

Annual Report 2011-12



INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI - 600 036

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1. DIRECTOR'S REPORT



The Indian Institute of Technology Madras (IITM) was established in 1959 and declared an institute of national importance by an Act of Parliament in 1961. Its primary objective was to promote higher technical education, conduct research and perform industrial consultancy. It is expected to be an exemplar for higher engineering education and research in the country and compare itself to the best in the world. The Institute currently has 16 Departments and several Research Centres with 7006 students, of whom more than 50% are postgraduates. The campus covers an area of 256 hectares of wooded land and is widely acclaimed as being among the loveliest in the country. It is home to a community of around 13000 people, and several hundred species of animals and plants.

The Institute offers research based master's and doctoral programmes, and a rich variety of course-based undergraduate and post-graduate programmes. In addition, there are specially designed user-oriented M.Tech. and continuing education programmes to cater to the needs of industry and academic institutions respectively. The 1-year preparatory course programme for students from disadvantaged sections offers intensive coaching to eligible candidates to prepare them for entry into IITM. 10 students have been admitted to this course in 2011.

The Institute undertakes a large number of research and consultancy projects sponsored by a wide spectrum of funding agencies from both Government and Industry. IITM has active linkages with leading academic and research organizations world-wide. This Report provides a summary of our activities, achievements and accomplishments during the year 2011-12.

1. The Forty-Eighth Convocation:

At this Convocation, a total of 1591 degrees are being awarded: 175 Ph.D., 88 M.S., 422 M.Tech., 69 M.B.A., 24 M.A (first batch graduating), 115 M.Sc., 206 Dual Degree (B.Tech. & M.Tech.) and 286 B.Tech. These degrees cover a wide range of disciplines and specializations offered by the eleven Engineering departments, three Science departments, the department of Management Studies and the department of Humanities and Social Sciences. Among the graduands are : 26 QIP candidates (teachers from other colleges), 15 sponsored candidates, 28 External and 44 UoP candidates, 192 ladies, comprising 42 Ph.D., 18 M.S., 52 M.Tech., 22 M.Sc., 6 MBA, 7 MA, 16 Dual Degree and 29 B.Tech. students.

Faculty members are the backbone of any good university. IIT Madras places the utmost emphasis on recruiting the best minds and hearts for the job. In 2011-12, the Institute added 44 new faculty members (of whom 5 are women), taking the total number to 514. We bade farewell to 9 faculty members and 31 staff members who retired after yeoman service to the Institute in its formative years.

2. Course-Based Programmes:

IITM offers UG, Dual Degree and PG programmes in Aerospace Engineering (AE), Biotechnology (BT), Chemical Engineering (CH), Civil Engineering (CE), Computer Science & Engineering (CS), Electrical Engineering (EE), Engineering Design (ED), Mechanical Engineering (ME), Metallurgical & Materials Engineering (MM), Ocean Engineering (OE) and Physics (PH) departments, an integrated Masters programme in Humanities and Social Sciences (HS) and PG programmes in Applied Mechanics (AM), Chemistry (CY), Humanities & Social Sciences (HS), Management Studies (MS), Mathematics (MA) and Physics (PH) departments. A unique Clinical Engineering programme is offered jointly with the Christian Medical College, Vellore and Sree Chitra Tirunal Institute for Medical Science and Technology, Tiruvananthapuram, and the second batch is graduating today. The Institute also runs the prestigious Visionary Leaders in Manufacturing PG Dipoloma program in Metro Rail Technology and Management specially tailored for the engineers of urban metro-rail systems is also graduating today. The Institute launched its multi-disciplinary programmes in Petroleum Engineering and Nuclear Engineering at the M.Tech level, in 2009. User Oriented M.Tech programmes are currently offered in CE, ME and OE.

Two new Dual Degree programmes have been started from the academic year 2012, namely, B.Tech+M.Tech in Biological Engineering, and BS+MS in Biological Sciences. The first programme brings together engineering and molecular life sciences, whereas the second provides a strong foundation in biological sciences by encompassing the study of living organisms and life processes. The current B.Tech programme in Biotechnology is being discontinued.

A minor course on Innovation and Social Entrepreneurship coordinated by the Institute's Centre for Social Innovation and Entrepreneurship (CSIE) has been offered since the 2009-10 academic year. The course is now the most sought-after minor course at IIT Madras. It lays emphasis on the theoretical understanding of establishing and running an enterprise, including developing appropriate technologies.

The Institute has a Joint Doctoral Degree Programme with the National University of Singapore, and a large number of collaborative research and student exchange programmes with reputed universities across the world. It is proposed to intensify the traditional exchange of faculty and research scholars through such programmes, leading to Joint Doctoral degrees wherever appropriate.

3. Academic Research:

Research at IIT Madras continued to grow in quantity, quality, and diversity during the year under review. Nearly 400 Ph.D students have enrolled in 2011-12, marking an increase of more than 100% compared to five years ago. This is in keeping with the national goal of increasing the availability of the highest - quality researchers and teachers to industry and academia. Our faculty and research scholars have published 1046 papers in refereed international (983) and national (63) journals in 2011-2012. They have also presented 566 research papers in international (433) and national (133) conferences. IIT Madras is thus a significant contributor to the national research output, which saw the nation climb from 15th to 9th position globally.

3.1 Snapshots of Research in 2011-12

Around 250 research scholars, assisted by their faculty supervisors, have submitted theses and papers that have been published this year. The titles of the theses are given separately; brief descriptions are available in an annexure to this report. I shall now give you a glimpse of the breadth and quality of the research work carried out in various departments. The research ranges from the theoretical to the experimental, and from the study of molecules and materials to engineered devices and systems.

On the theoretical front, S. Mariappan and Dr. R. I. Sujith developed a mathematical framework for modelling and stability analysis of thermoacoustic systems. K. Hemalatha and Dr. M. Manivannan developed a hybrid mathematical model of the human cardiopulmonary system and explored the clinical role of peripheral arterial pulse. N. Sadagopan and Dr. N.S. Narayanaswamy studied the impact of graph operations on vertex connectivity from the complexity and combinatorics points of view. P.Dominic, Dr. P. A. K. Tripathy, and Dr. S. Govindarajan analysed the stability of dimensional non-supersymmetric attractors in type IIA string theory in the presence of subleading corrections to the effective black hole potential.

In the exploding field of biotechnology, P.V. Giridhar and Dr. T.S. Chandra produced the first notably extremely halo-acid-alkali-stable xylanase, a good candidate enzyme for industrial applications. M.Mathew and Dr. R S Verma developed their novel humanized immunotoxins for targeting acute myeloid leukemia cells, and demonstrated through *in vitro* studies that the proteins were selectively cytotoxic. D.J. Albino and Dr. I.M. Nambi attempted to accelerate bioremediation of ground water contaminated with solvents using anaerobic organisms which can produce biosurfactants and also biodegrade the solvent. N.Ramakrishnan and Dr P.B.Sunil Kumar investigated co-operative behaviour of in-place order and non-equilibrium activity on the morphology of biological membranes.

Moving to the world of communications and multimedia, M. Bama, Dr. A. Thangaraj and Dr. B. Srikrishna proposed transmission schemes to improve information flow in a interference-limited wireless network. J.V.B. James and Dr. B. Ramamurthi attempted to mitigate interference in cellular systems using different co-operative precoding schemes. A. V. Bhavsar and Dr. A.N. Rajagopalan found solutions for several problems associated with scene recovery for optical and range cameras.

In the social sciences, G. Vaidyanathan and Dr. V. R. Muraleedharan analysed the patterns of utilization of public healthcare services in Tamil Nadu to assess whether the benefits of public spending preferentially reached the poor. M.B. Raghupathy and Dr. A. Thillairajan used operating and stock performance measures to estimate value creation arising out of venture capital investment.

Experimentation and system design, analysis and simulation form the bedrock of engineering research. K.C. Kumar and Dr. Amit Kumar numerically explored the mechanisms controlling flame spread over thin solids in space and their extinction using a water mist. Ionic liquids are important for energy storage, and N.A.N. Chandran and Dr. S. Senapati simulated the interaction parameters, their validation and subsequent application for estimating the thermodynamic, structural and dynamical properties of acetate anion-based ionic liquids. V.R. Regatte and Dr. N.S. Kaisare simulated and analysed high temperature catalytic micro-reactors as sources for distributed power generation. S. B. Karanki, Dr. M. Kumar and Dr. K. Kumar designed controllers and inverters for custom power devices to mitigate power quality disturbances in power distribution systems.

M. Sudhakar and Dr. S. Sundar analysed the calibration furnace with uniform block heating. O.S.S. Mansoor Ali and Dr. V. Raghavan predicted, using a transient two-phase numerical model, the mass burning and flame spread rates in steady diffusion flame and transient concurrent flames spread over methanol surfaces. N. Gnanasekaran and Dr. C. Balaji combined measurements and forward model inverse methodology to perform multi-parameter estimation in heat transfer. D.R. Sudhakar, Dr. K.S. Reddy and Dr. A. K. Kolar studied devolatilization and combustion of a wood particle in a fluidized bed reactor. M. Thayaprabha, Dr. K. Murali and Dr. V. Anantha Subramanian characterized experimentally the hydrodynamic properties of submerged elastic plates in waves. A.K. Jayanthi and Dr. N. Sujatha developed a laser speckle contrast imaging technique for assessing red blood cell concentration, depth and blood flow in burns, and changes in capillary blood in diabetic foot ulcers.

In the fascinating world of the science of molecules and materials, J.M. Joseph and Dr. E. Prasad demonstrated the effect of aggregation on the photophysical, morphological and encapsulation properties of poly (amido amine) dendrimers. S.A. Kumar and Dr. A. Veeraragavan developed a framework for selection of binders to obtain necessary performance from bituminous mixtures in pavement layers. A. Thakur and Dr. S. Ghosh synthesised and characterized ferrocene-based chemosensors and novel metallahydroborane clusters. B.P. Kumar, Dr. B. S. Murty and Dr. M. Balasubramanian synthesised and characterized micro- and nano-crystalline lead zirconate titanate based ceramics using the solid-state and mechanical activation route. S.S.J. Aravind and Dr. S. Ramaprabhu synthesized novel carbo nanostructures by green chemical technique and analysed their applications in fuel cells and biosensors. M.R. Parida, Dr. C. Vijayan and Dr. P.C. Deshmukh discovered that decoration of low – dimensional nanostructures with metal nanoparticles enhanced their optical non-linearity and rendered them attractive for photonic devices.

3.2 New Research Centres:

Several new research centres have been created in 2011-12 with large multi-disciplinary research projects of globally comparative size and scope.

A state-of-the-art Intelligent Transportation Systems (ITS) Laboratory has been established in the Department of Civil Engineering under the Centre of Excellence in Urban Transport. The Laboratory is sponsored by the Ministry of Urban Development (MoUD), Govt. of India. This is the first of its kind in an academic setting in India that showcases advanced ITS technologies and enables real-time traffic monitoring and evaluation.

The Healthcare Technology Innovation Centre (HTIC) of IIT Madras has been set up in the IITM Research Park. It is funded by the Department of Biotechnology (DBT) to the tune of Rs. 18.5 crores and also by various industries, with a charter to develop technology solutions for unmet healthcare needs in the country. The Centre works on a range of clinical areas such as ophthalmology, intensive care, neonatal care, cardiology, and ultrasonography. A diverse group of scientists, technologists, doctors, industries and government agencies come together for developing technology solutions to address various healthcare challenges. This integrated approach ensures that the technologies developed at the Centre reach the field and deliver benefits to society.

The Centre successfully completed its first high-impact project, a Mobile Eye Surgical Unit that enables clinicians to perform cataract surgeries in rural areas with the highest quality standards of a world-class surgical facility. Sankara Nethralaya, a premier ophthalmology institution in the country, is leading the clinical efforts in this collaborative project. This first-of-its-kind effort in the country, which addresses the challenge of blindness and accessibility to quality healthcare was given approval by the Ministry of Health, Government of India. In the pilot phase of the project, the mobile surgical unit has successfully completed 486 surgeries in rural areas of Vellore district in Tamilnadu. Translational R&D projects like these that have direct societal benefit and impact are vital components of R&D activities at IIT Madras.

At this juncture, I would like to place on record our gratitude to Ashok Leyland and Wheels India for their generous support extended to this project through donations of two chassis units and two air suspension units, respectively. I am also pleased to share with you that the Class of 1975, IIT Madras has also supported this project to the tune of Rs10 lakhs, under the scheme of "Socially Relevant Projects". Such support and participation from industry and alumni greatly bolster our efforts in developing technology for solving the nation's challenges.

Sensing the pivotal role played by combustion on energy and environment, the Government of India has set up through the Department of Science and Technology (DST) the National Centre for Combustion Research and Development (NCCRD) jointly at IIT Madras and IISc Bangalore. These two institutes have been chosen for establishing this Centre based on their overwhelming strength in this research area. At IIT Madras, there are 25 faculty members across the departments of Aerospace Engineering, Applied Mechanics, Chemical Engineering, Engineering Design and Mechanical Engineering with deep knowledge of different facets and applications of combustion. The faculty of IITM and IISc will coordinate their research activities to ensure complementarity and cooperation, and will also reach out to combustion researchers from other institutions to work in a collaborative mode.

A total of 90 crores spread over 5 years has been sanctioned for the joint centre, of which ₹46 crores is allocated for IIT Madras. One of the goals of this centre being manpower development, about 50 Ph.Ds and 100 Masters students are estimated to graduate with research on combustion from the centre. Additionally, the faculty of the centre will be engaged in conducting a series of summer and winter schools to train about 200 professionals on combustion R&D. The centre will focus on three major sectors, namely, Automotive, Power, and Aerospace sectors. An "Industry- Academia Workshop on Combustion" has been recently organized to explore problems of industrial research pertinent to these three sectors. Several industry experts participated and provided their inputs for formulating certain grand challenges of industrial importance in combustion within the Indian context. Accordingly, several test facilities and diagnostic instrumentation are being planned for development, procurement, and installation. The research activities will ramp up towards full scale of operations before the end of 2013 when the Centre will have about 18000 sq. ft. of newly- built space.

The Nano Functional Materials Technology Centre (NFMTC), a research initiative for advanced studies on nanomaterials and their characterization established at IIT Madras under the auspices of the Department of Science and Technology (DST) with the support from Murugappa Group of Industries and Orchid Chemicals & Pharmaceuticals was formally inaugurated on April 10, 2012 by Dr.T.Ramasami, Secretary, ST. This centre, costing ₹25 crore with 20% from industry) has state-of the art facilities for the investigation of morphological, electrical, thermal and magnetic properties of nanomaterials. The associated industries have already benefited from the collaboration and some technologies are being deployed commercially.

A Thematic Unit of Excellence on Water Purification Using Nanotechnology has been sanctioned by DST with a grant of ₹10.8 crores. New space for the centre is being built, and the centre will be functional in a year's time. This centre will develop drinking water purification technologies using nanomaterials leading to viable products.

The Reliance-IITM Telecom Centre of Excellence located in the IITM Research Park demonstrated three new products at the Annual India Telecom 2011 Conference and Exhibition. Mobile voice banking, voice operated GSM-based security system, and an automatic mobile-phone based customer acquisition system for service providers were launched.

The China Studies Centre (CSC) inaugurated last year has made steady progress. One visiting faculty member has been appointed, and four courses, including two Chinese language courses, have been introduced. An international conference on Legitimacy, Participation and Contestation in China is planned during December 2012. Workshops are being conducted to improve capacity for Chinese language training. Lectures by foreign service experts and other officers, corporate leaders and academicians are a regular feature. The CSC website in both Chinese and English is updated fortnightly with research articles, and is accessed regularly by visitors from India, China, US, Europe, Middle East and South-East Asia.

3.3 New Research and Fabrication Facilities:

A foamed Bitumen Production and Pugmill Mixing Equipment was gifted by Wirtgen, GmbH, and has been installed in the Pavement Engineering Laboratory in February 2012.

The Central Workshop is being modernized for training our undergraduate students in a variety of skills, and for fabrication work. The facility at the Calibration Laboratory in the CEC has been upgraded to calibrate oscilloscopes upto 600 MHz and -25°C to 650°C.

The 25 Teraflop, 2048-node High-Performance Computing Cluster procured in 2008 by the P.G.Senapathi Centre for Computing Resources has been replaced with a state-of-the-art 85 Teraflop, 4096-node cluster. The new cluster, which is being commissioned as we speak, will again place IITM at around the 225th position in the top 500 HPC clusters in the world in 2012. Besides, it is ranked as the fifth most efficient HPC cluster in the world. A 6 Tflop double-precision GPU cluster has also been commissioned recently.

More than 60 faculty and 300 research scholars across the Institute use the HPC facilities for their research. It is proposed to make the HPC available to the companies in the Research Park as well. The Internet bandwidth for the Institute has been enhanced from 90 Mbps to 135 Mbps. This is in addition to the bandwidth provided by the National Knowledge Network.

Research at the highest levels requires constant upgradation of instruments and facilities. The Institute has ordered for and is awaiting supply of sophisticated instruments worth more than ₹ 50 crores, extending from cryogenic facilities to the latest electron microscopes and spectrometers. A 500 MHz NMR Spectrometer has been commissioned in the Chemistry Department, and is used by scholars from multiple departments. Several instruments have also been purchased to support research in the areas of Proteomics and Genomics. They will help to study protein characterization, protein folding, protein-drug interaction, drug design, cell characterization and cell sorting.

It is our constant endeavor to equip the faculty and students of IIT Madras with the best possible facilities to take on the most challenging research problems in the years ahead.

4. Academic Distinctions Secured by our Faculty Members and Students:

Several academic distinctions, honours and awards, fellowships of professional societies, and memberships on editorial boards of journals, have been bestowed on our faculty, staff and students in recognition of their academic achievements during the current year.

Our faculty have been prolific the past year in writing books and monographs, and filing patents for their inventions. Some of these are listed below:

Dr. Andrew Thangaraj (EE)	- INAE Young Engineer Award
Dr. Anuradha Banerjee (AM)	- Young Faculty Recognition Award, IITM
Dr. Archith Mohan (EE) Shiv Kumar Aggarwal (ME)	- Honda Young Engineer and Scientist (YES) Award 2011, Honda Motor India Pvt. Ltd
Dr. Arockirajan (AM)	- INAE Young Engineer Award
Dr. Ashok Jhunjhunwala	- Dronacharya Award, TiE Chennai Entrepreneur Awards One among the Top 11 Innovators of 2011', mHealth Alliance and Rockefeller Foundation.
Dr. Bhaskar Ramamurthi	- Techno Visionary, lifetime achievement award, India Semiconductor Association (ISA)
Dr. K Krishnaiah	- Srimathi Marti Annapurna Gurunath Award for Excellence in Teaching
Dr. Manu Santhanam (CE)	- • Outstanding Young Concrete Engineer 2011, Institution of Engineers (I) • Corps of Engineer Prize, Institution of Engineers (I)
Dr. M S Mathew MS (CE)	- Reach Heritage Awards – 2011, Reach Foundation
Shri B Muthuraman (Distinguished Alumnus)	- Padma Bhusan, Government of India
Dr. T Pradeep (CY)	- Prof. S S Deshpande National Award in Chemistry for 2011
Dr. K Ramesh (AM)	- 2012 Zandman Award, Society for Experimental Mechanics, USA
Dr. Sanjib Senapati (BT)	- NASI – Scopus Young Scientist Award for 2011 under the 'Biological Science' category
Dr. K N Stayanarayana (CE)	- Distinguished Scholar Award, Project Management Institute (PMI)
Dr. Tanmay Basak (CH)	- Herdillia Award, Indian Institute of Chemical Engineers (IIChE)
Dr. Nagendra Krishanpura (EE) Vikas Singh (EE)	- ISA Technovation Award, India Semiconductor Association
Dr. A N Rajagopalan (EE)	- DAE-SRC Outstanding Investigator Award, DAE-SRC
Dr. C S Shankar Ram (ED)	- Young Faculty Recognition Award, IIT Madras
Dr. S Sundar (MA)	- Alumni Ambassador of City of Kaiserlautern, Germany
Dr. C Balaji (ME)	- Tamilnadu Scientist Award (TANSA)-2010, Tamilnadu State Council for Science and Technology
Dr. V Ganesan (ME)	- • Excellence in Aerospace Education Award, Aeronautical Society of India • Rastriya Gaurav Award, India International Friendship Society • Best Citizens of India Award, International Publishing House, New Delhi
Dr. Nilanjan Saha (OE)	- Hari mOm Ashram Prerit Research Award, Sardar Patel Renewable Energy Research Institute
Dr. V G Idichandy (OE) Dr. C P Vendhan	- Academy Excellence Award (2011), DRDO

Fellowships

- | | | |
|-----------------------------------|---|---|
| Dr. A V Jayanthan (MA) | - | Boyscast Fellowship, DST |
| Dr. M P Kothiyal (PH) | - | Fellow, Optical Society of America |
| Dr. Krishnan Balasubramaniam (ME) | - | Fellow, Indian National Academy of Engineering |
| Dr. K Prasad Rao (MM) | - | <ul style="list-style-type: none">• Fellow, Indian National Academy of Engineering• Fellow, ASM |
| Dr. Sarit Kumar Das (ME) | - | Fellow, National Academy of Sciences |
| M Satheesh (AE) | - | Alexander Von Humboldt Fellowship |
| Dr. Shanthi Pavan (EE) | - | Fellow, Indian National Academy of Engineering |
| Dr. C Siva Ram Murthy (CS) | - | <ul style="list-style-type: none">• IEEE Fellow, Institute of Electrical and Electronics Engineers• INAE Chair Professorship |
| Dr. K Sridharan (EE) | - | Tan Chin Tuan Fellowship, Nanyang Technological University |
| Dr. Sumantra Mandal (MM) | - | Alexander von Humboldt Research Fellowship |

Best Thesis Awards:

- | | | |
|---|---|---|
| Dr. B Ambedakar (CH)
Guides: Dr. Nagarjan
Dr. Sreenivas Jayanti | - | Ph.D thesis published in the 'Springer Theses Series: Recognition Outstanding Research' |
| B Gokul (ME)
Guide : Dr. Somashekhar S Hiremath | - | National Award, Best Master Thesis in Mechanical Engineering, ISTE's 41 st Annual Convention |
| Dr. K Gopalakrishnan (MS)
Guide: Dr. L S Ganesh | - | Highly Commended Award, Emerald EFMD for Outstanding Doctoral Research, 2011 |
| Dr. Priya Rajeev (MS)
Guide: Dr. T J Kamalanabhan | - | Highly Commended Award, Emerald EFMD for Outstanding Doctoral Research, 2011 |
| Dr. Santhosh Kumar Almsetti (CY)
Guide : Dr. G Sekar | - | 1 st Prize, '2011 Eli Lilly Outstanding Thesis Award' |
| Dr. B Sivaraman (CY)
Guide: Dr. Indrapal Singh Aidhen | - | 2 nd Prize, '2011 Eli Lilly Outstanding Thesis Award' |

Scholarships

Anirudha Poria (MA) Arundhati Krishnan (MA) Susmita Agarwal (MA)	- Scholarship of the National Board of Higher Mathematics.
Avishek Ranjan (ME)	- Manmohan Singh Scholarship, St. John's College, University of Cambridge
M Brij Bushan (ME) E Dhivya (CS) Kanda Bhargava Ram (CE)	- OP Jindal Engineering and Management Scholarship (OPJEMS)
Dilip K. Kainikkara (EE)	- Aditya Birla Scholarship
Rohan Jaishankar (EE) GM Karthick (MM) Saikumar Vidula (MM)	- Shastri Indo-Canadian Institute Scholarship
P Muthukumar (MA) Pooranapushkala N (MA) E Pramod (MA)	- Ph.D. Scholarship of the National Board of Higher Mathematics.
SL Pramod (MM)	- Canadian Commonwealth Scholarship
Siddharth Kumar Thakur (ED)	- Nissan Global Foundation Scholarship

Best Paper Awards:

Dr. Ashwin Mahalingam (CE) et al.	- Procurement Theme Best Paper Award, Joint CIB W070, W092 and TG72 International Conference 2012
Dr. K. N. Satyanarayana (CE) Ganesh Devkar (CE)	- Built Environment Project and Asset Management Journal Best Paper Award, Joint CIB W070, W092 and TG72 International Conference 2012
Dr. Koshy Varghese (CE) Liju Joshua (CE)	- JCCE 2011 Best Paper Award, American Society of Civil Engineers (ASCE).
Dr.A.Veeraragavan (CE) Shailendra Grover (CE)	- C.P.W.D. Medal for Best Paper on Maintenance, Indian Roads Congress
V. Marimuthu (CE)	- Dr. Ramaiah Prize, International Journal of Constructional Steel Research
Dr. Gaurav Raina (EE) M J. Shankar Raman (CS)	- Best Paper Award, Eleventh International Conference on Networks (ICN 2012)
S. Sharmila Deva Selvi (CS) S. Sree Vivek (CS) Dr. C. Pandu Rangan (CS)	- Best Student Paper Award, IWSEC 2011
Praveen Raja (CS) Dr. Gaurav Raina (EE)	- Best Paper Award, International Conference on Communication Systems and Networks
Udayabhaskararao Thumu (CY)	- 'Malhotra-Weikfield Foundation Fellowship', Bangalore Nano Conference
B.Kuppan (CY) Dr. P. Selvam	- Hindustan Platinum Award, Best Poster Presentation, 15 th Int'l Workshop on Role of Materials in Catalysis
Dr. Arun D. Mahindrakar (EE) Dr. B. Kalyan Kumar (EE) S. N. Raghunandan (EE)	- Best Paper Award, 2nd International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS 2012)

Manoj K. Maharana (EE) Dr. K. Shanti Swarup (EE)	- Corps of Electrical and Mechanical Engineers Best Paper Prize, Journal of the Institution of Engineers (India)
Anil Kulhare (EE) Arindam Chowdhury (EE) Dr. Gaurav Raina (EE)	- First Prize, Best Student Paper Award Competition, ACODS
Pradeep Krishna Dr. Shanthi Pavan (EE)	- Silkroad Award, IEEE International Solid State Circuits Conference
Dr. A. N. Rajagopalan (EE) et al.	- CMC Best Paper Award, IAPR International Conference on Biometrics
Dr. Nandita Dasgupta (EE) Dr. Enakshi Bhattacharya (EE) Dr. Anjan Chakravorty (EE)	- Dr. S.K. Agarwal Memorial Best Poster Award, IWPSD 2011
P. Ramkrishna (EE)	- Best Paper, ACODS 2012
B. Ratna Sunil (MM) Dr. T. S. Sampath Kumar (MM) Dr. Uday Chakkingal (MM)	- Bajpai-Saha Award, Best Student Paper Presentation, XXII National Conference, Society for Biomaterials and Artificial Organs (India)
Anish S. Menon (MS) Dr. P. Krishna Prasanna (MS)	- First Prize under the Research Category, Athenaeum 2012, VI International Management Research Conference
Dr. Arshinder Kaur (MS)	- Best Paper Award, International Conference on Advances in Supply Chain and Manufacturing Management
Dr. P. Krishna Prasanna (MS)	- Best Paper Award, International Conference on Frontier Global issues and Challenges in Accounting and Finance
Rameshwar Ture (MS) Dr. M. P. Ganesh (MS)	- Special Prize, Athenaeum 2012, VI International Management Research Conference
Dr. A. Thillai Rajan (MS) Ashish Deshmukh (MS)	- 'Highly Commended Paper', Emerald Literati Network Award for Excellence 2012
Dr. J M Mallikarjuna (ME)	- Best paper Award, International Conference on Mechanical Production and Automobile Engineering (ICMPAE – 2011)
S Rajkumar (ME)	- Best Paper Award, 22 nd National Conference on 1C Engines and Combustion, 2011
Dr. T S Sampath Kumar (MM)	- JBT Best Paper Award, Journal of Biomaterials and Tissue Engineering, American Scientific Publishers
S Devaraj (MM)	- Hindustan Platinum Award for Best Poster Presentation, Indian Institute of Metals
Niraj M Chawake (MM)	- Second Prize, Poster Competition in Emerging Materials Section, Indian Institute of Metals
Hrushikesh Nath (MM)	- Best Poster Award, Indian Institute of Metals
Gerald Tennyson (MM)	- Best Oral Presentation, Indian Institute of Metals
S Zaheetha (all from MM) Rajathi Rajkamal Balu K Madumathi S Alamelu Bai	- Best Poster Presentation Award, XXI National Conference of the society for Biomaterials and Artificial Organs (India)
D C Swapnadip De Chowdhury (OE)	- Best Paper Award, PIANC-COPEDEC 2012

Prizes won in competitions:

- Ananya Rath (CE)
 - G.D. Srinivasan (CE)
 - Tamanna Sriram Nihar (CE)
 - Kanhurkar Nishant Ankush (CE)
 - Vikas Singh (EE)
 - Oviya Govindarajan (HS)
 - Shivraj Singh Negi(HS)
 - M. J. Vishnu (HS)
 - Biotechnology Students
 - T. Avaneesh, P. Chaitra
 - S. Kousik, Sonia Chothani,
 - Varun Chokshi, Abhishek De
 - Chetan Srinath, Nayan Jain,
 - Vinay Lathi, Govind Krishnajoshi,
 - Sri Teja Mullapudi, Vivek Parathasarathy
 - Biotechnology Students
 - Nisarg Shah, AbinavGopal, Amit Agrawal, DharavSolanki, Suraj Rathi, TanmayPai, Govindkrishna Joshi
 - Team from Computer Science
 - K.V.N.Pradyot, S.S.Manimaran Prahasaran et al.
 - Team from Engineering Design
 - Dr.Sandipan Bandyopadhyay
 - Dr.G.Saravana Kumar
 - Tarun Mehta,Swapnil Jain
 - Jaideep Badduri
 - Sayantana Biswas
 - Sri Ram Charan Chepylala
 - Moupiya Niyogi (MS)
 - Harshal Choudhari (ME)
 - Guide: Dr. Sujatha Srinivasan (ME)
 - Team Chronos from Mechanical Engineering
 - Sumit Patil Pulkit Agarwal Sohan Jawale
 - Tanuj Jhunjhunwala
 - Chetan Bademi (ME) Guru
 - Prakash (CS) Sarang
 - Bharadhwaj (CS)
 - Team 'Aquaregia' from Ocean Engineering
 - Anant Jain, Arun Chandran
 - Lohit Vankina, Vinay Sridhar
 - VishruthSrinath
 - Akshay Krishna (PH)
- Best Innovative Structural Steel Design, INSDAG, Kolkatta
 - INAE Innovative Student Project Award 2011
 - Winner, PERL's Student Essay Competition
 - Winner, Chennai leg of TATA Crucible 2012 Quiz
 - Special Prize for 'Best New Natural BioBrick, Gold Medal and Safety Commendation, iGEM Regional Competition held at Hong Kong
 - Silver medal, BIOMOD Competition, Wyss Institute at Harvard University.
 - Selection of their framework that lets a robot mimic human gestures and movements for the Asia-Pacific Student Entrepreneurship Summit at Stanford University
 - Selection of their proposal 'HuMotor', a human-powered motor, Innovation Challenge to Reduce Worker Drudgery, National Innovation Council.
 - NISSAN Brand Manager Award
 - Top Overall Prize, Second Edition of the ED-I Project Challenge for the project that developed a 'develop a "standing" wheelchair that offers three positions in the same chair—standing, seating and sleeping.
 - Winner of Sustainability Award, 2011 India Inventor Student Design Competition
 - First Place, National Level Programming Contest NLPC '12, SVCE ACM Chapter
 - First place, Genesis 2011
 - First Place, Youth Business Development Competition 2011.
 - Gold Medal & Best in Practicals Awards, 5th International Olympiad on Astronomy and Astrophysics.

Membership of Editorial Boards:

Dr. A. Veeraragavan (CE)	- Member, Editorial Board, International Journal of Pavement Research and Technology
Dr. K. Rajagopal (CE)	- Editorial Board Member, Indian Geotechnical Journal
Dr. Tanmay Basak (CH)	- Associate Editor, International Journal of Heat and Mass Transfer and International Communications in Heat and Mass Transfer.
Dr. T. Pradeep (CY)	- Member, Editorial Advisory Board, ACS Applied Materials and Interface Member, Advisory Board, Particle
Dr. A. N. Rajagopalan (EE)	- Associate Editor, Editorial Board, IEEE Transactions on Image Processing
Dr. K. Sridharan (EE).	- Associate Editor, IEEE Transactions on Industrial Electronics.
Dr. Harishankar Ramachandran (EE)	- Editor-in-Chief, International Journal of Advance in Engineering Sciences and Applied Mathematics
Dr. Nagendra Krishnapura, (EE)	- Associate Editor, IEEE Transactions on Circuits and Systems : II; Express Briefs
Dr. V. R. Muraleedharan (HS)	- Member, Editorial Board, 'Medical History
Dr. M. Thamban Nair (MA)	- Editor, Editorial Board of Journal of Mathematical Analysis Illinois Publishing Corporation, Kosovo
Dr. R. Usha (MA)	- Member, Editorial Board, Physics of Fluids Member, Editorial Board, Fluid Dynamics Research
Dr. S. Ponnusamy (MA)	- Editor, Journal of Classical Analysis
Dr. Amitava Mukherjee (MA)	- Associate Editor, Editorial Board, Statistical Methodology
Dr. Rajiv Sharma (OE)	- Member, Editorial Board, International Journal of CAD/CAM
Dr. S. Ramaprabhu (PH)	- Member, Editorial Board, 'Nano Communications' Member, Editorial Board, Nanofluids (JON)
Dr. P. C. Deshmukh (PH)	- Associate Editor, Journal of Atomic & Molecular Science
Dr. A.R. Ganesan (PH)	- Member, Editorial Board, International Journal of Holography and Speckle
Dr. M. P. Kothiyal (PH)	- Member, Editorial Board, Journal of Optics
Dr. P. B. Sunil Kumar (PH)	- Member, Editorial Board, Advances in Planar Lipid Membranes and Liposomes

Books /Monographs:

Dr. T. Panda (CH)	·	Mixing and Agitation Design: "Handbook of Food Process Design, Wiley Blackwell, England (2011) Bioreactors Analysis & Design, McGraw Hills
Dr. Tanmay Basak (CH)	·	Microwave Heating of Oil-Water Emulsions: Theoretical and Simulation Studies Using Galerkin FEM, LAP Lambert Academic Publishing
S. Balu, (CE)		Structural Reliability Bounds : Under Mixed Uncertainties', LAP Lambert Academic Publishing AG and Co. KG
Dr. B. Nageswara Rao (CE)	·	
Dr. V. ThamizhArasan (CE)		Quantifying Traffic Flow on Intercity Roads, VDM Verlag GmbH & Co. KG
Dr. Shriniwas Arkatkar (CE)	·	

Dr. V. ThamizhArasan (CE)	Traffic Concentration and Level of Service of Roads,
Dr. G. Dhivya, (CE)	VDM Verlag GmbH and Co. KG of Germany
Dr. V. ThamizhArasan (CE)	Planning for Priority For Public Transport, , LAP
P. Vedagiri (CE)	Lambert Academic Publishing AG and Co. KG
Dr. S. Pushpavanam (CH)	'Introduction to Chemical Engineering', Prentice Hall of India, EEE.
Dr. K. Srilata (HS)	Arriving Shortly,Writers Workshop, Kolkata
Anu Joshy (HS)	Of The Lesser Known, Green Books India
Dr. Aysha Viswamohan (HS)	English for Hotel Industry, Pearson, New Delhi
Dr. S. Ponnusamy (MA)	Foundations of Mathematical Analysis, Birkhäuser, Boston 2011
Dr. T. T. Narendran (MS)	Composite Heuristics for a Class of Vehicle Routing Problems,
Dr. K. Ganesh (MS)	LAP Lambert Academic Publishing, UK
Dr. C. Balaji (ME)	The Joy of Teaching, Ane Books, New Delhi. Essentials of Thermal System Design and Optimization, Ane Books, New Delhi, Int'l Editor CRC Press
Dr. V. Ganesan (ME)	Internal Combustion Engines 4 th Edition, McGraw Hill,
Dr. J. S. Mani (OE)	Coastal Hydrodynamics, PHI Learning Pvt. Ltd., Delhi.
Dr. S.Chandrasekaran (OE)	Analysis & Design of Offshore Structures, Changwon University
Dr. S.K.Bhattacharrya (OE)	press, Korea
Dr. L. Sriramkumar (PH)	Vignettes in Gravitation and Cosmology (Editor), World Scientific, Singapore, 2012

Patents Filed:

Dr. T Pradeep (CY) Sreeprasad Theruvakkattil Sreenivasan, Panikkanvalappil Ravindranathan Sajanlal	- Application of nanoscale zinc oxide in peaut crop Removal of pesticides from water using graphenic materials
Dr. T Pradeep (CY) Amrita Choudhary Udhaya Sankar Anshup	- One container gravity fed storage water purifier
Dr. Debashis Chakraborty (CY) Payal Malik Ravikumar R Gowda Venkatachalam Ramkumar	- Metal free catalysts for the ring-opening polymerization of cyclic esters and lactide
Dr. Sandipan Bandyopadhyay (ED) Dr. M Ramanathan Aditya Soni	- An improved design for the manually operated tricycle for the physically challenged
Dr. Bobby George (EE) Sheik Mohammed Ali S Lelitha Vanajakshi Jayashankar V	- An inductive loop vehicle detection system for heterogeneous and less-lane disciplined traffic conditions
Dr. Shankar Krishnapillai (ME) T N Sivasubramanian	- Portable cable way for agricultural applications

- Ayyar Arun
Balavenkata subramanian (CeWIT)
Dr. Krishnamurthi Giridhar (EE)
Dr. Bhaskar Ramamurthi (EE) et al.
- Nadeem Akhtar Deepak Pengoria
(CeWIT)
Dr. Timothy A. Gonsalves (CS)
- Kiran Kumar Kuchi (CeWIT)
Dr. Giridhar Krishnamurthi (EE)
Dr. Bhaskar Ramamurthi (EE) et al
- Sheetal Kalyani (CeWIT)
Lakshminarayanan Raghavendran
(EE)
- Kiran Kumar Kuchi (CeWIT)
Dr. Bhaskar Ramamurthi (EE)
Dr. Krishnamurthi Giridhar (EE) et al.
- Kiran Kumar Kuchi (CeWIT)
Dr. Bhaskar Ramamurthi (EE) et al.
- Kiran Kumar Kuchi (CeWIT)
Dr. Bhaskar Ramamurthi (EE)
Dr. Krishnamurthy Giridhar (EE) et al.
- Sheetal Kalyani (CeWIT)
Dr. Bhaskar Ramamurthi (EE) et al.
- Sendilramkumar Devar (CeWIT)
Dr. Bhaskar Ramamurthi (EE) et al
- Kaimalettu Sunil (CeWIT)
Dr. Bhaskar Ramamurthi (EE) et al
- Interference Cancelling Block Modulation
 - Method for Context Aware Service Adaptation for Heterogeneous Wireless Networks and Devices
 - Pilot aided Data Transmission and Reception with Interference Mitigation in Wireless Systems (applied in US, India and Europe)
 - Robust Channel Estimation and Interpolation in OFDMA systems
 - Stable CQI region in downlink
 - An ordered Reduced Set Successive Detector For Low Complexity; Quasi-ML MIMO Detection
 - Interference management for a distributed spatial network
 - Cognitive Interference Management in Wireless Networks with Relays; Macro Cells; Micro Cells; Pico Cells and Femto Cells (applied in US, India and Europe)
 - Interference Management in a Heterogeneous CDMA Cellular Networks
 - Indoor Personal Relay

Patents Granted:

- Dr. Arun K Tangirala (CH)
Dr. B Viswanathan (CY)
Vasu Gollangi (CH)
- Dr D Janakiram (CS)
- Dr B Viswanathan (CY) Dr. T
K Varadarajan (CY)
Pilli Satyananda Kishore (CY)
Dr. S Ramaprabhu (PH)
Dr. K Sethupathi (PH)
R B Rakhi (PH)
A Leela Mohana Reddy (PH)
Dr S Ramaprabhu (PH)
Ms. A Leela Mohana Reddy (PH)
- Dr.S. Ramaprabhu (PH)
Ms. A Leela Mohana Reddy
(PH)
- A method of and an apparatus for continuous humidification of hydrogen delivered of fuel cells
 - Method and system for enabling representation of UML class diagram in a lisp format and design pattern detection using such representation
 - An electrode based on ru-polyoxometalate for a supercapacitor
 - A process for the manufacture of flexible carbon nanotube based field emitter
 - Synthesis of multi walled carbon nanotubular coils over alloy hydride catalyst
 - A process for the manufacture of PT/multiwalled nanotubular coils (MWNC) electrocatalysts

5. INDUSTRIAL CONSULTANCY AND SPONSORED RESEARCH

India's industrial development and manufacturing are at a critical stage in the country's evolution. Premier research institutes such as IIT Madras play an important role in this growth. Reflecting the importance of collaborative research and consultancy work, the number of projects sponsored by industry and their value have been steadily increasing. In 2011-12, the Institute received sanction for ₹ 51 crores in new projects from industry, of which more than 50% was for research-based consultancy.

Public funding for research in the form of sponsored projects from science ministries and government departments is critical for the high research intensity of IIT Madras. Funding in this category has been increasing at an annualized rate of more than 30%, with several Centres being funded, as mentioned earlier, at levels comparable to global standards. The faculty secured sanction for projects proposed by them worth ₹ 182 crores in 2011-12. The total value of ongoing sponsored projects in the Institute is ₹ 403 crores. It must be noted that the amount of money received by the Institute for R&D is now comparable to the support for the academic programmes and infrastructure provided by MHRD.

More than 250 faculty members are currently involved in sponsored research and consultancy projects. Six new Innovative Student Projects have been taken up by students during the year, supported to the extent of ₹ 6 lakhs by the Institute.

The ISRO-IITM Space Technology Cell renewed 21 projects and sanctioned 6 new projects during this year. Under the IGCAR-IITM Cell, 4 new projects have been initiated and 16 projects were continued. Joint monitoring and regular technical review of projects have made the cell concept a success and a model for other agencies to follow. Under the NIOT- IITM Cell 12 on-going projects were continued while 4 new projects for ₹ 83 lakhs have been initiated.

The Industrial Associateship Scheme fostering close interaction with industry has 197 members this year. We have signed 19 Memoranda of Understanding during the year with industries such as Saxon Infotech, Texas Instruments India (Private) Limited, Hari Shankar Singhania Elastomer & Tyres Research Institute (HASETRI), Renault Nissan Technology & Business Centre, Autodesk India Pvt. Ltd., Bangalore, Japan International Co-operation Agency (JICA), Saint Gobain, Central Power Research Institute (CPRI), Bangalore, Danfoss Industries Private Ltd., Honeywell Technology Solution Pvt. Ltd.

The Board of Governors approved the new Incubation Policy & Guidelines in its 212th meeting held on 23rd March 2012. IIT Madras will directly and actively support the incubation of companies by its Faculty/Staff/Research Scholars/Students. The Board has approved the formation of an IITM Incubation Society to implement the above policy.

The Board also approved the revised IPR Policy of IIT Madras in the above meeting. The revised policy states the policy of the Institute with respect to protection, ownership and licensing of IP that is generated with /without external funding.

6. RESEARCH PARK AND INCUBATION:

The IITM Research Park has been progressing well towards the goals it had set out for itself. With 50 companies in its fold, it encompasses a wide range of research projects. The potential of this initiative has prompted the Ministry for Human Resources Development to recommend that the other IITs and NITs also consider setting up similar research parks. The XII Plan proposes to set aside a separate fund for similar parks across the country. IIT Madras is emerging as a trail-blazer and role model for the nation in this regard. I will now give you a glimpse of how the alchemy of industrial know-how, faculty expertise and student innovation is leading to new products and processes.

The Wear Sensor developed by Madras Engineering Industries will be used for the first time in commercial vehicles in India. The simulation expertise of the faculty expert in VLSI and in the aerospace department helped IFMR in financial modeling! Defence Research & Development Organization (DRDO) and BHEL propose to accelerate their collaborative projects with IITM through their R&D Gateways in the Research Park.

Collaborative activities of companies such as Amada, Cognizant, Tata Elxsi, Renault Nissan, Caterpillar, Murugappa Group, Converteam, and Triviron are ripening and several patents/products will emerge in the coming months.

TCS Innovation Labs is working with IITM faculty in the area of prospective hydro/wind turbine (micro energy systems) for rural areas of Tamil Nadu. ARCI has piloted the manufacture of 50 kW PEM Fuel Cell, and a state-of-the-art pilot plant for Li-ion battery line for EVs/HEVs has been initiated and is expected to be commissioned at IITM RP by this year.

The Centre of Excellence in Wireless Technology was given the TCOE Award for R&D Excellence in 2011. The Centre collaborates extensively with faculty and students of the wireless research group at IIT Madras, and also with other companies in the Research Park.

Among companies incubated at the Research Park by the Rural Technology and Business Incubator nominated in Red Herring's Top 100 Asia Award for Private Technology (RTBI) of IIT Madras, DesiCrew, Companies. Dhvani Research is Uniphore, ROPE, and Aaum Analytics are marching ahead and have bagged several orders from outside and within the eco system. Indian School of Business (ISB) has identified DesiCrew as one of India's Fastest Growing Companies, and it has also been working on a Small Business Innovation Research Initiative (SBIRI) project from DBT, which promises to improve the imaging quality of low-cost portable medical ultrasound systems that will improve health diagnostics in developing countries. Myeasydocs along with a student has developed a Scan Box, which is a scanning service integrated with advanced image processing.

Villgro and RTBI aim to provide a common meeting ground for innovators, social entrepreneurs, investors, policy makers, researchers, media and leading lights from the innovation and social entrepreneurship ecosystem. RTBI has won an Award in the Enabling Environment Category. The award was presented in the WSIS Forum 2012 that recognizes outstanding achievements in getting the world connected.

To enhance student interaction with the companies, the Research Park co-ordinated the summer internship 2012 drive, placing about 100 students. The Research Park has also emerged as a hub for regular industry events such as the monthly Community event, Nasscom's Mentorship Program, TIE's, Entrepreneur event, and the like.

One of the Institute's Incubators C-TIDES has used alumni funding of ₹ 26 lakhs for improving the awareness about entrepreneurship through various events. Genesis, the social B-Plan competition saw 105 entries including 7 international entries while Breakthrough – the technical Plan competition saw 51 entries. C-TIDES has been running an internship quest for which around 14 start-ups have registered.

The Centre for Social Innovation and Entrepreneurship (CSIE) of IIT Madras in partnership with Villgro Innovations Foundation and with financial support from the International Development Research Centre (IDRC) Canada has commissioned and completed 5 research projects with an exclusive focus on social entrepreneurship in the Indian context. These projects cover the start-up and scale-up challenges faced by social entrepreneurs in India, case studies of social enterprises, a special look at the fuel efficient cook stove business in India aside from a ground breaking study on the need for new parameters in assessing social enterprises in developing countries.

CSIE has partnered with the Mentoredge programme of IIM Ahmedabad bringing together 7 mentors and 8 companies as mentees. CSIE also worked with Techfortrade, UK in introducing the "3D printing for Development" challenge to 24 young entrepreneurs in India.

CSIE is in the process of creating a sustainable database of social enterprises in Tamil Nadu, building a support fund for IITM students who wish to run a social enterprise, undertaking social impact studies of social enterprises, and coordinating all socially relevant activities within the IITM campus.

7. Continuing Education:

IIT Madras has an important role to play in outreach programmes. The Centre for Continuing Education (CCE) has been very active in promoting activities for the benefit of faculty members of other technical Institutions and

working professionals in Industries. Our faculty members organized 12 AICTE-funded Short Term Training Programmes (QIP) for the benefit of engineering college faculty, as well as 81 Continuing Education Programmes (CEP) for the benefit of Industrial personnel, and 3 programmes under the Curriculum Development Cell. These programmes have benefited about 2800 participants in 2011-12, and resulted in revenue of around ₹ 2.5 crores.

Under the Book Writing Scheme designed to encourage textbook writing by our faculty members, 51 books have so far been published and 5 books have been published in the current year. In addition to this, about 23 books have been published under Golden Jubilee Book Writing Scheme. A total of 41 conference registration numbers and 13 ISBN numbers were allotted by CCE to enable faculty members to organize conferences and publish the proceedings of the conferences.

8. Our Contributions to the National S&T Educational System:

IITM plays an important role in assisting other engineering institutions in the country with their curriculum, laboratory upgradation, and faculty career development. Under the Quality Improvement Programme (QIP), 491 faculty from other institution have obtained their Ph.D degrees and 567 faculty from the other institution have obtained their M.Tech degrees from IITM since its inception. Currently we have a total of 92 QIP scholars – 68 Ph.D and 24 M.Tech which includes 17 women in Ph.D and 8 in M.Tech in the Institute.

The National Programme on Technology Enhanced Learning (NPTEL) is India's largest ICT-based (QIP), 491 faculty from other technical course dissemination programme in the higher education sector. Its main objective is to increase the reach of high-quality engineering and sciences education across our country. The 136 video-based courses and 125 web-based courses in Engineering, Science and Technology developed under NPTEL Phase-I are freely available to everyone on our website <http://nptel.iitm.ac.in> and through Youtube <http://www.youtube.com/iit>, and telecast through the Eklava channel made available by MHRD exclusively for this purpose. The NPTEL Channel in Youtube has received more than 45 million upload views and has crossed 6.4 million channel views. The NPTEL site has recorded more than one crore visits since inception. 67 new courses developed under Phase – II are already available on the NPTEL website and 947 new courses are on the pipeline and expected to be uploaded by end of 2012.

A national Consortium on text-to-speech synthesis launched screen readers in six Indian languages for the visually challenged. They also conducted a training programme “basic computers for the visually challenged”, in which 30 students benefited, and developed an online examination framework for them.

IITM's Summer Fellowship Scheme, initiated a few years ago, provides opportunities for summer training to top-ranking engineering and science students all over the country; 166 students participated in the programme this year.

9. International Collaboration:

IITM has been interacting with several globally reputed universities and organizations for collaborative research, exchange of faculty and students, etc. During the year, we have signed MoUs with universities in Australia, Canada, China, France, Germany, Ireland, Japan, Poland, Sweden, Singapore, Spain, Taiwan, USA and UK. So far IITM has inked 170 MoUs with international universities. We have also signed 10 MoUs with international companies and research laboratories for collaborative R&D. Almost all these MOUs are active, with at least one collaborative effort ongoing in each case. During the summer, as many as 170 faculty members from the Institute visited universities and research laboratories abroad for collaborative research, participation in conferences, visiting assignments, etc.

Over the past few years, the Institute has created several opportunities for international student exchange. Under the Indo-German Agreement between the seven IITs and seven Technical Universities in Germany, we have deputed 6 M.Tech. and 2 M.S. scholars to undertake their project / thesis work in these German Universities last year. We have also received 59 students from Germany to undertake their projects in our research laboratories. Under the DAAD sponsored IITM-Bremen Student Exchange programme, 3 MA students will visit the University of Bremen for a semester. Under the MoU with EPFL, 5 students visited last year, and under the student exchange programme, 2 B.Tech/ DD students visited NTU and NUS. This year a total of 100 exchange students from various countries have visited IITM for course / project / research work.

The Indo-German Centre for Sustainability (IGCS) has completed a year since inception. Three German faculty have joined IGCS as visiting professors to work in the areas of water, waste and energy, respectively. One research project on measuring carbon fluxes from a catchment area in Tamil Nadu is already underway with preliminary funding from IIT Madras, and more collaborative research is being initiated. A minor stream in sustainability is being started by the Civil Engineering Department, and discussions are underway for an interdisciplinary Masters' programme on sustainability and public policy.

A two-week Winter School on sustainability for Indian and German students was conducted in February 2012 at IIT Madras, and a Summer School focusing on energy systems will be held in Berlin in July 2012. A quarterly bulletin is also being brought out by IGCS.

10. Human Resources Training:

Systematic efforts are made to train our technical and administrative staff to help them upgrade and acquire new knowledge, skills and professional orientation through a variety of learning experiences. In the year under review about 90 staff members benefitted from 4 in-service and 22 off-site training programmes. Apart from this, as many as 30 officers/staff have been provided Hindi Training.

A Teaching Learning Centre (TLC), the first of its kind among higher technical institutions in the country, was inaugurated in 2011. The TLC is a part of the Institute's Centre for Continuing Education. The vision is to be a Centre of Excellence and Innovation in the Teaching Learning Process (TLP) for a new and sustainable paradigm in higher technical education, resulting in human resources with the highest professional and personal qualities. Under its auspices, several Faculty Development Programmes (FDP), Workshops and Lectures have been held, and several faculty members have benefitted.

A collaborative MoU on 'Faculty and Student Development and Research in Engineering Education has been signed by IITM and Wipro Mission 10X. A Teaching Assistant Training Program was conducted in collaboration with Wipro's Mission 10X in February 2012, from which 32 Teaching Assistants benefited.

11. Quality And Process Improvement Initiatives

IIT Madras was awarded ISO- 9001:2000 certification for academic support processes since 1999 and for administrative support processes since 2001. In the year 2011, all the units of IIT Madras have been recertified as per the ISO standard ISO 9001:2008. The certificate is valid until August 2014 for academic support processes and till January 2014 for administrative support processes. In addition to ISO 9001:2008 certification, the Central Electronic Centre is NABL-accredited for its Testing and Calibration Laboratories since 2004.

One of the major initiatives to enhance the efficiency and quality of the processes at IITM is Workflow automation. This project, which commenced in 2010, aims to streamline and automate the activities of different sections such as Academic Section, General Administration, Accounts, Gymkhana, Estate, Library and Hostels. Automation of over 150 processes is complete, including most academic processes.

12. Infrastructure Development & Biodiversity Management

The Engineering Unit is one of the important service units of the Institute. It plays a vital role in overseeing all new construction and facilities management in the campus. The unprecedented growth of the last few years, aging of some buildings built during the last 50 years and the increased demand on limited resources such as electricity and water, has led to significant challenges in managing these facilities and services.

The major infrastructure works completed in the campus during the last academic year include construction of additional rooms in seven hostels, squash court, 60 G-type one-bedroom apartments for married research scholars, and primary school building in Vanavani School. The projects currently under construction include New Shopping Complex, New Community Centre, 30 Nos. 'G' type quarters for married research scholars, two new 400-seat hostels for men, and a new 540-seat women's hostel.

A Revised Master Plan has been finalized for the campus to ensure that the growth occurs in a sustainable manner while protecting the ecosystem. Provision has been made in the Plan for expansion of student capacity to 8000 with the concomitant academic, residential and recreational facilities. This has been done without significant additional footprint burden, by replacement of old buildings with high-rise structures. Upgradation of the support infrastructure such as water, electricity and sewerage has also been taken into account.

Construction of a number of new buildings and facilities as per the Master Plan are slated to commence in the ensuing academic year. These include: New Academic Complex for three departments, a new Canteen Building, an additional block for Chemistry Department, a new building to accommodate the Indo-German Center for Sustainability and expansion of Biotechnology Department, 48 'B' type apartments, new dining facility for 1200 students near Krishna Hostel, and renovation of the Open Air Theatre and the Swimming Pool. It is being ensured that all the new buildings meet the green building norms and are provided with energy efficient fittings.

We remain committed to protecting and preserving our beautiful campus and its animal population, even as we implement the mandated growth plan. While spotted deer and macaque populations have increased significantly since 2008 and now number in the hundreds, the black buck count has fluctuated around 20. With completion of construction activities in the hostel sector, which overlaps with the black buck habitat, we are hopeful that the black buck will also rebound.

The Zero Waste Zone (0WZone) project continues to do yeoman service to the cause of keeping the campus clean. It employs five self-help groups to collect the solid waste on campus on a daily basis for segregation, recycling and composting.

13. Student Co-curricular And Extra-curricular Activities:

The academic year 2011-12 has been yet another remarkable one for the students. The co- and extra-curricular activities continued with great enthusiasm and scaled new heights. Eminent personalities from all walks of life addressed our students in different forums. Several new initiatives were launched for the welfare of the students.

IIT Madras won the Men's General Championship in the 47th INTER-IIT SPORTS MEET, in the closest fought Inter-IIT ever. With this, our GC tally goes to 19, which is ahead of any other IIT by 7. This year, IIT Madras won gold medals in Hockey, TT (for the sixth consecutive year), Basketball (for the first time in six years) and Weightlifting. We also won silver medals in Athletics and Squash. Our women's contingent fought with spirit in the Women's GC, with the Volleyball team coming in for special mention.

The IIT Madras Weightlifting team won six silver medals and secured the overall 2nd place in the Chennai District Open Weight Lifting Championship.

IITM assisted in the conduct of the third edition of the TERRY FOX RUN in aid of cancer research. The participation (~10,000) and the funds collected (₹ 10 lakhs) were more than double when compared to previous editions.

SHAASTRA, India's premier ISO-certified annual technical festival, managed by a team of about 500 students with intense planning for over a period of 6 months, witnessed a footfall of over 20000 and about ₹ 15 lakhs in prize money this year. Shaastra 2011 created high benchmarks ranging from setting up a national record for the maximum number of robots on a line, to introducing ERP- based QMS bar code reader technology. Shaastra 2011 also marked the beginning of a close association of the PG students and the IIT Madras Research Park with Shaastra.

Shaastra 2011 initiated the Inter-University Sustainability Challenge, which invited participants from various colleges to adopt green projects on their campuses, encompassing myriad themes such as Energy, Water, Waste-management, Social Media and Awareness, and Community participation. The IIT-Madras Research Expo at Shaastra 2011 demonstrated the research carried out by various research groups in the Institute and was regarded as the most diverse Research Expo ever put up by a college. The Industrial Open House that proved to be a platform of innovations in science and technology was conducted in association with leading companies and organizations.

The Spirit of Engineering (SOE) projects executed over a 3-4 month period prior to Shaastra at the CENTRE FOR INNOVATION (CFI) represent the very soul of Shaastra. This year, CFI demonstrated a wide variety of SoE projects during Shaastra which include a human-computer interface operated through hand gestures, a ball follower robot, and a prize-winning interactive surface called Insense made with low-cost foam and acrylic sheets.

Students have also undertaken 3 big projects this year at CFI with a view to participating in international competitions: Robocon – a robot contest conducted by Asia-Pacific Broadcasting Union; FIRA - an international Robo-soccer competition hosted by the Federation of International Robo-soccer Associations; and Formula SAE - a student design competition organized by the Society of Automotive Engineers. CFI now has several clubs. The Computer Vision Club, the HAM Radio Club, Electronics Club, and 3-D Animation clubs have been added to the existing Aero-Modelling, iBOT and Auto Clubs.

This academic year saw the revival of an old lecture series JOY OF SCIENCE, with lectures on interesting and extraordinary topics from science and engineering. The first talk was delivered by Prof. S. Ranganathan, IISc on “QuasiCrystals – Arts meets Science”, a recent Nobel Prize winning topic.

The EXTRA MURAL LECTURE (EML) team of IIT Madras has been very successful in bringing speakers of national and international repute to the campus throughout the year to shed insight, provoke thought and stimulate conversation about some of the most compelling issues, stories and events of our time. The Speakers this year include Mr.Simon Katich, Dr.G.Vishwanathan, Mr.Rajiv Malhotra, Mr.N.Gopaldaswami Mr.Khursed Batliwala, Dr.Jayant Narlikar, Prof.Hans-Peter Durr, Dr.Y.V.Reddy, and Dr. Shantha Sinha.

The COLLOQUIUM is a discussion forum at IIT Madras that conducts open discussions on topics of public interest, i.e., current affairs, topics of social relevance, and topics of interest to the student community. The forum seeks active engagement from its participants and promotes debate and exchange of ideas through regular discussions. The Colloquium also maintains an active Facebook page. A total of 9 discussions were held spread across the academic year.

The cultural festival SAARANG 2012 saw a footfall of 50000. It witnessed 52 events with notable additions such as the Carnival and the Saarang debate, and MadAds. The carnival area was a big hit with fair games and street performances by regional folk artists from Karnataka, Tibetan dancers, jugglers and street magicians. The Saarang Indian Film Festival was hosted for the first time with notable film-makers like Gitanjali Rao, T Kumararaja, Sudhish Kamath and Kaushik Mukherjee. The Big Plan was a new socially oriented initiative involving a fund raising run and a library building competition. Popular and Culture Lectures Series involved people like Anita Ratnam, the Trichur Brothers, R Balki, and ventriloquist Indusree. The first ever campus edition of INK Talks (the cultural counterpart of TED Talks) was held at IIT Madras with a 5-lecture session.

The students donated the proceeds ₹ 8.25 lacs) earned out of the Choreo Night to charity. SPICMACAY IIT Madras chapter was revived and had the inaugural session by Pandit Shiv Kumar Sharma. A Gotipua Dance event and Kalamkari workshop were conducted by Spic Macay this semester.

The IIT MADRAS OPEN QUIZ was organized by the Quiz club with prize money of ₹ 1.5 Lacs.

SUSTAINABILITY NETWORK (SNet), a new faculty-student organization with support from the administration, staff, alumni and other campus communities, is a group of environmentally conscious volunteers who engage in promoting sustainable practices within our campus. The major activities of SNet are : Shaastra Sustainability Challenge, Solar Photovoltaics Workshop, Chennai Coastal Cleanup Programme, and Renewable Energy Day Celebrations.

IIT FOR VILLAGES (IVil), serving the dual role of a discussion forum and an action platform for the students of the Institute to work for and discover rural India, has seen a plethora of activities this year - a tech-fest and science lab in the village of Vallipuram; a project on evaluating the supply chain of a rural product reaching the urban market; a session of Ignited Minds to sensitize Chennai school kids to the reality of rural India, to name a few.

14. Student Welfare:

This year the Guidance and the counseling Unit (GCU), renamed Mitr, saw a lot of changes. The newly formed faculty team has been structured in terms of a Chief Advisor (Mitr), and five Faculty Mentors, one each for the B.Tech/DD, M.Tech+ MBA+M.Sc, MA+ integrated MSc, MS+P.hD programmes, and one for lady students. Mitr is structured on a task-force based model, with the team divided into academic grievances, anti-addiction, public health, social activities, creative and media task forces. Each task force is headed by a coordinator and volunteer counselors. A 24*7 counseling system was implemented this academic year with a 24-hour helpline. A professional Counseling organization provides the counselors who visit the campus every day during working hours and man the call centre at all times.

The Anti-Smoking Campaign was aimed at making people aware of the hazards of cigarette smoking. It grew institute-wide with The Fifth Estate, our campus magazine, supporting the cause. The final phase of the campaign would be to help the people who want to quit smoking through workshops. A confession box system has been introduced for anyone who wishes to share his/her problems, and is built into the Mitr website.

15. Placement:

A total of 249 companies have visited the campus for placement, of which 192 were core engineering industries. Over 50 new recruiters have registered this year. A new trend has been set, with 10 foreign companies visiting this year as compared to a mere 3 last year. With the inclusion of Internship placement, there have been many internship opportunities for 2nd year UG and MBA students involving teaching, web-operations, design, marketing, technology, etc.

16. Alumni Matters:

The alumni of our Institute make us proud by distinguishing themselves in various professions and walks of life. Many occupy leadership positions in India and abroad in Industry, Government Organizations and Educational Institutions, fulfilling the original intent of the creators of the IIT system. Till 2011, 35979 students have been awarded degrees. Since 1997, we have been honouring select alumni for their distinguished contributions to society, through Distinguished Alumnus Awards every year. The names of the awardees for the year 2012 were announced on Republic Day. They are:

- ◆ Dr. Raj Mutharasan, Professor, Chemical & Biological Engineering., Drexel University, USA
- ◆ Dr. Jayant R. Haritsa, Senior Professor, Department of Computer Science and Automation, IISC Bangalore
- ◆ Dr. Prabhakar Raghavan, Vice-President, Strategies Technologies, Google, USA
- ◆ Dr. P.R. Kumar, Professor and College of Engineering Chair in Computer Engineering Texas A & M University, USA
- ◆ Dr. V. Sumantran, Vice Chairman, Hinduja Automotive Ltd, Chennai
- ◆ Dr. Ashok S. Krishna, Vice President of Technology for Global Downstream, Chevron Corp., USA
- ◆ Ms. Uma Ghurka, Technical Director, Thermopads Pvt. Ltd. & Managing Director, Thermo Cables Ltd., Hyderabad
- ◆ Dr. Balaji Sampath, Founder and CEO, AID INDIA, Chennai

Alumni continue to contribute generously towards the development of the Institute, and the welfare of our students. In 2011, for the first time ever, alumni donations to IIT Madras exceeded ₹10 crores in a calendar year, with nearly ₹ 8 crores being donated by alumni in India. Contributions were directed towards research infrastructure, socially - relevant projects, chair professorships, student and faculty awards, an "Alumni Endowment" corpus fund, and a "Nobel Laureate Lecture Series".

Many events were held on campus to strengthen and celebrate alumni relations. The first-ever "PG Confluence Day" was held in April 2011, at the behest of IITM post- graduate students. It was conceived as an initiative to achieve a quantum leap in relation-building between IITM PG students and alumni, as well as to instill a deeper sense of belonging among PG students. "Alumni Day" was celebrated in July 2011. More than 320 alumni, faculty and families joined the proceedings.

"Reunion Day 2011" was attended by more than 300 alumni with families. It featured the Silver Reunion of the 1986 batch, the Pearl Reunion of the 1981 batch, and the Coral Reunion of the 1976 batch. A highlight of the Event was the release of the first-ever IIT Madras coffee - table book "Campaschimes", a collaborative effort between our alumni, Prof. Ajit Kumar Kolar (ME) and Kumaran Sathasivam.

Brief Summary of the Research Work

Ph.D

Aerospace Engineering:

- Balaji C & Dr. SR Chakravarthy formulated the flame acoustic interaction in a generalised framework of simultaneous multiple time and length scale.
- Chenthil Kumar K & Dr. Amit Kumar explored numerically the mechanisms controlling flame spread over thin solids in space environment and their extinction by use of water mist.
- Lipika Kabiraj & Dr. RI Sujith investigated the non-linear thermoacoustic oscillation from the point of view of the dynamical systems theory.
- Priya S & Dr. RI Sujith performed a non-modal approach to stability analysis of thermoacoustic instability effectively using tools from dynamical systems theory to and determined linear & nonlinear stability of the system.
- Sathesh Mariappan & Dr. R.I Sujith developed a mathematical framework for modeling and stability analysis of thermoacoustic systems.

Applied Mechanics

- Hemalatha K & Dr. M Manivannan developed a hybrid mathematical model of human cardiopulmonary system and carried out studies to explore the clinical role of peripheral arterial pulse.
- Jayanthy AK & Dr. N Sujatha developed a laser speckle contrast imaging technique and applied it for the assessment of RBC concentration, depth and blood flow in burns and for understanding the changes in capillary blood associated with certain diseases like psoriasis and diabetic foot ulcer.
- Kasimiyan T and Dr. K. Ramesh proposed a new five-step method with adaptive smoothing and two-point colour adaptation, which can be used for solving complex problems by conventional transmission and reflection polariscopes.
- Mohamed Yacin S, Dr. M Manivannan & Dr. V Srinivas Chakravarthy proposed a non-invasive measurement of gastric motility using finger photoplethysmographic signal and conducted studies on healthy male volunteers.
- Srinivasan K & Dr. M Ramasubba Reddy developed several lossless/near-lossless compression algorithms for electroencephalogram (EEG) signals based on their high- dimensional forms. Alzheimer's disease EEG signals were studied using novel complexity measures and various other statistical measures in the context of classification from normal EEG.

Biotechnology:

- Aneesh Chandran NA & Dr. Sanjib Senapati showed through molecular dynamics simulations that the stability of acetate anion-based ionic liquids (IL)-in-CO₂ micro emulsions mainly pertains to anion-surfactant interactions, and the IL cations play a secondary role. They explored the basis of long-term stability of DNA in hydrated ILs.
- Hema Iswarya S & Dr. Mukesh Doble studied the interaction of phenylpropanoids with synthetic drugs as antibacterial and anticancer agents to reduce the dose of the drug and the toxicity associated with it.
- Kavitha S & Dr. TS Chandra studied the stress response of filamentous fungus *ashbyagossypii* in the presence of oxidants and anti-oxidants.

- Mrudula Mathew & Dr. Rama S Verma developed three novel humanized immunotoxins for targeting acute myeloid leukemia (AML) cells and demonstrated that the proteins were selectively cytotoxic to AML cells and that they acted through induction of apoptosis.
- Poosarla V Giridhar & Dr. TS Chandra produced multiple xylanases in SMF and SSF using *Gracilibacillus* sp., an aerobic, xylanolytic moderately halophilic bacterium. Xylanase was purified and characterized. It was the first notably extremely halo-acid-alkali-stable xylanase, good candidate for many industrial applications.
- Ritam Sarkar & Dr. Anju Chadha isolated six novel lipase genes from candida yeast and over expressed in *E. coli* as fusion proteins. The lipases were used for the production of biodiesel fuel.
- Sandeep Shiromani & Dr. GK Suraishkumar studied the metabolic responses of *Bacillus subtilis* to stress induced by reactive oxygen species and reactive nitrogen species.
- Sawan Kumar & Dr. Satyanarayana Gummadi studied the growth and Metabolism of Halotolerant *Debaryomyces Nepalensis* NCYC 3413.
- Shashi Bala Prasad, Dr. KB Ramachandran & Dr. Guhan Jayaraman genetically engineered *Lactococcus lactis* for the production of hyaluronan, a muco-polysaccharide used for the treatment of osteoarthritis, and in drug delivery etc.
- Sreejit P & Dr. Rama S Verma developed protocols for the isolation and long term maintenance of murine neonatal cardiomyocytes, and adult bone marrow derived stem cells (BMSC), which were then used to generate putative mesenchymal stem cell lines and ventricular cardiomyogenic cell line. BMSC grown on vardiogel increased cell proliferation, adhesion, enhanced survival under stress, and cardiomyogenic specific differentiation even in the absence of chemical induction.
- Stella S & Dr. Anju Chadha prepared chiral synthons like optically pure amino acids and hydroxy amides using biocatalytic methods and epoxides using polypeptide catalyzed reactions.
- Tarjan K, Dr. Anju Chadha & Dr. Satyanarayana Gummadi produced in large scale, optically pure chiral intermediates using *Candida Parasitosis* ATCC 7330.

Chemical Engineering:

- Prabu V & Dr. Sreenivas Jayanti studied experimentally and theoretically the possibility of using underground gasification of Indian coals for carbon-neutral electrical power generation thus paving the way for clean coal utilization.
- Saravanan V, Dr. Sreenivas Jayanti & S. Seetharamu (CPRI, Bangalore) studied experimentally and through computational fluid dynamics-based simulations the possibility of retrofitting Indian utility boilers operating of high ash Indian coals to operate in oxy-coal combustion mode to allow for implementation of carbon capture and storage schemes.
- Suresh K & Dr. A. Kannan studied the effect of particle blockage and eccentricity in location on the Newtonian and non-Newtonian fluid hydrodynamics and heat transfer around a sphere.
- Venkat Reddy Regatte & Dr. Niket S Kaisare simulated and analysed high temperature catalytic microreactors as efficient and effective sources for distributed power generation.

Chemistry:

- Arunabha Thakur & Dr. Sundargopal Ghosh have described the chemistry and applications of functionalized ferrocenes, fischer-carbenes and dimoybdahetero-boranes.
- Christy George & Dr. N. Chandrakumar developed novel optimal NMR experiments for homonuclear correlation of rare spins with both direct and indirect detection, and also an experiment to amplify scalar couplings. Further, they developed new NMR methodology for membrane permeability studies and performed NMR imaging of fuel cells under load.
- Ganesan M & Dr. KM Murleedharan synthesized glycolipid mimics and nucleoside analogs and used polyhydroxylated Oxanorbornane and 1,2,3-Triazole Moieties as Design Elements.
- Geetharani K & Dr. Sundargopal Ghosh have described the synthesis, reactivity and catalytic activity of group 8 metallaborane clusters.

- Jagadeesh Chandra Prasad D and Dr. G. Sekar have developed a new methodology for the synthesis of benzo fused sulfur heterocycles through copper catalyzed C(aryl)–S Bond forming reactions.
- Jasmine Maria Joseph & Dr. E. Prasad identified the factors which control the aggregation properties of one class of polymers and designed a strategy for controlling the morphology of macromolecular assembly.
- Lekha PK & Dr. E. Prasad developed tunable light emitting molecular assembly in the visible region of the electromagnetic spectrum and designed a strategy for generating excimers for polycyclic hydrocarbon units.
- Monalisa Mohapatra & Dr. AK Mishra demonstrated that certain fluorescent molecular probes based on excited state prototropism are remarkably sensitive in sensing hydration of lipid bilayer membranes.
- Murali A & Dr. S. Baskaran developed a novel approach for the stereo- and enantioselective total synthesis of Pyrrolizidine alkaloid 223I.
- Muthupandi P and Dr. G. Sekar have developed a new protocol for the synthesis of optically active α -hydroxy ketones and α -hydroxyphosphonates using chiral metal catalysts.
- Payal Malik & Dr. Debashis Chakraborty synthesised new phosphoroimidates, thiophosphoroimidates, aryldihydrogen-phosphates and described their role as catalyst for ring-opening polymerization.
- Rima Das & Dr. Debashis Chakraborty described the Ag(I) mediated catalytic transformation of organic molecules.
- Saravana Kumar R & Dr. S. Sankararaman developed new palladium-1,2,3- Triazolylidene complexes and studied their catalytic activities towards C-C bond forming reactions; synthesized acetylene dicarboxylic acid and utilized them as building block for co-ordination polymer and hydrogen bond network solid.
- Saritha Davuluri & Dr. UV. Varadaraju explored new electrode materials for rechargeable Li-ion batteries.
- Senthil Murugan A & Dr. Indrapal Singh Aidhen developed new strategies and novel building blocks for the synthesis of TT720, Varitriol and spaced sugars.
- Sumantha Kumar Meher & Dr. G. Ranga Rao developed novel synthesis methods for nanostructured oxide materials that were found to be extremely active for electrochemical energy storage, catalysis and sensors.

Civil Engineering

- Anil Kumar MV & Dr. V Kalyanaraman developed a new design equation for the strength of cold formed steel lipped channel compression members under the interaction of local, distortional and overall buckling.
- Anjan Kumar S & Dr. A. Veeraragavan developed a framework for selection of binders considering the issues & benefits related to the performance of bituminous mixtures in pavement layers.
- Balu AS & Dr. BN Rao developed a methodology that can be applied to estimate the structural reliability in the presence of mixed uncertain variables accurately and efficiently.
- Chethanamba KR & Dr. GR Dodagoudar proposed a method to remove the scalability problem associated with the fixed and adaptive kernel density estimation to seismic hazard analysis.
- Devkar Ganesh Ashok & Dr. KN Satyanarayana identified and assessed the competencies in urban local bodies for implementing urban PPP projects in India.
- Ethirajan R & Dr. S Mohan assessed in detail volatile organic compounds (VOC) in an industrial area and developed an integrated model for estimation of source profiles and in turn the source contributions of VOC.
- Jeyasingh J, Dr. Ligy Philip & Dr. BS Murthy carried out the bioremediation of hexavalent chromium contaminated soil and aquifer with reference to the chromium contaminated site at Ranipet, Tamilnadu, India, using pilot scale studies and development of management models.
- John Albino D & Dr. Indumathi M Nambi tried to accelerate bioremediation of ground water contaminated with solvents. They identified anaerobic organisms which can produce biosurfactants and also biodegrade the solvent.

- Kanagarathinam L, Dr. GR Dodagoudar & Dr. A Boominathan carried out a comprehensive probabilistic seismic hazard analysis for structures of the NPP facilities at Kalpakkam, Tamilnadu and presented the results in the form of peak ground acceleration, uniform hazard spectra and spectrum compatible acceleration time-histories.
- Moltat Zewdie Belayneh & Dr. BS Murthy developed a water quality management model under single & multi objective optimization for tidal river scenario.
- Natarajan N & Dr. G Suresh Kumar studied the numerical modeling of co-colloidal reactive solute transport in a single fracture.
- Nithyadharan M & Dr. V Kalyanaraman studied cold-formed steel shear wall panels under monotonic and reversed cyclic in-plane shear loading using experimental studies and computational modelling.
- Pavan Kumar K & Dr. S Mohan developed a new equity measure for waste load allocation problems and proposed both fuzzy and scheduling models for waste load allocation through scheduling of dischargeable waste load spatially and temporally.
- Priyadarsini RS, Dr. V Kalyanaraman & Dr. MS Sivakumar experimentally and numerically studied the buckling behaviour of axially compressed composite cylindrical shells with and without PZT patches.
- Rajasekar E & Dr. A Ramachandraiah evaluated objectively and subjectively the thermal comfort characteristics in residential apartments located in hot humid climates and analyzed the influence of various design factors and building material properties on the indoor thermal comfort.
- Rakesh J Pillai, Dr. RG Robinson & Dr. A Boominathan studied the effect of microfabric on the static and cyclic behaviour of clays by conducting static and cyclic triaxial experiments and analysed the results using critical state soil models.
- Sri Muruganandam B & Dr. SM Shiva Nagendra characterized particulates emitted from heterogeneous traffic, their source identification and developed an ANN based PM prediction model.
- Sreenath S, Dr. U Saravanan & Dr. V Kalyanaraman developed an efficient and accurate hybrid model for the analysis of steel plane frames.
- Sundaresan R & Dr. G Appa Rao investigated the size effect in RC deep beams and proposed energy based size effect equation for predicting the shear strength of RC beams with and without web reinforcement.

Computer Science and Engineering

- Dhnanjaya N, Dr. B. Yegnanarayana & Dr. C. Chandrasekhar explore the signal processing methods that utilize the speech production knowledge for extracting and representing information in the speech signal. New methods such as zero-time liftering have been proposed for excitation-based analysis of acoustic events in speech.
- Renumol VG, Dr. D. Janakiram & Dr. S. Jayaprakash identified the cognitive processes relevant for procedural programming and differentiated the cognitive behavior of effective and ineffective students in programming. They proposed a teaching strategy mainly for ineffective students based on some cognitive principles.
- Sadagopan N & Dr. NS Narayanaswamy studied the impact of graph operations on vertex connectivity from complexity and combinatorics view.
- Vinod P & Sukhendu Das proposed a multi-stage framework to model the relationship (in eigen-domain) between a real-world frontal training face image and its virtual face manifold, using subject-invariant eigen-domain transformations (EDTs), to obtain illumination- and pose-invariant face recognition from a single frontal training sample. Concept of SUBBAND face and a module for face pose classification using a SVM trained using geometric features of a face, have been exploited for this purpose.

Electrical Engineering:

- Achintya Kumar Sarkar & Dr. S Umesh proposed several computationally efficient techniques for speaker-identification and verification which are important in many real-time applications.

- Angeline Ezhilarasi G & Dr. K Shanti Swarup used decomposition and coordination approach to power system studies with implementation of distributed processing of load flow analysis and parallel processing of contingency analysis.
- Arnav Vinayak Bhavsar & Dr. AN Rajagopalan addressed the problem of scene recovery using optical and range cameras with special emphasis on content-dependent interpretations.
- Aryanandiny B & Dr. R Sarathi adopted UHF technique to show electrical treeing phenomena in XPLE cable insulation under harmonic AC voltages.
- Bama M, Dr. Andrew Thangaraj & Dr. Srikrishna Bhashyam proposed new relaying protocols for unicast and multicast communication over half-duplex relay networks. Protocols using interference processing techniques were showed to perform significantly better than interference avoidance protocols, especially in multi-hop relay networks with three or more hops.
- Binu Sarkar, Dr. R Sarathi & Dr. SR Chakravarthy generated nano-particles for hydrogen applications and synthesised tungsten carbide nano-particles. They characterized polymer nano-composites by laser ablation method.
- Jamuna K & Dr. K Shanti Swarup developed a hybrid power system state estimator with both SCADA and PMU measurements for observability analysis and optimal measurement placement.
- Jobymol Jacob, Dr. Amitava Dasgupta & Dr. Anjan Chakravorty developed a physics based compact model of non-quasi-static effects in silicon-germanium hetero-junction bipolar transistor. They implemented large-signal equivalent circuit model and showed its superiority over state-of-the-art existing models by verifying against numerically simulated reference data.
- Shakti Prasad Rath & Dr. S Umesh addressed the problem of inter speaker variability in automatic speech recognition and proposed several new techniques to account for such problems.
- Sivasubramani S & Dr. K Shanti Swarup proposed hybrid optimization techniques, by combining classical and evolutionary methods, to solve the power system problems having non-convex characteristics.
- Srinivas Bhaskar Karanki, Dr. Mahesh Kumar & Dr. Kalyan Kumar worked on topologies and design of state feedback controller for custom power devices in power distribution system and proposed new topologies and control algorithms.
- Vinosh Babu James J & Dr. Bhaskar Ramamurthi proposed a distributed base station cooperation employing cooperative precoder selection for effective interference mitigation in cellular wireless systems. They also proposed three different cooperative precoder selection schemes, and characterized their performance under different deployment scenarios.

Engineering Design:

- Jagannath M & Dr. Venkatesh Balasubramanian developed a methodology to use multimodal physiological signals to assess driver fatigue in three different modes of transport that has potential application in designing seat bucks and evaluating ride comfort of automobiles.
- Jobin K Antony & Dr. Nilesh J Vasa studied laser induced breakdown spectroscopy (LIBS) for high vacuum applications especially on lunar surface. They proposed and demonstrated a novel dual-wavelength approach.

Humanities & Social Sciences:

- Girija Vaidyanathan & Dr. VR Muraleedharan assessed whether the benefits of public spending preferentially reach the poor by analysing patterns of utilization of public health care service in the state of Tamil Nadu.
- Malini V Shankar & Dr. VR Muraleedharan studied the effect of standards stipulated by developed countries on the competitiveness of small producers, with specific reference to grape farmers in Maharashtra for public policy in agribusiness.
- Shashi Kanta Tarai & Dr. S Devaki Reddy showed that Odia speakers nativize Arabic, Portuguese and English loan words by modifying the segments features, syllable structures and periodic features.
- Vidya Sarveswaran & Dr. R Swarnalatha conducted an ecocritical study of the integrated orientation in the writings of Terry Tempest Williams.

Management Studies:

- Devi Soumyaja & TJ Kamalanabhan studied the antecedents of employee readiness for change and analyzed the individual, process and context factors.
- Manish Kumar & Dr. M Thenmozhi proposed different hybrid linear and non linear models to forecast financial stock indices.
- Neha Sharma & Dr. TJ Kamalanabhan examined the role of internal corporate communication on internal branding outcomes in Indian IT services.
- Priya Nair & Dr. TJ Kamalanabhan examined the impact of organizational environment on unethical choices and its relationship of moral disengagement and ethical empowerment among managers.
- Raghupathy MB & Dr. A Thillairajan examined the impact of venture capital investment in maximizing firm value using comparative company method that used operating and stock performance measures to estimate value creation.
- Shoban Babu B & Dr. G Srinivasan analysed reconfiguration issues in manufacturing systems to identify when to change the system and what to change in the system.
- Susan Thomas & Dr. TJ Kamalanabhan compared the emotional intelligence at the work place in multinational and Indian companies.

Mathematics:

- Debasisha Mishra & Dr. KC Sivakumar extended certain important results hitherto known for matrices having nonnegative inverses to matrices having nonnegative generalized inverses using proper splittings.
- Indhumathi R & Dr. SA Choudum showed that several height-balanced trees are embeddable into hyper cubes with minimum dilation, minimum load and minimum expansion.
- Ramakrishna Nanduri & Dr. AV Jayanthan studied some homological properties namely depth, Cohen-Macaulayness, Castelnuovo-Mumford Regularity, relation type and Gorensteinness of a blowup algebra known as fiber cone.
- Sudhakar M & Dr. S. Sundar studied and analyzed the calibration furnace with uniform block heating through numerical modeling and simulation.

Mechanical Engineering:

- Anand Verma & Dr. K. Gopinath developed high strength Boron steel and compared the mechanical properties and rolling contact fatigue strength with EN353 steel.
- Arun Prakash, Dr. R. Gnanamoorthy & Dr. M. Kamaraj investigated the new surface enhancement processes, namely oil-jet peening and controlled ball impact peening, that were used for the generation of ultrafine grain structure in the surface layer of metallic materials by inducing compressive residual stresses with significant surface hardening.
- Biju B, Dr. N. Ganesan & Dr. Shankar Krishnapillai used the magnetic vector potential approach and studied the dynamic response of MEE structures such as beam, plate and shell using finite element method. MEE materials are those which have magneto-electric coupling in addition to electro-elastic and magneto-elastic coupling.
- Diwakar SV, Dr. T. Sundararajan & Dr. Sarit Kumar Das analysed the stability of confined two layer system and evolved a novel algorithm for interface tracking in multi-phase flow.
- Ganesan S & Dr. P Chandramouli proposed a new time-varying stiffness model for flexible diaphragm coupling under parallel misalignment. This simpler model was generated from a finite element model with geometric non-linearities. This model was then used with a rotor system finite element model to predict the dynamics of a power-take-off shaft. Vibration measurements on the system clearly validates the procedure and can be used to examine the effects of misalignment on system dynamics in a computationally effective manner.
- Gnanasekaran N & Dr. C. Balaji developed a new Markov Chain Monte Carlo (MCMC) based Bayesian approach to simultaneously estimate thermodynamic and transport properties in heat transfer systems by combining measurements and mathematical models.

- Hariharan K, Dr. M. Sathya Prasad & Dr. V. Raghu Prakash studied the effect of anisotropy and residual stresses induced due to metal forming on the fatigue life of sheet metal components and observed that even though the residual stresses along a specific orientation of a sheet metal was high, it does not correspondingly affect the fatigue life of sheet metal components.
- Janarthanan B, Dr. C. Sujatha & Dr.P Chandramouli developed a simulator for a tracked vehicle integrating the longitudinal and lateral dynamics for perhaps the first time. The inputs to the simulator are from the accelerator/brake pedals and steering wheel and the vehicle motion is the output. These simulation results have been validated with extensive field experiments on hard ground and cross-country conditions.
- Jogi Janaki Suresh, Dr. Ajit Kumar Kolar & Dr. K. Srinivas Reddy analysed the energy, exergy environment and economic of advanced coal technologies for power generation.
- Manoj Kumar P & Dr. Ajit Kumar Kolar dealt with three dimensional modeling and experimental studies on air-breathing proton exchange membrane fuel cells.
- Micha Prem Kumar T & Dr. Dhiman Chatterjee carried out characterization of S- shaped blades under non-cavitating and cavitating conditions using experimental and numerical techniques. These results help in better design of fully reversible flow hydroturbomachine that finds use in tidal power plants.
- Mohan R & Dr. N. Ramesh Babu developed a novel method of polishing metallic materials with Ice bonded abrasive polishing and established its feasibility for ultra- fine polishing of flat surfaces by nano sized abrasive particles embedded in ice matrix.
- Murugarajan A & Dr. GL Samuel developed a non-contact sensor based measurement system using a capacitive sensor for measurement of micro/meso-scale features. Techniques for measurement and evaluation of surface finish, form and dimensional features of meso-scale components were developed and verified experimentally.
- Praveen Krishna IR & Dr. P Chandramouli proposed several model reduction techniques based on harmonic balance method with parametric continuation for studying non-linear dynamics of systems with localized clearances. The computationally effective method was identified and was applied to a rotor-stator rub interaction problem (with application in gas turbine engines). One of the unique features of this study was the comparison between flexible-to-rigid surface impacts and flexible-to-flexible surface impacts both experimentally and numerically on simple structures as well in the case of rotor-stator rub interactions.
- Rama Thirumurugan & Dr. G. Muthuveerappan studied the load sharing ratio based stress analysis of high contact ratio spur gears and evaluated their performance in terms of friction losses.
- Ruben Sudhakar, Dr. Ajit Kumar Kolar and Dr. K. Srinivas Reddy studied the devolatilization and combustion of wood particle in a fluidized bed combustor.
- Saleel Ismail & Dr. Pramod S Mehta presented the second law-based analyses of sub- processes involved in fuel-air mixing and combustion in IC engines and identified the causes of the destruction and loss of the supplied fuel availability.
- Shaji Mohan B, Dr. Shaligram Tiwari & Dr. MP Maiya investigated the Liquid Desiccant-Vapour Compression Hybrid Air Conditioning System for low humidity air conditioning. The system is modeled, built and tested for low S/A (desiccant solution to air) flow ratio in the absorber and regenerator columns. The hybrid system was found to be very energy efficient for low humidity applications such as datacenters and archives.
- Sheik Mansoor Ali OS & Dr. V. Raghavan used transient, two-phase numerical model and predicted mass burning and flame spread rates in steady diffusion flames and transient concurrent flame spread over methanol surfaces.
- Srinivasa Ramanujam K & Dr. C. Balaji developed a suite of Algorithms to determine the vertical rain structure in the atmosphere using satellite microwave radiances for applications in the new Indian climate research satellite – Megha-Tropiques.
- Suresh Kumar & Dr. Raghu Prakash numerically estimated the stress intensity factors for cracks emanating from a thread root of a bolt and found that there was a need to model the boundary conditions accurately, such as nut face loading, friction coefficient and load distribution between different threads. They investigated the effect of thread geometry and multi-start threads on stress intensity factor.

Metallurgical and Materials Engineering:

- Boda Ramakrishna Rao, Dr. BS Murthy & Dr. A.S.Gandhi proposed a new glass forming ability criterion which is better than the existing criteria in identifying the best glass forming composition in multicomponent alloys and verified it successfully in iron and copper based alloys.
- Kesavan D & Dr. Kamaraj investigated Ni-based surface coating on Type 316LN stainless steel using Plasma Transferred Arc welding process (PTA) and evaluated stability of microstructure, wear, corrosion and aging behavior for Nuclear Engineering applications.
- Murugan K, Dr. BS .Murthy & Dr. AS Gandhi developed visible light active nano titania coatings on glassy substrates and analysed in detail their efficiency of stain removal.
- Praveen Kumar B, Dr. BS Murty & Dr. M .Balasubramanian dealt with the development and dielectric characterization of nanocrystalline Pb-Zr-Titanates with various dopants and demonstrated their superior behavior in comparison to their microcrystalline counterparts.
- Sangeetha Raman & Dr. Ravikumar N V discussed the structural and mechanical properties of the barnacle exoskeleton along with their adhesion behaviour to various surfaces through extensive interfacial analysis
- Suresh Kumar R & Dr. Ashutosh Gandhi developed silicon carbide composites with molybdenum di-silicide and zirconium di-boride as reinforcements. They established the potential of the SiC-MoSi₂ composites as high temperature structural materials for space applications.

Ocean Engineering:

- Aswathy Senan & Dr. P Krishnankutty studied using finite element method the nonlinear effects of free surface waves on marine structures.
- Rajasekaran C & Dr. SA Sannasiraj studied experimentally the acoustic characteristics of the breaking wave and its correlation with wave breaking dynamics.
- Seebai T & Dr. R Sundaravadivelu studied experimentally and numerically the response analysis of a spar platform to support a 5mw Wind Turbine.
- Thayapraba M, Dr. K Murali & Dr. V Anantha Subramanian conducted a comprehensive experimental study to characterise the hydrodynamic properties of the submerged elastic plates in waves.

Physics:

- Ajay Deep Kachhvah & Dr. Neelima M identified the critical case of load bearing hierarchical network where power law distributions were observed and the existence of an explosive percolation transition on a substrate that corresponds to this critical case when the normal networks showed a second order percolation transition.
- Anupriya J & Dr. M. Pattabiraman studied experimentally and computationally the influence of a Laguerre Gaussian beam on electromagnetically induced absorption and transparency resonances, magneto-optical rotation and associated Zeeman coherences in atomic Rubidium.
- Basherrudin Mahmud Ahmed A & Dr. MV Satyanarayana studied several cavity QED systems to understand the entanglement dynamics among various constituents of the systems and analysed the effects of nonlinearity and intensity dependent atom-field coupling on the dynamics of atom-field interaction.
- Jagadeesh Kumar K & Dr. A Subrahmanyam reported the correlation of physical properties with the photocatalytic properties of wide band gap metal oxide thin films prepared by a technique suitable for industrial production.
- Jyothirmayee Aravind SS & Dr. S Ramaprabhu developed a novel method for the synthesis of graphene by a green energy approach and developed a semiconducting NPs based nano-coolant for the removal of thermal energy from electronic circuits and Fuel cells.

- Laxmi Narayana Patro & Dr. K Hariharan synthesized stannous fluoride based fast ion conductors using different methods and investigated systematically their frequency dependent conduction characteristics.
- Manas Ranjan Parida, Dr. C Vijayan & Dr. P C Deshmukh established the influence of size, shape and composition of nanoflowers and nanoclusters based on vanadium oxide and silver oxide and observed large optical nonlinearity arising from multiphoton absorption and an enhancement of nonlinearity due to local field effects on doping with silver nanoparticles. They also observed, room temperature ferromagnetism in vanadium oxide nanoflowers”
- Muniswami Naidu RV, Dr. A Subrahmanyam & Dr. MK Jain achieved repeatable, reproducible and stable p- type Zinc oxide thin films (for transparent electronics) by reactive DC magnetron sputtering technique.
- Pramod Dominic, Dr. Prasant AK Tripathy & Dr. Suresh Govindarajan investigated the attractor behaviors of single centered, spherically symmetric extremal non- supersymmetric black holes in type IIA string theory compactified on a Calabi -Yau manifold. They found stable attractors for suitable choice of the black hole charges in the presence of sub-leading corrections to the N=2 prepotential.
- Rajesh KP & Dr. TS Natarajan used the technique 'Electrospinning' to investigate the electrical properties of ion conducting polymeric materials fabricated in the form of fibers with sub-micrometer dimension. An apparatus designed, developed indigenously for this purpose was later technology transferred to a private firm for commercial manufacturing through IITM.
- Ramakrishnan N & Dr. PB Sunil Kumar studied the organization and morphogenesis of biological membranes. They particularly focussed on the cooperative behaviour of two important membrane remodeling mechanisms: namely anisotropic elasticity and the non equilibrium activity induced deformations.
- Ravi Chandra Raju N & Dr. A. Subrahmanyam demonstrated the new application of silver oxide thin films as Surface Enhanced Raman Scattering (SERS) substrates that can be used for biological specimens.
- Roopas Kiran Sirugudu, Dr. VRK Murthy & Dr. V Subramanian synthesized nanocrystalline Zinc Magnesium titanate dielectric resonators by microwave sintering process for low temperature cofired ceramic microwave integrated circuit devices (LTCC devices). The grain size uniformity showed enhancement of dielectric constant, density, Q factor and low temperature coefficient of resonant frequency in microwave region. These are essential parameters for miniaturised microwave devices for Bluetooth technology and microwave oscillators in microwave.
- Samir Ranjan Meher & Dr. Mahaveer Kumar Jain developed MARE, a technique in the lab that shows excellent control over the properties of thin films for ternary compounds like InGaN.
- Senthil Kumar E & Dr. MS Ramachandra Rao realized stable p-type ZnO using a novel co-doping method. Nanoparticle assisted pulsed laser deposition (NAPLD) technique was developed and used to grow ZnO nanostructures on nanocrystalline diamond (NCD) layers for light emission applications.
- Tessy Theres Baby & Dr. S Ramaprabhu synthesized graphene in large-scale by hydrogen exfoliation method and developed a multifunctional nanomaterial for glucose sensor for food industries.

M.S.

Aerospace Engineering:

- Ajit Nivrutti Desai & Dr. Sunetra Sarkar investigated a fluid structure interaction system with application to wind turbine rotors with system parametric uncertainties. They simulated the propagation of random uncertainties with a spectral uncertainty quantification tool.
- Gouripriya S & Dr. K Bhaskar conducted rigorous two-step analysis for buckling of non-uniformly compressed rectangular plates and critically examined simple methods for the analysis of the results for long rectangular plates
- Lalit Kumar Chandravanshi & Dr. Sunetra Sarkar studied the wake patterns behind an oscillating airfoil with and without gust effects.

- Manimaran R, Dr. M Ramakrishna & Dr. PA Ramakrishna experimentally verified predominant theory of temperature separation and explored new parameters in finding correction between flow field and temperature separation in range Hilsch
- Meshram Devendra Maniram & Dr. RI Sujith presented a unified approach for analyzing thermo-kinetic and thermoacoustic instabilities in a model combustor, in the framework of dynamical systems' theory. Both phenomena are characterized as Hopf bifurcations.
- Sooraj R & Dr. A Sameen analysed the modal and non-modal stability of flow of superfluid Helium-II in a channel
- Vivekanandan Jagadesan & Dr. R I Sujith experimentally investigated the effect of noise on the stability of a thermoacoustic system operating in a bistable region. Transition to instability is observed when the amplitude of the noise is significantly less than the triggering amplitude of the corresponding deterministic system.
- Wankhede Manish Ramkrishna & Dr. Nandan Kumar Sinha studied the high-spin dynamics including aerodynamic uncertainty and jetstream condition.

Applied Mechanics:

- Deepak Kumar Jha & Dr. Anuradha Banerjee developed a stress-state dependent cohesive zone model to predict multi-axial fatigue failure
- Esuff Khan & Dr. MS Sivakumar developed a new SMA spring actuator design considering the nonlinearity of shape memory alloy, a smart material. They evaluated the bonding characteristics of SMA wire actuator from polymer based composite materials using experimental investigations.
- Sakthivel. M & Dr. A. Arockiarajan a simple analytical model to study the applicability of piezoelectric composites as transducers for underwater and biomedical applications.
- Sridhar Raghuvir Pawar and Dr. C. Lakshmana Rao employed a constitutive modeling based approach by using Bordner-Partom model for simulating fatigue and creep for turbo machinery components. They provided a comprehensive material estimation procedure for Bordner model and demonstrated the application of the model by adopting two case studies.
- Trideep Singh & Dr. A Arockiarajan developed a method for measurement of material constants for piezoelectric materials. The feasibility study of this material for larger loading conditions is also addressed.
- Umesh Kumar Jha, Dr. S Vengadesan & Dr. BVSSS Prasad performed detailed experimental and numerical analysis to obtain a relationship between tongue position and outlet diffuser core angle on a small size centrifugal fan for optimum performance.
- Vijai Anand D & Dr. BSV Prasad Patnaik implemented an efficient and a novel vortex structure extraction strategy to enable a symbiotic coupling between two reduced order modeling techniques, viz., proper orthogonal decomposition (POD) and high-dimensional model representation (HDMR).

Biotechnology:

- Anshu Agarwal & Dr. Nitish Mahapatra carried out genetic studies in mouse models of human essential hypertension
- Bankim Subhash Chander & Dr. V Srinivas Chakravarthy conducted a biophysical model of neuro-glia-vascular interactions.
- Mihir V Shah & Dr. KB Ramachandran improved the production of hyaluronic acid from microbial fermentation by redirecting the carbon flux towards its biosynthetic pathway.
- Purushothaman G & Dr. D Karunakaran studied Smad proteins and showed that HeLa cells induced by Smad3 deficiency have higher genomic instability, chemo resistance and migration potential.
- Usha Shivakumar & Dr. A Gopalarishna biophysically characterized human Calumenin.

Chemical Engineering:

- Abhijnan Sarkar & Dr. Raghuram Chetty synthesized a Ruthenium-based electrocatalysts supported on carbon nanotubes by novel methods and characterised for oxygen reduction reaction.
- Anandhan M, Dr. K. Kannan and Dr. Preethi Aghalayam used simulations to predict the temperature profile and crosslink density for vulcanization of natural rubber.
- Arun Srikanth S, Dr. Sridharkumar Narasimhan & Dr. Shankar Narasimhan developed a dynamic model and obtained an optimal unloading policy to minimize the total cost of unloading petroleum products through a pipeline from a jetty to storage tanks
- Manoj Krishna KN & Dr. Raghuram Chetty investigated Titania supported platinum nanoparticles as alternative anode catalyst for proton exchange membrane fuel cells.
- Sangram Roy & Dr. PST Sai studied the modeling and simulation of the three-dimensional aspects of a liquid solid circulating fluidized bed (LSCFB) using computational fluid dynamics (CFD). They used Eulerian-Eulerian approach to deal with the two-phase flow aspects, and the kinetic theory of granular flow approach to deal with the solid-fluid interaction, the complete flow loop of an LSCFB was simulated.
- Sarvani Kuchibhotla & Dr. PST Sai developed a process for the manufacture of Diethyl Sulphate by using ionic liquids to enhance the esterification reaction between Ethanol and Sulphuric acid. This process eliminates all the drawbacks in the existing processes
- Pradeep MNS & Dr. K. Krishnaiah experimentally investigated the hydrodynamics in 3-phase inverse fluidized bed and proposed correlations for predicting pressure drop and bed expansion hitherto not available. These equations are in terms of easily measurable particle characteristics, geometric and operating variables.

Civil Engineering:

- Ameena Salim Padiath, Dr. V Lelitha Devi & Dr. C S Shankar Ram developed a model based approach using Kalman Filtering Technique and optimization for estimating spatial traffic state from location based traffic data
- Anju Krishnan, Dr. GR Dodagoudar & Dr. B Nageswara Rao studied the reliability analysis of raft foundation for flexural settlement and cracking performances.
- Asha Anand, Dr. Lelitha Devi & Dr. R. Gitakrishnan estimated the travel time and traffic density using data fusion from multiple sources. A model based approach was adopted using traffic flow theories combining flow data from fixed/Eulerian sources and travel time from limited probe vehicles to estimate average density and travel time of entire vehicle population.
- Divya PS & Dr. J. Murali Krishnan investigated the influence of the type of binder, dosage rate & gradation of crumb rubber on the micro-structure & rheological properties of crumb rubber modified binder.
- Divya Rani S & Dr. Manu Santhanam studied the influence of sustained moderately elevated temperatures on the engineering properties and microstructure of normal aggregate concrete
- Lakshmi Kumari K and Dr. ST Raghukanth developed a ground motion simulation model based on spectral finite element method and used it to simulate ground motion for a great hypothetical earthquake in the Garwhal Himalaya.
- Navya V & Dr. G Appa Rao investigated the cyclic behavior of poorly designed RC exterior beam-column joints with haunch element retrofit.
- Reshma PS, Dr. Murali Krishna & Dr. A. Veeraragavan analysed a wide variety of bitumen samples and developed master curves for them. The shear and temperature susceptibilities of these binders were also quantified.
- Sangeetha S and Dr. STG Raghukanth developed stochastic models for earthquake sources and ground motion. The earthquake source is modeled as anisotropic von Karman random field. A fully non-stationary model to earthquake ground motion has been developed based on empirical mode decomposition.
- Seshaiiah Katakamsetti V & Dr. G Appa Rao studied the performance of poorly bonded and detailed RC beam-column joints under monotonic loading.

Computer Science and Engineering:

- Abhishek Ghose & Dr. B. Ravindran developed a semantic representation of text using supervised lexical chain construction, grouping sets of related words together. This method performs much better than traditional lexical chain construction algorithms, and enables better segmentation of text into topics, as well as better disambiguation of word senses.
- Anish S. Kumar & Dr. V. Kamakoti developed a novel performance driven Buffer Sizing technique for Network-on-Chips (NoCs) which resulted in better area and power utilization of NoCs without significant degradation in performance.
- Arpit J. Joshi & Dr. Madhu Mutyam proposed a low cost mechanism for deadlock avoidance in network-on-chips for torus and ring topologies.
- Arun Kumar Tejasvi & Dr. Shankar Balachandran worked on micro-architectural techniques for improving single threaded performance of applications. They proposed hardware structures that disambiguate memory addresses and resolves data dependences in a very compact hardware structure that also used less power than existing techniques.
- Chaya Ganesh & Dr. C. Pandurangan studied the "cut and choose" paradigm that is fundamental to two party communication problem and arrived at clever cutting and improved choosing strategies.
- Deepti Kumar, Dr. TA Gonsalves & Dr. Gaurav Raina developed interoperability standards for mobile payments in India and conducts a performance evaluation of the proposed standards.
- Esha Ghosh & Dr. C. Pandurangan characterised the hamiltonian circuits problem in special classes of graphs and studied their applications.
- Gireesan Namboothiri P & Dr. Krishna Sivalingam studied the capacity of wireless sensor networks based on multiple channel medium access control protocols and also developed a customised wireless sensor node designed for target tracking applications.
- Pawan Kumar M and Dr. V. Kamakoti developed a reliability-aware technique that performs mapping and placement of Network-on-Chips onto three-dimensional integrated circuits.
- Priya Anna Mani & Dr. B. Ravindran worked on the problem of developing a computational framework for visual routines. They proposed one of the first hierarchical statistical relational framework for performing active vision for recognition of objects.
- Sajin K & Dr. Shankar Balachandran studied connections between hierarchical floorplans and integer sequences and showed new insights into analyzing and counting hierarchical floor plans. Asymptotically tight bounds were derived and several connections between geometric interpretations and integer sequences were also made.
- Sarang Deshpande U & Dr. Krishna Sivalingam studied energy-efficient target tracking schemes that used application-specified tracking error tolerance limits and improved guided navigation methods based on adaptive velocity of the guidance vehicle, in the context of wireless sensor networks.
- Shivashankar S & Dr. B. Ravindran worked on multi-view learning methods, a classification framework that performed sentiment analysis and an information retrieval method for protein homologue retrieval. They were the first to use domain ontologies for multi-grain sentiment analysis.
- Vijayasarthi R & Dr. B. Ravindran worked on building a DDoS detection mechanism that can work at reasonable line speeds. They developed a Naive Bayes based classification scheme that was engineered carefully to work with minimal computational requirements.
- William Kumar Moses Jr & Dr. C. Pandurangan took a closer look at verifiable secret sharing where the sharers are either honest or malicious and rational secret sharing where the sharers are neither good nor bad but selfish and studies the relation between these two cryptographic primitives.

Electrical Engineering:

- Amrith Sukumaran & Dr. Y Shanthi Pavan designed a high-linearity class-D DAC used for driving digital hearing aids. They adopted techniques such as 'Pseudo natural PWM' and 'Assisted Opamp' to improve the overall linearity.

- Anil Kumar R, Dr. Kalyan Kumar & Dr. Mahesh K Mishra minimized the VA rating of dynamic voltage restorer (DVR) using particle swarm optimization adaptive neuro fuzzy inference system (ANFIS) to make the system suitable for practical applications.
- Ashwin V, Dr. V. Kamakoti & Dr. R. Manivasakan developed algorithms for synthesis, testing and diagnosis of reversible logic circuits, that dealt with area, power and garbage minimization while converting normal Boolean circuits to reversible ones.
- Bharath Cheekati & Dr. Bharath Bhikkaji modelled the dynamics of a guitar string and altered the mode shapes using a feedback control to obtain better dynamic response.
- Chembiyan T & Dr. Nagendra Krishnapura analysed various schemes for reduction of spurious tones in a phase locked loop. They came up with an analysis of pulse position modulated signals.
- Gaurang Ravindra Bhatt & Dr. BK Das successfully demonstrated dispersion-free DWDM channel inter-leavers with silicon waveguides. Some of the fabricated prototype devices have been fiber pigtailed and packaged in a suitably designed metal housing. The transmitted spectra at each of the output ports revealed that alternate DWDM channel wavelengths are separated with a uniform inter-channel extinction of ~18 dB. Each of the channel passbands showed their 3-dB bandwidth of ~40 GHz".
- Hariharan S & Dr. Y Shanthi Pavan demonstrated the capability of accomplishing equalization at gigabit data rates in continuous time using low bandwidth filters. The successful validation of the chip proved the efficacy of on-chip high frequency measurement techniques thereby eliminating the need for sophisticated/expensive instruments.
- Harish AV & Dr. S. Balaji focused on developing novel grating structures for elastic wave sensing used in structural health monitoring applications. A dynamic interrogator has been developed in-house and packaged into a portable, compact box.
- Karthikeyan N, Dr. Mahesh Kumar & Dr. Kalyan Kumar worked on load compensation using UPQC on power distribution systems and they proposed a new method of extraction reference voltage and currents in three-phase systems and robust control of UPQC.
- Mandar Shrikant Kulkarni & Dr. AN Rajagopalan proposed tensor voting framework for three challenging scenarios in computer vision namely, foreground object extraction, multiple person/object tracking and range image in painting.
- Nune Venkata Sudheer & Dr. Anjan Chakravorty developed a semi-numerical model for the channel charge of carbon nanotube field effect transistor and its partitioning into source and drain components. They also developed analytical model for the density of states for cylindrical silicon nano-wire field effect transistors.
- Paresh Kumar & Dr. Enakshi Bhattacharya developed a digital microfluidics platform which used electric field to manipulate droplets for routing, division, and delivery operations and integrated this platform with a silicon based biosensor and successfully demonstrated the delivery of the sample into the biosensor.
- Pawan Prasad BH & Dr. R Arvind proposed a system capable of estimating the head pose and facial action parameters in uncalibrated monocular videos. They developed a model based point tracking algorithm using the sift descriptor. The proposed head pose tracking system was found to be robust to large head rotations.
- Prashanth R & Dr. Shanti Bhattacharya developed fibre based Optical Coherence Tomography (OCT) systems for acquiring depth resolved images of samples using time and Fourier domain techniques. Improved image processing methods were applied on the resulting OCT scans to improve their resolution and for analyzing subsurface motion in samples.
- Rajat Misra & Dr. R. Sarathi showed that the major cause of failure in GIS is due to partial discharges induced by particle movement. An attempt has been made to understand the impact of harmonic voltages on PD formation due to particle movement in GIS using UHF technique.
- Rajeshwari SS & Dr. K. Gridhar studied the design of linear precoding matrices in a two way amplify – forward relaying system. They proposed algorithms for computation of precoding matrices with different objective functions, such as BER, MSE and sum-rate.

- Shankar P & Dr. Nagendra Krishnapura designed a delta-sigma audio band analog to digital converter and a low power decimation filter for such converters, that found applications in commercial audio devices.
- Sridhar K & Dr. Mahesh Kumar conducted a detailed analysis of switching control algorithms for dynamic voltage restorer (DVR) to mitigate voltage sags/swells in power distribution system
- Thiruthakkathevan S & Dr. Anil Prabhakar developed a scheme for coherent state quantum key distribution optoelectronic mixed signal design, at 1550nm, that was used to control an active mode locked pulsed laser, and gate a single photon detector. These were integrated into a coherent state quantum key distribution system, using four wave mixing on the ITU grid.
- Valluri Harish & Dr. KMM Prabhu proposed methods to reconstruct uniform samples from k-th order nonuniform and bunched non-uniform samples. These methods found applications in time-interleaved analog-to-digital converters and lithographic machines, respectively.

Engineering Design

- Chaman Nasa & Dr. Sandipan Bandyopadhyay developed a three degrees of freedom planar parallel robot and implemented on it a trajectory tracking control scheme with singularity avoidance
- Lakshmi M & Dr. T. Asokan developed an algorithm for improving the electromagnetic communication in swarms of autonomous underwater vehicles.
- Neelankanthu Karra, Dr. T Asokan & Dr. M Singaperumal proposed a method to enhance the dynamic performance of industrial robots using calibration data.

Management Studies:

- Aluru Prasanth Karthick, Dr. D Janakiram & Dr. G Arun Kumar proposed a peer-to-peer based framework for video on demand over intranets called Dhara. Dhara is being productized and is targeted at enabling engineering colleges to implement educational VoD service for students within their LANs intranets
- Balaji CV & Dr. L. Prakash Sai examined the Business Excellence Practices in the Indian Auto Component Clusters through an exploratory study.
- Bharathan S & Dr. C Rajendran proposed order policies for inventory optimization in a serial supply chain considering backorders and lost sales.
- Dheeraj Pandey & Dr. A Thillai Rajan conducted a longitudinal study to analyse venture capital investment patterns and exits in US & India.
- Himakshi Gupta & Dr. P Vijayraghavan conducted an exploratory study to determine the factors influencing customer satisfaction in grocery retailing in India.
- Kamakshi Dasan PV & Dr. TJ Kamalanabhan studied the role of Leader's spiritual values, transformational leadership in relation to project success
- Karthika S Nair & Dr. M Thenmozhi examined the effect of macroeconomic factors on treasury bond returns and volatility using ARMA-regression and ARMA-GARCH model in the context of emerging and developed markets
- Padmapriya P & Dr. Arshinder Kaur studied risk mitigation in a supply chain through information sharing and dual sourcing
- Ramkumar N & Dr. TT Narendran developed mathematical models and heuristics for a class of inventory routing problems.
- Sailesh Kumar Reddy PVL & Dr. G Srinivasan studied the inventory rationing problem in multi-echelon divergent supply chain networks
- Seganrasan S & Dr. C Rajendran developed exact and heuristic algorithms for scheduling of vessels and Quay cranes on berths in container terminals.
- Vinodini Sureshkumar & Dr. G Srinivasan developed models for forecasting time series data including by explanatory variables and by modifying exponentially weighted and neural network methods

Mechanical Engineering:

- D Ahammad Basha & Dr. SP Venkateshan constructed a very low speed horizontal wind tunnel for conducting studies in the mixed convection regime. He studied the role of conductivity of the substrate material as well as surface emissivity on the total heat transfer from a horizontal surface as well as a protruding heat source.
- Amandine Bernier & Dr. S Swarnamani estimated through acoustic emission and vibration analysis faults in antifriction bearings. The new application of wavelet techniques on vibration acoustic emission data lead to classify and locate faults in bearings subjected to electrical discharge.
- Avishek Ranjan, Dr. Pramod S Mehta & SR Chakravarthy investigated the effect of piston cavity shape on incylinder flow due to reciprocating piston during compression using Particle Velocimetry (PIV) in an optical test-rig, designed and developed ab-intio. PIV measurements for different piston configurations were compared with corresponding numerical simulations and their proper orthogonal decomposition were analysed for determining turbulence production.
- Deepthi Kumar MB & Dr. AS Sekhar carried out modal balancing of flexible rotor with bow in a single plane using transfer matrix and finite element methods and validated the results experimentally.
- Ganesh S & Dr. BVSSS Prasad developed an iterative inverse design method for obtaining compressor blade geometries that correspond to required pressure distribution."
- Gokul B. & Dr. Somashekhar S. Hiremath worked on the development of a robust and self-organizing multifunctional sensor network for integration into industrial production lines. The application specific, optimal process parameters were determined and the necessary operating parameters were adapted during runtime in industries such as tyre production, nuclear waste disposal plants and reflow soldering systems. The prototype implementation of software and hardware components for monitoring of industrial production processes were carried out using model-driven development, a service oriented architecture, network self-organization and wireless components.
- Hitesh HC & Dr. Raghu Prakash investigated numerically the effect of oblique impact, compound angle impact of a simulated bird on aero-engine fan blades taking into consideration the blade rotation effect. Blade rotation enhances the energy absorption characteristics of the fan rotor compared to a static blade impact, but more blades experience critical damage, as a consequence, affects the natural frequency of the rotor. Shrouding improves the energy absorption characteristics during bird strike.
- Jinka Ranganayakulu & Dr. Somashekhar S. Hiremath designed and developed an instrumented setup of a Micro-Electro-Chemical Discharge Machining (μ ECDM) for parametric studies. μ ECDM a hybrid nonconventional machining process combines the features of EDM and ECM to machine various non-conducting engineering materials efficiently and effectively with required accuracy and precision. Important parameters were identified and their effects were studied during the machining process. Soft computing and statistical techniques were used to analyze and optimize the process parameters. The results obtained from these techniques were validated with experimental results carried out on the developed setup for machining of microholes and microchannels on silicon wafer, sodalime and borosilicate glass and also on acrylic plates.
- Krishna Addepalli S & Dr. J. M. Mallikarjuna studied in-cylinder fluid flows of a two- stroke engine under different motoring conditions using CFD and PIV. Their study aimed to find the effect of various engine parameters viz. engine speed, compression ratio, and port orientation on in-cylinder flows and performance characteristics of a two-stroke engine.
- Panendra Kumar Sahu & Dr. K. Srinivasan concentrated on analysis of near acoustic characteristics of non-circular slot jets for subsonic and supersonic (underexpanded) condition.
- Parathasarathy U, Dr. C. Balaji and Dr. T. Sundararajan developed a new and computationally inexpensive semi three dimensional porous body model to simulate fluid flow and heat transfer in a fast breeder reactor and validated it with experimental research.

- Pratheesh Prakash, Dr. Pramod S. Mehta & Dr. V. Raghavan experimentally measured the mass burning rates of biodiesel and diesel blends, developed unified correlations and theoretical simulations of transient burning of blended fuel droplets.
- Rajasekhar A & Dr. N. Ramesh Babu developed a novel semi-discrete representation method to represent 2-d irregular parts and 2-d irregular shaped sheet for nesting applications. The effectiveness of nesting algorithm was demonstrated in terms of speed of nesting and utilisation of sheet materials and found it to be faster by two times.
- Rajesh Kumar Y & Dr. S Swarnamani reported experimental and analytical correlation on dynamically modelled beam with induced faults based on analysis of vibration modal responses of the beam, using spatial wavelet analysis.
- Sandeep Kumar & Dr SP Venkateshan, proposed a mechanism for the entrainment of air over an L-Corner and its influence on the stability of the boundary layer based on Numerical and Flow Visualization results.
- Saravanan K & Dr. A. Seshdari Sekhar carried out simulation and experiments for coupled responses, operational deflections and statistical features for shaft crack detection while using laser based measurements".
- Saravanan R, Dr. Raghu Prakash & Dr.R.Gnanamoorthy carried out failure analysis of helical gear with tooth interior crack through stress intensity factor and T-stress approaches. They suggested that higher helix angle contributed to faster fatigue crack propagation and shear mode of fracture was the likely mode of cracking for sub- surface cracks in helical gears.
- Senthil Kumar S & Dr. N. Ganesan carried out multi-body dynamics on slider crank mechanism and four bar mechanism using different isotropic, composite and viscoelastic material at room temperature as well as at higher temperature.
- Siva Nageswara Rao Boleem & Dr. V. Ganesan studied the optimization of the geometry and parameters of a hydrogen fuelled engine using CFD.
- Thippeswamy S & Dr. MS. Shunmugam proposed a modified RAPID (Robust and Accurate Polygon Interference Detection) along with 'part feature exclusion' for collision detection and a graph based algorithm combined with a local search among parallel arcs for bend sequencing. Together they provided good quality solutions in sheet metal planning with considerable time reduction when tested for parts with up to 24 bends.
- Vignesh TG & Dr. Shamit Bakshi proposed non-iterative algorithms for interface reconstruction in an interfacial flow using volume of fluid method. The static interface reconstruction using these algorithms showed significant reduction in errors as compared to the existing algorithms.

Metallurgical and Materials Engineering:

- Anand N, Dr. P. Venugopal & Dr. S Sankaran have carried out studies on the microstructure and forming characteristics of martensite-ferrite microalloyed steels.
- Archana L, Dr. Ashutosh Suresh Gandhi carried out the first ever study on the effect of aging on the fracture toughness of rare-earth stabilised zirconia thermal barrier materials. Her work has shown that the toughness degrades early in the life of a TBC and recovers slowly afterwards.
- Babu S & Dr. GD Janaki Ram successfully utilized friction stir spot and seam welding in place of riveting in the fabrication of aluminium aerospace structures.
- Charbhai Nikhil Shrikant, Dr. S. Shankaran and Dr. BS Murty developed Al-4Cu- TiB₂ in-situ composite foams and analysed in detail the influence of TiB₂ on precipitation kinetics during ageing of the composites.
- Chenna Krishna S & Dr. Ravi Sankar Kottada characterized Cu-Ag-Zr alloy for thrust chamber application in rocket engine. They obtained by an appropriate precipitation hardening treatment optimum combination of strength, thermal conductivity.
- Deepu J. Babu & Dr. SS Bhattacharya established flame spray pyrolysis as a feasible process for the single step, industrially upscalable and low cost synthesis of high purity nanocrystalline La_{0.75} Sr_{0.2} MnO₃ for solid oxide fuel cell applications.

- Karthikeyan NR, Dr. BS Murty & Dr. VS Sharma synthesised ODS nanostructured ferritic 9Cr-1Mo and 9Cr-1W alloys containing Y₂O₃ and Ti and characterized microstructure and high temperature mechanical behavior.
- Mahesh K, Dr. P. Venugopal & Dr. S. Sankaran carried out investigations on dual phase steel produced through powder metallurgical route and arrived at structure property correlations
- Manoj Kumar PA, Dr. M. Kamaraj & Dr. Ashutosh Gandhi worked on the D-gun deposition of nanocrystalline alumina coatings and the effect of processing parameters on their tribological behaviour.
- Narender Reddy & Dr. Ashutosh Suresh Gandhi worked on the mechanism of the molten salt attack on rare-earth stabilised zirconia thermal barrier materials and showed that the TBC dissolves in molten sulphate vanadate salts before precipitation of reaction products.
- Ramakrishnan S & Dr. Prathap Haridoss developed a novel hybrid coatings, based on polymers and carbon nanotubes, for gas diffusion layers for Proton Exchange.
- Membrane Fuel Cells. The technique of electrospinning was used to prepare these coatings.
- Sree Harsha Nandam, Dr. BS Murty & Dr. S Sankaran carried out studies on precipitation kinetics and foaming behaviour of Al-Si-Mg-TiB₂ in-situ composites.
- Surendra Babu & Dr. Bauri investigated the conduction mechanism in Ceria based electrolytes and studied the phase formation, phase stability and conduction behavior of BaCeO₃ (Barium cerate) based proton conductors.

Ocean Engineering:

- Arunjith A, Dr. V. Sundar & Dr. SA Sannasiraj studied in detail the wave induced pressures due to regular, random and Cnoidal waves on the crown wall of breakwaters formed with KOLOS as armour layer have been studied in detail.
- Gopu R Sekhar & Dr. S. Nallayarasu conducted a study to establish wave slam and slap coefficient for circular and non-circular sections.
- Nimmy Thankom Philip, Dr. S Nallayarasu & Dr. SK Bhattacharyya studied the hydrodynamics of different heave plate geometries of a spar buoy using experimental techniques.
- Sudhir Kumar Chaturvedi & Dr. P Shanmugam proposed an Integrated Ocean Surveillance System (IOSS) to detect the ship with the estimation of its speed along with the retrieval of wave parameters using synthetic aperture radar 9SAR0 data.

INDIAN INSTITUTE OF TECHNOLOGY MADRAS

MAJOR ACHIEVEMENTS ANNUAL REPORT 2011-12 AND DEVELOPMENT TILL AUGUST 2012

1. Courses:

The Institute offers Ph.D. programme in all the 16 departments, M.S. programme in 12 departments, M.Tech programme in 30 streams/ specialisations, M.Sc. programme in 3 branches, B.Tech programme in 10 branches, Dual Degree (B.Tech and M.Tech) programme in 20 streams, Dual Degree (BS & MS) in Biological Sciences and Physics, M.B.A. programme, M.A. Integrated programme in 3 streams and PG Diploma in Metro Rail Technology and Management in Civil Department besides a preparatory course for SC/ST students during the year.

2. User Oriented Programme:

User oriented M.Tech programmes are currently offered in the Department of Civil Engineering, Mechanical Engineering & Ocean Engineering.

3. New Programmes Started:

Two new Dual Degree programmes have been started from the academic year 2012

1. Dual Degree (B.Tech & M.Tech) in Biological Engineering
2. Dual Degree (BS & MS) in Biological Sciences

4. Preparatory Course for SC/ST:

The Preparatory Course programme for weaker section students offers intensive coaching to eligible candidates to prepare them for entry into IITM on successful completion of this one-year programme. Accordingly, 3 ST & 6 PD candidates have been admitted in B.Tech & Dual Degree in 2012. At present, 8 PD candidates have been offered admission in the Preparatory Course 2012.

5. Convocation:

The Details of programme-wise degrees awarded:

Ph.D – 3622(141): MS – 2655 (127): M.Tech –12293 (468): M.Sc–2789 (123): MBA – 550 (69):M.A – 53 (29): Dual Degree (B.Tech & M.Tech) – 1341 (225): B.Tech –13821 (273): PG Diploma - 9: PGDMEM – 30: B.Sc (Tech) -20 : DIIT - 245.

So far 38769 degrees were awarded out of which 1689 degrees were awarded during 49th Convocation held on 20th July 2012.

() indicates of the degrees awarded in the present convocation.

Convocation 2012



6. Admission & Students on Roll:

2079 students (Inclusive of 237 Ph.D and 199 MS Scholars) have joined in various programmes in July 2012. As on 31-8-2012, 7551 students on roll [Foreign Nationals: 7, Women Students 1321: and QIP (Teachers from other Engineering Colleges): 103.

7. Research and Development:

IITM continues to be active in research and during the year under review, 141 Ph.D theses and 127 Master's theses have been completed. Our faculty and research scholars have published 1046 research papers in refereed International (983) and National (63) Journals and have presented 566 research papers in International (433) and National (133) Conferences. IIT Madras is thus a significant contributor to the national research output, which saw the nation climb from 15th position to 9th position globally.

8. Patents:

17 patents have been filed in the year 2011-12 and 6 patents were granted.

9. Industrial Consultancy and Sponsored Research:

The number of active consultancy projects during the year 2011-12 was 549 for a total value of ₹ 5077 lakhs. The number of faculty members involved in consultancy projects is 167. 144 sponsored projects for a total value to ₹ 18185 lakhs were taken up by the Institute during 2011-12 and 219 faculty members are actively involved in sponsored projects. The value of the on-going Sponsored Projects during 2011 – 2012 is ₹ 40328 Lakhs. The ISRO-IITM Space Technology Cell renewed 21 projects and sanctioned 6 new projects. The Industrial Associateship Scheme fostering close interaction with 197 Industry members. During the period April to June 2012, 118 Consultancy Assignments and 29 Sponsored Projects were taken up with a total value of 938.42 lakhs and ₹ 1427.54 lakhs respectively.

10. Centre for Continuing Education:

The Centre for Continuing Education (CCE) has been very active in promoting activities for the benefit of faculty members of other technical Institutions and working professionals in Industries. Our faculty members organized 12 AICTE-funded Short Term Training Programmes (QIP) for the benefit of engineering college faculty, as well as 81 Continuing Education Programmes (CEP) for the benefit of Industrial personnel, and 3 programmes under the Curriculum Development Cell. These programmes have benefited about 2800 participants in 2011-12, and resulted in revenue of around ₹ 2.5 crores.

11. Teaching Learning Centre

A Teaching Learning Centre (TLC), the first of its kind among higher technical institutions in the country, was inaugurated in 2011. The TLC is a part of the Institute's Centre for Continuing Education. The vision is to be a Centre of Excellence and Innovation in the Teaching Learning Process (TLP) for a new and sustainable paradigm in higher technical education, resulting in human resources with the highest professional and personal qualities. Under its auspices, several Faculty Development Programmes (FDP), Workshops and Lectures have been held, and several faculty members have benefitted.

12. Quality Improvement Programme:

IITM plays a lead role in providing guidance and assistance to the other engineering intuitions in the country. Currently there are a total of 103 QIP scholars – 74 Ph.D & 29 M.Tech.

13. National Programme on Technology Enhanced Learning (NPTEL):

The National Programme on Technology Enhanced Learning (NPTEL) is India's largest ICT-based (QIP), 491 faculty from other technical course dissemination programme in the higher education sector. Its main objective is to increase the reach of high-quality engineering and sciences education across our country. The 136 video-based courses and 125 web-based courses in Engineering, Science and Technology developed under NPTEL Phase-I is freely available to everyone on our website <http://nptel.iitm.ac.in> and through Youtube <http://www.youtube.com/iit>, and telecast through the Eklava channel made available by MHRD exclusively for this purpose. The NPTEL Channel in Youtube has received more than 45 million upload views and has crossed 6.4 million channel views. The NPTEL site has recorded more than one crore visits since inception. 67 new courses developed under Phase – II are already available on the NPTEL website and 947 new courses are on the pipeline and expected to be uploaded by end of 2012.

14. Golden Jubilee Book Writing:

Book Writing Scheme designed to encourage textbook writing by our faculty members, 51 books have so far been published and 5 books have been published in the current year. In addition to this, about 23 books have been published under Golden Jubilee Book Writing Scheme.

15. Research Park and Incubation:

The IITM Research Park has been progressing well towards the goals it had set out for itself. With 50 companies in its fold, it encompasses a wide range of research projects. The potential of this initiative has prompted the Ministry for Human Resources Development to recommend that the other IITs and NITs also consider setting up similar research parks. The XII Plan proposes to set aside a separate fund for similar parks across the country. IIT Madras is emerging as a trail-blazer and role model for the nation in this regard.

To enhance student interaction with the companies, the Research Park co-ordinated the summer internship 2012 drive, placing about 100 students. The Research Park has also emerged as a hub for regular industry events such as the monthly KCommunity event, Nasscom's Mentorship Program, TiE's, Entrepreneur event, and the like.

2. ADMINISTRATION

2.1 General:

Indian Institute of Technology, Madras is an autonomous statutory Organisation functioning within the "Institutes of Technologies Act 1961, "as amended by "The Institute of Technology (Amendment Act, 1963)". The Indian Institutes of Technology (others being at Mumbai, Kanpur, Kharagpur, Delhi, Guwahati, Roorkee, Rupnagar, Bhubaneswar, Gandhinagar, Hyderabad, Patna, Rajasthan, Mandi, Indore and BHU varanasi) are administrated centrally by the Councils of IITs, an apex body established by the Government of India to co-ordinate the activities of these Institutes. The Minister for Human Resource Development, Government of India is the Chairperson of the Council. Each Institute of Technology has a Board of Governors responsible for the overall administration and control.

The Senate decides the academic policies of the Institute. It approves and controls curricula, courses, examinations and declaration of results. It appoints various Committees to look into specific academic matters arising from time to time. The teaching, training and research activities of various departments at the Institute are constantly under review to improve both facilities and standards. The Director of the Institute is the Chairman of the Senate. Members of the Senate are listed in the Appendix. Financial advice to the Institute is given by the Finance Committee. The Buildings and Works Committee advises the Institute on matters relating to buildings and works activities.

The compositions of the above Committees and Boards together with a list of other officers are also given in the Appendix.

2.2 Staff Position:

As on 31.03.2012, 492 Faculty, 3 Visiting Faculty, 75 Group A Staff, 6 Scientific Staff, 264 Technical Staff and 364 Administrative Staff were in position totaling 1204. During the period under report 60 faculty/staff members comprising 2 Professors, 35 Assistant Professors, 3 Visiting faculty and 20 other staff were appointed. 44 faculty/staff members were retired from their services. 1 staff member was expired. 21 Faculty/Staff members were on long leave. The details of the above are given below:-

2.2.1 Faculty / Staff appointed from 01.04.2011 to 31.03.2012:

List of faculty members/staff members appointed during the period April 2011 to March 2012

Sl. No.	Name	Design.	Dept.	Date of Joining
1.	Dr. S. Aniruddhan	AP.	EE	15.04.2011
2.	Dr. Karthik Raman (contractual)	AP.	BT	20.04.2011
3.	Sri. G. Ravichandran	DR	Acad.	03.05.2011
4.	Sri. B. Nagarajan	DR	TP&PR	03.05.2011
5.	Smt. Prema Chakkarapani	DR	IC&SR	03.05.2011
6.	Sri. S. Sambasivam	DR	F&A	03.05.2011
7.	Sri. V. Perumal	AR	Acad.	03.05.2011
8.	Sri. V. Rajendran	AR	IC&SR	03.05.2011
9.	Sri. C. Rajendran	AR	S & P	03.05.2011
10.	Sri. V. Ravichandran	Dy. SE./Officer	CS	03.05.2011
11.	Sri. C.N.Vijayaraghavan	Dy. SE./Officer	CS	03.05.2011
12.	Dr. Rangunathan Rengasamy	Prof.	CH	09.05.2011
13.	Sri.M.G.Narasimha Rao	AR	Admn.	19.05.2011 (upto 29.03.12)
14.	Dr. Pijush Ghosh (contract)	AP.	AM	25.05.2011
15.	Smt. P. Jamuna	AR	Admn.	01.06.2011
16.	Sri. S. Muthukrishnan	AR	F&A	01.06.2011
17.	Shri. S. Anandkumar	ASE/Officer	CS	01.06.2011
18.	Shri. V. Selvaraju	ASE/Officer	CS	01.06.2011
19.	T.Gayathiri	Jr.Sys.Engr.	CC	06.06.2011
20.	Dr. Kristin Steger	Visiting Asst. Prof.	BT	09.06.2011

Sl. No.	Name	Design.	Dept.	Date of Joining
21.	Dr. Peter Fiener	Visiting Prof.	CE	09.06.2011
22.	Dr. Sunethra Ramanan	AP.	PH	28.06.2011
23.	Priya S. (on Contract)	ASE/Officer	CC	01.07.2011
24.	Dr. Mugurel Dan Zlotea	Visiting Asst. Prof.	HSS	18.07.2011
25.	Dr. Abhijit Chaudhari	AP.	AM	25.07.2011
26.	Dr. Birabar Ranjit Kumar Nanda	AP.	PH	25.07.2011
27.	Dr. Gaurav Raina	AP.	EE	27.07.2011
28.	Dr. S. Subash	AP.	HS	27.07.2011
29.	Dr. Rajib Basu Mallick	Prof.	CE	01.08.2011
30.	Dr. V. V. Raghavendra Sai	AP	AM	01.08.2011
31.	K. Kumarappan	AR	Admin.	01.08.2011
32.	M.Satish Kumar	Jr.Sys. Engr.	CC	01.08.2011
33.	Dr. V. Vijayalakshmi	AP.	MS	03.08.2011
34.	Dr. R. Santhosh	AP.	HSS	09.08.2011
35.	Elumalai N	Sec-cum-Fire Offi.	SS	17.08.2011
36.	Dr. Radhakrishna Ganti (Contractual)	AP.	EE	22.08.2011
37.	Dr. Lata Dyaram	AP.	MS	08.09.2011
38.	Dr. John Ebebezer Augustine	AP.	CS	19.09.2011
39.	Dr. Abdus Samad	AP	OE	19.09.2011
40.	Dr. Nandivada Venkata Krishna	AP.	CS	03.10.2011
41.	Dr. Sachin S. Gunthe (on Contract)	AP.	CE	10.10.2011
42.	Dr. Ethayaraja Mani (Contractual)	AP.	CH.	01.11.2011
43.	Dr. Sabuj Kumar Mandal	AP.	HS	01.11.2011
44.	Dr. Krishna Prasanna Jagannathan (contractual)	AP.	EE	02.11.2011
45.	Dr. Deleep R. Nair (on Contract)	AP.	EE	01.12.2011
46.	Dr. Upasna Sharma (Contractual)	AP.	HS	01.12.2011
47.	Dr. Manu Jaiswal (Contractual)	AP.	PH	05.12.2011
48.	Dr. Soumya Dutta (on Contract)	AP	MA	12.12.2011
49.	Dr. Ashis Kumar Sen	AP	ME	12.12.2011
50.	Dr. Shaikh Faruque Ali	AP.	AM	13.12.2011
51.	Dr. Pazhamalai Anbarasan	AP.	CY	14.12.2011
52.	Dr. Amitava Mukherjee	AP	MA	14.12.2011
53.	Dr. Ramakrishna Pasumarthy (on Contract)	AP	MA	15.12.2011
54.	Dr. Lakshman Neelakantan	AP.	MT	02.01.2012
55.	Dr. Sushanta Kumar Panigrahi (on Contract)	AP	ME	30.01.2012
56.	Dr. Athi Narayanan Naganathan	AP.	BT	01.02.2012
57.	Dr. Shireen Mirza (Contractual)	AP.	HS	15.02.2012
58.	Sri. M. Chakkarapani	AR	Acad.	01.03.2012
59.	Dr. Narasimhan Swaminathan (on Contract)	AP	ME	05.03.2012
60.	Dr. Manas Mukherjee	AP.	MT	19.03.2012

No. of Faculty / Staff members resigned/relieved:

Sl.No.	Name , Designation & Dept.	Date of Resignation	Resigned/Relieved
1.	Sri. P. V. Hari Krishna, Technical Officer Gr. I, Ele. Engg.	24.06.2011	Resigned
2.	Dr. Niket S. Kaisare, Assistant Professor , Che. Engg.	15.07.2011	Resigned
3.	Dr. John Moolakkattu Stephen, Professor (on Contract), HSS	03.01.2012	Resigned

Faculty / Staff retired from 01.04.2011 to 31.03.2012:

S.No.	ID No.	Name	Designation	Dep./sec	D.O.R
1.	2458	Pathak S D	Professor	MT	30.04.2011
2.	0955	Ramadoss, D.	Sr. Technician	CWS	30.04.2011
3.	0994	Aliya Begum	Jr. Attdt.	PH	31.05.2011
4.	1521	Anbalagan M.	SSI	SS	31.05.2011
5.	1940	Ankaiah T	Sr. Attdt.	EU	31.05.2011
6.	0392	Dakshinamurthy A.	Supdt.	CY	31.05.2011
7.	2183	Devarajan, K.	Sr. Attdt.	F & A	31.05.2011
8.	2585	Gopinath K	Professor	ME	31.05.2011
9.	0991	Jayaraman, A.	Jr.Tech.Supdt.	CY	31.05.2011
10.	0551	Johnson Christdoss B	P.T.I. (SG)	Gymkhana	31.05.2011
11.	0200	Mohanasundaram G.	Sr. Attdt.	MA	31.05.2011
12.	0782	Perumal, P.	Jr.Tech.Supdt.	ME	31.05.2011
13.	0561	Prakash A.	Jr. Supdt.	CH	31.05.2011
14.	0586	Devadoss G.	Sr. Attdt.	Placement	30.06.2011
15.	1176	Lakshmi Lakshmanan	Jr. Supdt.	ICSR	30.06.2011
16.	2261	Muthu V	Sr. Attdt.	EU	30.06.2011
17.	0934	Natanasigamani T.	Jr. Supdt.	T Cell	30.06.2011
18.	1666	Thiruvengadam R.	SSI	SS	30.06.2011
19.	2215	Chinna Obiah, G.	Sr. Attdt.	EU	30.06.2011
20.	0022	Karpagasundari K.M.	Jr. Supdt.	ICSR	31.07.2011
21.	1171	Rajendran, S.S.	Sr. Technician	ME	31.07.2011
22.	2660	Ramachandra Rao V S	Professor	CH	31.07.2011
23.	2314	Venkataiyya, K.	Jr. Attdt.	EU	31.07.2011
24.	0006	Luvis J.S.	Sr. Attdt.	CH	31.08.2011
25.	3052	Idichandy V G	Professor	OE	30.09.2011
26.	0156	Palanivelu, R.	Jr.Tech.Supdt.	EE	30.09.2011
27.	2970	Sivanandam, V.	Lab Supdt.	SAIF	30.09.2011
28.	2102	Ravanaiah M	Sr. Attdt.	EU	31.10.2011
29.	2172	Sriramulu, S.	Sr. Technician	CWS	31.10.2011
30.	1424	Syed Usman	Supdt.	ICSR	31.10.2011
31.	0214	Mohanachandran, M.R	Jr.Tech.Supdt.	EE	30.11.2011
32.	2361	Selvamani G	CSO	Security	30.11.2011
33.	0306	Venkataramana, A.	Jr.Tech.Supdt.	MT	30.11.2011
34.	3114	Venkatesan S P	Professor	ME	30.11.2011
35.	2485	Swarnamani S	Professor	AM	31.12.2011
36.	0146	Syed Usman K.	Sr. Attdt.	ME	31.12.2011
37.	0218	Chinnian, M.	Asst Engr.	EU	31.01.2012
38.	2853	Pounraj K.	Supdt.	Hosp	31.01.2012
39.	0604	Karunakaran T.	AR	EU	29.02.2012

40.	2457	Raghavan S	Professor	Met & Mat	29.02.2012
41.	2616	Choudum S.A	Professor	MA	29.02.2012
42.	0010	Krishnamurthy K	SO Gr II	CH	31.03.2012
43.	0485	Veerasamy V	PHO	EU	31.03.2012
44.	2973	Bhavani Kumar	Tech. Supdt.	SAIF	01.03.2012 FN (VR)

Expired (While in Service)

S.No.	ID No.	Name	Designation	Dep./sec	D.O.R
1.	1711	E. Dhanasekaran	Attendant	Dean (Students)	15.12.2011

Faculty/Officers/Staff on long leave:

I. Faculty/Staff Members on Extra Ordinary Leave:

Sl. No	Name	Design.	Dept.	From	To	Visits Name & Venue
1.	Dr. S. S. Gokhale	Prof.	AE	06.06.2011	30.06.2014	Director, Visvesvaraya National Institute of Technology (VNIT), Nagpur.
2.	Dr. Ravikiran Sangras	AP	ME	19.07.2011	18.05.2012	Assistant Professor, Dept. of Mechanical Engg. at IIT Hyderabad
3.	Dr. K. Prasad Rao	Prof.	MME	21.11.2011	20.11.2012	Visiting Research Professor at Metallurgical Engineering, University of Utah, USA
4.	J.Senthilnathan	Jr.Tech .Supdt.	CE	10.01.2012	13.12.2013	Post Doctoral Research at Central for Global Material Research & National Cheng Kung University (NCKU), Taiwan

II. Faculty Members on Sabbatical Leave:

Sl. No	Name	Design.	Dept.	From	To	Visits Name & Venue
1.	Dr. T. S. Natarajan	Prof.	Phy.	16.05.2011	01.09.2012	Offer of Visiting Professor in the Department Chemical and Materials Engineering, University of Alberta Edmonton, USA
2.	Dr. P. Bhyrappa	Prof.	Chy.	16.06.2011	15.06.2012	Visiting Professor at University of Houston, USA
3.	Dr. A. V. Jayanthan	AP	Maths	21.06.2011	20.12.2012	Boys cast Fellowship at the Department of Mathematics, University of Missouri, Columbia, USA
4.	Dr. K. Murali	Prof.	OEC	01.08.2011	28.11.2012	To visit College of Engineering, Swansea University, Wales, UK as a Research Visitor.
5.	Dr. P. C. Deshmukh	Prof.	Phy.	01.08.2011 01.01.2012	31.12.2011 29.02.2012	Visiting Professor position in University of Western Ontario, London, Canada & Georgia State University, Atlanta, USA.5484418

6.	Dr. K. M. M. Prabhu	Prof.	EE	05.08.2011	04.12.2012	To write book on Analog and Digital filters.
7.	Dr. Rajesh Narayanan	ASP	Phy.	23.08.2011	30.06.2012	Research Work at the Dept. of Physics, University of Hong Kong & Zhejiang University, P. R. China
8.	Dr. R. Ramanarayanan	AP	CHE	08.11.2011	07.05.2012	Collaborative Research Work as Visiting Scholar at the dept. of Chemistry, Northwestern University, Evanston Illinois, USA
9.	Dr. Srilata	ASP	HSS	02.01.2012	31.12.2012	Visiting Fellow at Chennai Mathematical Institute, Chennai
10.	Dr. V. R. Muraleedharan	Prof.	HSS	02.01.2012	31.12.2012	To write Research monograph (texts) and consult "other literature."
11.	Dr. M. Balasubramanian	Prof.	MME	02.01.2012	30.06.2012	Book writing on "Composite materials & processing" at IIT Madras
12.	Dr. S. Shankar Narasimhan	Prof.	CHE	02.01.2011	31.12.2012	To write book on Data Driven Approach for Process Modelling Reconciliation and Optimization
13.	Dr. Anil Prabhakar	Prof.	EE	02.01.2012	30.04.2012	Research work as visiting Faculty at inStem National Center for Biological Sciences, Bangalore
14.	Dr. M. Manivannan	ASP	APM	01.02.2012	29.06.2012	Book writing "Biomechanics"
15.	Dr. Kamala Krithivasan	Prof.	CS	02.02.2012	30.11.2012	To write book on Natural Computing
16.	Dr. S. Devaki Raddy	ASP	HSS	07.02.2012	06.07.2012	Book writing on "Written Communication"
17.	Dr. J. Murali Krishnan	ASP	CE	07.02.2012	29.06.2012	Book writing "Modeling of Bitumen"

2.3 Staff Welfare:

2.3.1 Human Resource Development

As part of human resource development activities, the Institute plans and implements programs for providing opportunities to technical and administrative staff to update and upgrade their knowledge and skills in order that they may perform their duties effectively. In addition, the programs are also aimed to enhance the pride and satisfaction they feel in their work. The overall feeling of happiness engendered by these programs also overflows to their home lives and contributes to a sense of well-being for the entire family. These activities also form a part of the training requirements under the ISO dispensation.

The HRD activities were initiated at the Institute in 1997 under the charge of a Professor. In the period of reporting, the total number of in-service training program conducted was 4 and staff members have been nominated for 22 various training programmes organized by other Institutions/Organisations. The impact of the various programs, as seen from the feedback at the end of each program, appears to be advantageous to the Institute as the employees were able to upgrade their knowledge through these programs as the programs were designed on need based.

HRD Programmes conducted:

Various types of Programmes attended by our staff members organized by the other organizations during April 2011 to March 2012:

In service training programme for our staff members related to various activities (Academic, Admn., Accounts, Personal Computer and technical:

Training calendar for the year 2011 - Internal Training

S.No.	No of persons attended	Course Title	Duration	Section/ Dept.	Organisation
1	19	Workshop on Good Driving Practice (Refresher Course)	7 th Feb.2011	Transport Cell	M/s. Ashok Leyland Pvt., Ltd., Chennai
2	11	Precaste Concrete Buildings in India: Practices, Possibilities and Prospects	6 th Aug. 2011	Engg. Unit	Indian Concrete Institute Tamil Nadu Centre
3	10	Fire Fighting Trining	21.3.2012 to 30.3.2012	Security Section	Tamil Nadu Fire & Rescue Service, Chennai
4	3	Seminar on Modern Formwork Systems for Building Construction	24.03.2012	Engg. Unit	SEWC Chennai

Outside Training

S. No.	No of persons attended	Course Title	Duration	Section/ Dept.	Organisation
1	2	One day workshop on Trends & Techniques in concrete Pavements for 21 st Century	12.02.2011	Engineering Unit	M/s. Association of Consulting Civil Engineers Tamil Nadu, Chennai Centre
2	1	Training Course on Lab VIEW	21.02.2011 to 25.02.2011	Dept. of Civil Engineering	M/s. NI Instruments, Chennai
3	3	Workshop on Commercials for Operating Managers	9.3.2011	Stores & Purchase Section	NR Performance EDGE Consultants Pvt., Ltd., New Delhi
4	2	One day wokshop on "Energy Efficiency"	12.3.2011	Engineering Unit	National Energy Efficiency outreach Programme (NEO) Ministry of Power, Govt. of India
5	1	CGBS – 17 th National Workshop & Seminar of ISSG at Rubber Research Institute, Kottayam	02.05.2011 & 03.05.2011	Central Glass Blowing Section	Rubber Research Institute of India, Kottayam
6	1	One day Seminar on Material Cost Management	14.06.2011	Engg. Unit	M/s. Confederation of Indian Industry, Chennai
7	3	Foreign Exchange for you	18 & 19.06.2011	Administration & Accounts Section	M/s. Reserve Bank of India, Chennai
8	2	Effective Maintenance of CNC Machines for Productivity improvements	20.6.2011 to 22.06.2011	Central Workshop	Indian Machine Tools Manufacturers Association, Pune
9	3	National Conference on Refrigeration and Air Conditioning NCRAC 2011	07.07.2011 to 09.07.2011	Engineering Unit	NCRAC, Chennai
10	3	Cisco Net work equipments	18.07.2011 to 22.07.2011	Computer Centre	Cisco Dimension Data India Ltd., Bangalore
11	1	Traffic Engineering and System Management	25.07.2011 to 29.07.2011	Dept. of Civil Engg.,	CSIR – CRRI, New Delhi
12	3	Recent Trends in Information Resource Management	05.08.2011	Central Library	Science City, Dept. of Hr. Edn. Govt. of TN
13	1	E-Waste Management	12.08.2011	Dept. of CEC	Director, MSME-DI Guindy
14	2	Measurement Uncertainty in Testing & Calibration	09.09.11 & 10.09.2011	Dept. of CEC	Electronics Test & Development Centre STQC Directorate, Bangalore

15	2	ISO 17025 NABL supported Internal Audit	05.09.2011 to 08.09.2011	Dept. of CEC	STQC Directorate Bangalore
16	5	Two days Workshop on Preparation of Financial statements of autonomous bodies	13.10.2011 & 14.10.2011	Accounts Section	Institute of Chartered Accountants of India & Comptroller and Auditor General of India, Bangalore
17	2	Web Portal Maintaining	17.10.2011 to 21.10.2011	Dept. of HSS	Indo-EU Study Centre Programme
18	1	Lead Auditor Certification	07.11.2011 to 11.11.2011	Dept. of Mgmt. Studies	M/s. TUV India Ltd., Chennai
19	2	LEAN Construction Culture and Implementation	19.11.2011	Engg. Unit	IIT Madras Research Park, Chennai
20	2	Implementaion of Reservation Policy on SCs/STs/OBCs & Physically handicapped in PSEs, Bank, Govt. Aided Bodies and Govt. Institutions	08.12.2011 to 10.12.2011	Administration	Society for Economic Research & Training , Jaipur
21	2	Right to Information Act: Obligation & Strategies	23.02.2012 to 24.02.2012	Academic /Admin. Section	Industrial Management Academy New Delhi
22	3	Two day All India Seminar on Emerging Trends	02.03.2012 & 03.03.2012	Engg. Unit	Indian Institution of Technical Arbitrator, Chennai

2.3.2 Hindi Coaching:

In accordance with the directions of the Department of the Official Language of the Home Ministry, Government of India, Hindi Training was conducted regularly to both technical and administrative staff members to improve their knowledge in Hindi. In 2011-2012, 30 staff members were attended the Hindi Examination. As on 31.03.2012, 49 Officers/staff members were offered this course.

Every year, the Institute celebrates Hindi Day Function. This year Hindi Day Function was celebrated on 14.09.2011, where the Director i/c. presided over the function and distributed Certificates, Cash Awards and Personal Pay to the staff members who have passed Hindi Examination.

The first Sub-Committee of the Committee of Parliament on Official Language, inspected IIT Madras on 19.01.2012 to ensure the progressive use of Hindi in IIT Madras. The Committee reviewed the use of Official Language – Hindi in the Office and insisted on implementation of Hindi to the maximum.

2.3.3 School Fee Concession:

The Institute reimbursed fees paid by the staff members for their children's education as per the Govt. of India norms. During the period under report 563 staff members were benefited.

2.3.4 Transport Facilities to Children of the Staff:

From 10.02.2008, free transport facilities have been provided for the benefit of all users within the campus.

2.3.5 Advances:

During the year under report a sum of Rs. 22.67 lakhs was sanctioned as advances for the following:

S.No.	Advance	No. of Employees	Amount Sanctioned in
1.	House Building Advance	-	-
2.	Car Advance	5	8,80,000
3.	Two Wheeler Advance	10	2,70,000
4.	Personal Computer Advance	11	3,29,100
5.	Cycle Advance	-	-
6.	Festival Advance	210	7,87,500
	Total	236	22,66,600

Insurance:**GROUP MEDICLAIM INSURANCE SCHEME FOR THE PERIOD FROM 01.02.2011 TO 31.01.2012**

Sl.No	Category	No. of Persons covered	Premium Paid Rs.
1	Employees & Dependants	1220 + 3119	2,08,00,000.00
2	Pensioners & Spouses	842 + 744	
3	Family Pensioners	401	
4	Fire Insurance		4,56,074.00
	TOTAL	2463 + 3863	2,12,56,074.00
	<u>ADDITIONAL COVERAGE:</u>		
5	Employees & Dependants	338	79,26,663.00
6	Pensioners & Spouses	461	
7	Family Pensioners	63	
	Total Premium paid	862	2,91,82,737.00

GROUP TERM INSURANCE SCHEME FOR THE PERIOD FROM 10.02.2011 TO 09.02.2012

SL.NO.	GROUP	No. of Employees covered	Sum Insured per employee (in Rs.)	Annual Premium/employee (in Rs.)	Total Premium Paid (in Rs.)	Death Claims made during period (in Rs.)
1	A	523	30 Lakh	8160	42,67,680.00	-
2	B	185	20Lakh	4080	7,54,800.00	-
3	C	417	10 Lakh	2720	11,34,240.00	10 Lakh
		1125			61,56,720.00	10 Lakh

2.3.6. Meetings of the Authorities:

Board of Governors	:	Five Meetings were held on 08.04.2011, 22.07.2011, 04.11.2011, 13.12.2011 and 23.03.2012.
Finance Committee	:	One Meeting was held on 13.12.2011
Buildings & Works Committee	:	Two Meetings were held on 17.06.2011 & 06.03.2012
Senate	:	Four Meetings were held on 12.07.2011, 07.10.2011, 29.11.2011 and 07.03.2012

2.3.7. ISO 9001:2000 in IITM : APRIL 2011 – MARCH 2012**ISO Summary**

International Organization for Standardisation (ISO) is a world-wide federation that certifies the operation and existence of a Quality Management System, and ISO 9001:2000 is an international standard for quality systems. IIT Madras was awarded ISO-9001:2000 certification for academic and support processes (QSM-I: Academic Section, Central Library, Central Workshop, Computer Center and Industrial Consultancy & Sponsored Research, and User-Oriented Programmes) since 1999 and for administrative support processes (QSM-II: Administration, Central Electronic Centre, Engineering Unit, Finance & Accounts, Security Section, and Stores & Purchase) since 2001. In the year 2011, all the academic and support units of IIT Madras have been certified as per the new ISO standard ISO 9001:2008. The certificate is valid until August 2014 for QSM-I and January 2014 for QSM-II. In addition to ISO 9001:2008 certification, the Central Electronic Centre in NABL-accredited for its Testing and Calibration Laboratories since 2004.

I. ISO Activities for the year 2011-2012:

Internal Audits:

Schedule of Unit/Section	First Audit	Second Audit
QSM – I	16-19 May 2011	Oct.31 - Nov.02, 2011
QSM – II	23-25 May 2011	08-11 Nov. 2011

Management Review Meetings:

Unit/Section	Schedule
QSM-I and QSM-II	June 21, 2011 (29 th MR meeting)
QSM-I and QSM-II	December 14, 2011 (30 th MR meeting)

Recertification/Surveillance Audits (undertaken by M/S TUV India Limited)

Unit/Section	Schedule
QSM – I	27-28 Jun. 2011(Recertification)
QSM-II	30-31 Jan. 2012 (Surveillance)

ISO Activities:

Recertification Audits for QSM-I and QSM-II units have been successfully completed. The ISO 9001:2008 certificate is valid until August 2014 for QSM-I and January 2014 for QSM-II. Two faculty members have been nominated to attend the ISO 9001:2008 Lead Auditor training program offered by M/S Intertek Moody International during Jan 25-29, 2012. Dr. Saji Mathew and Dr. R.K. Amit, Assistant Professors with DoMS, successfully completed the training program and have been certified as Lead Auditors.

II. NABL Activities for the year 2011-2012 (for Central Electronics Centre):

Management Review Meeting was conducted on 02 February 2012

2.3.8 List of faculty members and Officers in the Academic and General Administration

(i) Academic Administration:

Director	: Prof. M.S. Ananth (upto 31.07.2011) Prof. Bhaskar Ramamurthi (from 23.09.2011)
Deputy Director	: Prof. V.G.Idichandy (upto 30.09.2011)
Deans:	
Academic Courses	: Dr. K. Ramamurthy
Academic Research	: Dr. K. Krishnaiah
Administration	: Dr. P. Sriram
Industrial Consultancy & Sponsored	: Dr. Job Kurian (upto 11.03.2012)

Research	Dr. Krishnan Balasubramaniam (from 12.03.2012)
Students	: Dr. M.Govardhan (upto 31.07.20 11) Dr. K. Ramamurthy (upto 05.10.2011) Dr. L.S. Ganesh (from 06.10.2011)
Planning	: Dr. Bhaskar Ramamurthi (upto 31.07.2011) Dr. P. Sriram, Dean (Admn.) upto 29.09.2011) Dr. Ravinder David Koilpillai (from 30.09.2011)

(ii) Heads of Departments:

Aerospace	: Dr. K. Bhaskar
Applied Mechanics	: Dr. Ramasubba Reddy
Bio-Technology	: Dr. K.B.Ramachandran (upto 25.07.2011) Dr. Mukesh Doble (from 26.07.2011)
Chemical Engineering	: Dr.S.Pushpavanam
Chemistry & MSRC	: Dr.S.Sankararaman
Civil Engineering	: Dr. S.R. Gandhi
Computer Science & Engineering	: Dr. C.Siva Ram Murthy
Electrical Engineering	: Dr. Enakshi Bhattacharya
Engineering Design	: Dr. Nilesh Jayantilal Vasa
Humanities & Social Sciences	: Dr. Sudhir Chella Rajan
Management Studies	: Dr.C.Rajendran (upto 24.07.2011) Dr. G. Srinivasan (from 25.07.2011)
Mathematics	: Prof. P.V. Subramanyam (upto 08.12.2011) Dr. S.H. Kulkarni (from 09.12.2011)
Mechanical Engineering	: Dr.S.P.Venkatesan (upto 29.11.2011) Dr. T. Sundararajan (from 30.11.2011)
Metl. & Matl. Engineering	: Dr.T.S.Prasanna Kumar
Ocean Engineering	: Dr.S.K.Bhattacharaya
Physics	: Dr.G.Markandeyalu

(iii) Heads of Research Centre:

Sophisticated Analytical & Instrumentation Facility	: Dr.G.K.Suraish Kumar
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(iv) Heads of Special facilities for interaction with other Institutions:

Centre for Industrial Consultancy & Sponsored Research	: Dr. Job Kurian (upto 11.03.2012) Dr.Krishnan Balasubramaniam (from 12.03.2012)
Chairman, CCE & Central Photographic Section	: Dr.Ajit Kumar Kolar
Central Electronics Centre	: Dr. Ravinder David Koilpillai (upto 04.12.2011) Dr. V.Jagadeesh Kumar (from 05.12.2011)

Computer Centre : Dr.B.V.S.S.S Prasad (upto 08.01.2012)
Dr. P.B. Sunil Kumar (from 09.01.2012)

(v) Central Administration:

Registrar : Shri. A.Thirunavukkarasu

Deputy Registrars:

Academic Section : Shri. G. Ravichandran
Administration : Shri. R. Esakkimuthu
Finance & Accounts Section : Shri. S. Sambasivam
Stores and Purchase Section : Dr. T. Suryakumar
Training & Placement : Shri. B. Nagarajan
IC & SR : Smt. Prema Chakkarapani

Assistant Registrars:

Academic : Shri. D. Ravee
Shri. M. Chakkarapani
Administration : Smt. P. Jamuna
Shri. K. Kumarappan
: Shri. M.G.Narasimha Rao (upto 29.03.2012 AN)
Finance & Accounts Section : Shri S. Sundaravinayagam
Shri. S. Muthukrishnan
Internal Audit Section : Shri. J. Lazar
Stores & Purchase Section : Shri A.V.Sudarsanam
Shri. C. Rajendran
IC&SR : Shri. V. Rajendran
Security cum Fire Officer : Shri. N. Elumalai

(vi) Heads of Central Services, Facilities & Section:

Central Library : Dr.Harish Chandra
Chief Medical Officer in-charge : Dr.S. Sabitha (upto 30.04.2011)
Dr. Mahalakshmi M. Ravi(from 01.05.2011)
Central Gas Supplies Unit & Central Gas Blowing Section : Dr.S. Sankararaman
Professor in-charge, Central Workshop : Dr. N. Ramesh Babu
National Service Scheme : Dr.Srinivasa Chakravarthy
Advisor, Sports : Dr.M.Kamaraj (upto 03.05.2011)
Dr. K.P. Sudheer (from 04.05.2011)
Advisor, Cultural : Dr..Sarathi (upto 20.09.2011)
Dr. Udayachandran Chakkingal (21.09.2011)

Foreign & Weaker Section Students : Dr.K.Giridhar
Vigilance : Dr.N. Sivaprasad
Placement & Training : Dr. N. Ramesh Babu
Guidance & Counselling Unit : Dr.G.Srinivasan (upto 08.09.2011)
Dr. M.S.Sivakumar (from 09.09.2011)
Prof. in-charge (Alumni Affairs) : Dr.R.Nagarajan

(vii) Engineering Unit:

Chairman, Engg. Unit : Dr.K.N.Satyanarayana
Co-Chairman, Engg. Unit : Dr.V. Veeraraghavan
Superintending Engineer : Shri. R. Arumugam
Assistant Registrar : Shri. V. Perumal
Executive Engineers : Shri K.Viswanath
Shri L.Venkataraman
Assistant Executive Engineers : Shri V.Seenivasan
Shri.K.Dharmaraj
Shri M.Ramachandran
Shri.M.Murali Prakash
Shri.H.Anandram
Smt N R Vineetha
Shri K Rizwan Ali

3. ACADEMIC PROGRAMMES AND AWARD OF DEGREES

The Institute offered Ph.D. programme in all the 16 departments, M.S. programme in 12 departments, M.Tech programme in 28 streams/ specialisations, M.Sc. programme in 3 branches, B.Tech programme in 10 branches, Dual degree (B.Tech and M.Tech) programme in 21 Streams/Specialisation, Dual Degree (BS & MS) in Physics, M.B.A. programme, M.A. Integrated programme in 3 streams and PG Diploma in Metro Rail Technology and Management in Civil Department besides a preparatory course for SC/ST students during the year under report.

3.1 Admissions 2011-12:

Candidates for admission to B.Tech., Dual Degree and M.Tech. programmes were selected through JEE and based on GATE score respectively. Quite a few candidates were also selected for M.Tech. programme under Sponsored, Q.I.P. and User Oriented programmes through interview and/or written test. Selection for Ph.D. and M.S. programmes was done through test/interview. For M.Sc. branches of Mathematics, Physics, and Chemistry, selection was made through a common test JAM 2011 conducted jointly by seven IITs. For M.B.A. programme selection was made through JMET and interview for M.A. Integrated Programme selection was made through HSEE 2011.

The number of students and scholars admitted to various programmes both in July 2011 and in January 2012 are given in Table:

TABLE 1 – Fresh Admission

Sl. No.	Department	B.Tech	Dual Degree	M.Sc	M.Tech	M.B.A	M.A.	M.S	Ph.D	Total
1.	Aerospace Engg.	34	21	-	25	-	-	15	9	104
2.	Applied Mechanics	-	-	-	16	-	-	14	14	44
3.	Biotechnology	42	18	-	12	-	-	8	39	119
4.	Chemical Engg	72	19	-	35	-	-	24	25	175
5.	Chemistry	-	-	49	0	-	-	0	70	119
6.	Civil Engg.	60	34	-	104*	-	-	10	44	252
7.	Comp. Sc. & Engg.	29	26	-	61	-	-	23	9	148
8.	Electrical Engg.	49	70	-	64	-	-	61	22	266
9.	Engg. Design.	-	54	-	0	-	-	14	12	80
10.	Hum. & Soc. Sci.	-	-	-	0	-	45	0	7	52
11.	Management Studies	-	-	-	0	52	-	14	16	82
12.	Mathematics	-	-	44	12	-	-	0	15	71
13.	Mechanical Engg.	76	72	-	92	-	-	29	43	312
14.	Met. & Mat. Engg.	35	13	-	22	-	-	8	22	100
15.	Ocean Engg.	35	19	-	42	-	-	21	19	136
16.	Physics	30	9	41	9	-	-	0	22	111
	Total	462	355	134	494	52	45	241	388	2171

* includes 10 students admitted in PG Diploma in Metro Rail Technology & Management in CE

In addition to the above, 10 students (3 ST, 7 PD) joined Preparatory Course.

OBC/SC/ST Students under Fresh Admission:

Sl.No	Programme	OBC	SC	ST	PD	Female
1.	B.Tech	123	68	34	10	67
2.	Dual Degree	94	53	24	16	56
3.	M.Tech	118	47	25	6	74
4.	M.Sc.	41	21	-	2	28
5.	M.B.A	1	7	-	-	11
6.	M.A.	12	7	3	1	30
6.	M.S	52	2	1	2	42
7	Ph.D	112	21	-	2	110
	Total	553	226	87	39	418

Total no. of students admitted during the year includes the following:

Foreign Nationals	2	User-oriented Programme (M.Tech)	63	
OBC	553			
Scheduled Castes	226	Q.I.P.	M.Tech Ph.D.	11 12
Scheduled Tribes	87	Sponsored	M.Tech.	15
Physically Handicapped	39	Project	M.S. Ph.D.	24 13
Women Students	418	External Registration	M.S.	22
Defence Officers (M.Tech)	35		Ph.D.	29

3.2 Students/Scholars Enrolment:

The total numbers of students on roll in various programmes of the Institute in the academic year 2011-12 are given below:

TABLE 2 – Students on roll

Sl. No.	Department	B.Tech	Dual Degree	M.Sc.	M.Tech.	M.B.A.	M.A.	M.S.	Ph.D.	Total
1.	Aerospace Engg.	117	99	-	53	-	-	45	60	374
2.	Applied Mechanics	-	-	-	33	-	-	46	63	142
3.	Biotechnology	131	80	-	30	-	-	21	149	411
4.	Chemical Engg.	260	85	-	69	-	-	46	66	526
5.	Chemistry	-	-	94	-	-	-	-	203	297
6.	Civil Engg.	211	166	-	182	-	-	38	138	735
7.	Comp. Sc.& Engg.	122	118	-	131	-	-	94	65	530
8.	Electrical Engg.	204	309	-	128	-	-	162	109	912
9.	Engg. Design	-	226	-	-	-	-	31	35	292
10.	Hum. & Soc. Sc.	-	-	-	-	-	183	-	34	217
11.	Management Studies	-	-	-	-	121	-	44	83	248
12.	Mathematics	-	-	92	19	-	-	-	43	154
13.	Mechanical Engg.	302	299	-	187	-	-	110	182	1080
14.	Met. & Mat. Engg	117	57	-	39	-	-	23	81	317
15.	Ocean Engg.	125	70	-	78	-	-	52	60	385
16.	Physics	96	24	75	17	-	-	-	102	314
	Total	1685	1533	261	966	121	183	712	1473	6934

The above total includes the following:

Foreign Nationals	5	QIP	M.Tech Ph.D.	24 68	92
OBC	1204	Sponsored	M.Tech M.S.	31 0	31
Scheduled Castes	761	Project	M.S. Ph.D.	74 116	190
Scheduled Tribes	306	External Registration	M.S. Ph.D.	83 170	253
Physically Handicapped	54	Registration Kept Alive	M.S. Ph.D.	4 7	11
Women students	1178	Part -Time Programme (Ph.D)	M.S. Ph.D.	8 36	44
Defence Officers (M.Tech)	77	User-oriented Programme (M.Tech)			90

OBC/SC/ST Students on roll:

Sl.No.	Course	OBC	SC	ST	Female
1.	B.Tech	354	272	135	215
2.	Dual Degree	261	242	111	163
3.	M.Tech	229	93	41	124
4.	M.Sc	72	38	4	61
5.	M.B.A	10	16	2	29
6.	M.A	30	32	10	113
7.	Ph.D	139	61	3	362
8.	M.S	109	7	0	111
	Total	1204	761	306	1178

Figures in () show no. of female students

The branch/ discipline-wise and year-wise details of students enrolled in B.Tech, Dual Degree and M.Tech programmes are given below:

TABLE 3 - B.Tech students on roll

Sl. No.	Branch	2011	2010	2009	2008	2007 & earlier batch	Total
1.	Aerospace Engineering	30	36	28	18	5	117
2.	Biotechnology	38	40	31	20	2	131
3.	Chemical Engineering	69	75	61	52	3	260
4.	Civil Engineering	60	57	56	32	6	211
5.	Computer Sc. & Engg.	33	33	27	25	4	122
6.	Electrical Engineering	53	54	47	38	12	204
7.	Engineering Physics	29	22	21	21	3	96
8.	Mechanical Engineering	83	83	67	61	8	302
9.	Met. & Mat. Engineering	30	37	24	22	4	117
10.	Naval Architecture	34	37	25	23	6	125
	Total	459	474	387	312	53	1685

TABLE 4 - Dual Degree (B.Tech & M.Tech) students on roll

Sl. No.	Branch	2011	2010	2009	2008	2007	2006 & earlier	Total
1.	(i) Aerospace Engineering	12	14	11	17	13	5	72
	(ii) AE (B.Tech) & AM (M.Tech)	7	7	5	4	4	-	27
2.	Biotechnology	16	18	13	19	12	2	80
3.	Chemical Engineering	18	20	14	14	13	6	85
4.	Civil Engineering							0
	Infrastructural Civil Engg. CE (B.Tech) & AM (M.Tech)	28 6	26 8	22 6	32 5	25 5	3 -	136 30
5.	Computer Science & Engg.	29	29	20	18	18	4	118
6.	Electrical Engineering							0
	(i) Micro Elec. & VLSI Design	24	26	22	22	18	4	116
	(ii) Communication Engg.	24	22	20	16	18		100
	(iii) Power Sys. & Power Electronics	19	14	11	12	9		65
	(iv) EE (B.Tech) & AM (M.Tech)	9	7	3	5	4		28
7.	Engineering Design	54	57	45	43	25	2	226
8.	Mechanical Engineering							0
	(i) Energy Technology	22	26	21	17	12	2	100
	(ii) Intelligent Manufacturing	48	23	21	18	13		123
	(iii) Product Design	-	25	18	17	16		76
9.	Metallurgical & Materials Engg.	12	12	11	9	10	3	57
10.	Naval Arch. & Ocean Engg.	19	18	14	10	9	0	70
11.	Physics (BS & MS)	8	6	10	-	-	-	24
	Total	355	358	287	278	224	31	1533

TABLE 5 - M.Sc students on roll

Sl. No.	Branch	2011	2010 & others	Total
1.	Chemistry	48	46	94
2.	Mathematics	43	49	92
3.	Physics	39	36	75
	Total	130	131	261

TABLE 6 - M.Tech students on roll

Sl. No.	Department \ Discipline \ Batch	2011	2010	Extended students	Total
1.	Aerospace Engineering	24	28	1	53
2.	Applied Mechanics	16	16	1	33
3.	Biotechnology – Clinical Engineering	12	8	10	30
4.	Chemical Engineering	31	28	2	61
	Catalysis Technology	3	5	-	8
5.	Civil Engineering:				
	CE 1 - Building Technology	7	10	1	18
	CE 2 - Environmental Engineering	5	5	-	10
	CE 3 – Geotechnical Engineering	11	10	-	21
	CE 4 - Hydraulic & Water Resource Engg.	6	1	-	7
	CE 5 – Structural Engineering	21	23	-	44
	CE 6 - Transportation Engineering	13	9	-	22
	CE 7 – Construction Technology & Mgmt.	30	29	1	59
6.	CS 1 - Computer Science & Engineering	61	67	3	131
7.	Electrical Engineering:				
	EE 1 - Communication Systems	20	27	1	48
	EE 2 - Power Systems and Power Electronics	8	13	-	21
	EE 3 - Micro Electronics and VLSI Design	15	15	-	30
	EE-4 – control and Instrumentation System	12	9	1	22
	EE-5 – Photonics	7	-	-	7
8.	Industrial Maths & Scientific Computing	9	8	2	19
9.	Mechanical Engineering:				
	ME 1 - Thermal Engineering	38	30	1	69
	ME 2 - Design	30	28	-	58
	ME 3 - Manufacturing Engineering	17	19	-	36
	ME 4 - Automotive Engine Technology	7	10	-	17
	NE - Nuclear Engineering	-	6	1	7
10.	MM - Metallurgical & Materials Engg.	11	18	1	30
	NE - Nuclear Engineering	9	-	-	9

11.	OE - Ocean Engineering	10	14	1	25
	- Ocean Technology & Management	10	11	-	21
	- Petroleum Engg.	8	9	-	17
	- Offshore Structures and Engineering	14	-	-	14
12.	Physics: PH - Solid State Technology	8	9	-	17
Total		473	466	27	966

Extended semester students are given ()

TABLE 7 – M.B.A. students on roll

Sl. No.	Branch	2011	2010	Total
1.	Management Studies	52	69	121

TABLE 8 – M.A. students on roll

Sl. No.	Branch	2011	2010	2009	2008	2007 & earlier	Total
1.	Humanities and Social Sciences	41	44	39	29	31	183

TABLE 9 – M.S scholars on roll

Sl. No.	Branch	I Year	II Year	III Year	IV Year	V Year & others	Total
1.	Aerospace Engg.	15	8	8	12	2	45
2.	Applied Mechanics	14	15	7	7	3	46
3.	Biotechnology	8	5	6	2	0	21
4.	Chemical Engg	23	9	7	6	1	46
5.	Civil Engg.	10	8	15	5	0	38
6.	Comp. Sc. & Engg.	25	17	25	18	9	94
7.	Electrical Engg.	63	48	32	16	3	162
8.	Engineering Design	15	8	5	3	0	31
9.	Management Studies	13	16	10	5	0	44
10.	Mechanical Engg.	29	29	29	12	11	110
11.	Met. & Mat. Engg.	7	8	6	2	0	23
12.	Ocean Engg.	21	17	13	1	0	52
Total		243	188	163	89	29	712

TABLE 10 – Ph.D scholars on roll

Sl. No.	Branch	I Year	II Year	III Year	IV Year	V Year & others	Total
1.	Aerospace Engg.	9	9	14	8	20	60
2.	Applied Mechanics	14	15	11	6	17	63
3.	Biotechnology	38	19	25	29	38	149
4.	Chemical Engg	23	19	11	9	4	66
5.	Chemistry	74	44	25	20	40	203
6.	Civil Engg.	42	27	32	10	27	138
7.	Comp. Sc. & Engg.	9	3	14	12	27	65
8.	Electrical Engg.	22	26	19	17	25	109
9.	Engineering Design	12	9	4	6	4	35
10	Hum. & Soc. Sci.	6	7	6	3	12	34
11	Management Studies	17	12	24	12	17	82
12	Mathematics	15	8	8	8	4	43
13	Mechanical Engg.	43	37	38	23	41	182
14	Met. & Mat. Engg.	20	16	16	8	22	82
15	Ocean Engg.	21	16	13	5	5	60
16	Physics	21	24	19	11	27	102
Total		386	291	279	187	330	1473

3.3 Courses Offered:

In the academic year 2011-12, 1272 courses were offered of which 651 courses in July–Nov. 2011 and 621 courses in Jan–May 2012. The Department-wise details of the courses offered are given below:

TABLE 11 – No. of Courses offered

Sl. No.	Department	No. of courses offered in July – Nov 2011				No. of courses offered in Jan – May 2012			
		Core	Elect.	Lab.	Total	Core	Elect.	Lab	Total
1	Aerospace Engineering	10	11	4	25	6	15	4	25
2	Applied Mechanics	5	7	2	14	9	8	3	20
3	Biotechnology	12	8	3	23	7	10	1	18
4	Chemical Engineering	12	20	3	35	14	15	3	32
5	Chemistry	5	10	2	17	6	13	3	22
6	Civil Engineering	30	29	5	64	24	22	8	54
7	Computer Sc. & Engg.	12	13	6	31	6	21	4	31
8	Engineering Design	13	3	5	21	12	6	3	21
9	Electrical Engineering	16	32	6	54	15	36	8	59
10	Hum. & Soc. Science	37	36	0	73	30	26	1	57
11	Management Studies	27	41	0	68	6	45	0	51
12	Mathematics	15	19	1	35	12	21	1	34
13	Mechanical Engineering	42	34	6	82	51	24	7	82
14	Met. & Mat. Engineering	9	23	4	36	9	23	8	40
15	Ocean Engineering	20	14	2	36	18	8	2	28
16	Physics	20	10	7	37	18	21	8	47
Total		285	310	56	651	243	314	64	621

3.4 Convocation:

The 48th Convocation was held on 22nd July 2011. Dr Y Venugopal Reddy delivered the Convocation address. 1385 candidates were awarded various degrees 1148 candidates received degrees in person. The department-wise details of degrees awarded are given below:

TABLE 12 – Degrees awarded

Sl. No	Department	B.Tech	Dual Degree		M.A	M.B.A	M.Sc	M.Tech	M.S	Ph.D	Total
			B.Tech	M.Tech							
1.	Aerospace Engg.	15	12	12	-	-	-	20	8	-	67
2.	Applied Mechanics	-	-	-	-	-	-	14	7	5	26
3.	Biotechnology	24	12	12	-	-	-	6	4	10	68
4.	Chemical Engg.	49	12	12	-	-	-	31	3	10	117
5.	Chemistry	-	-	-	-	-	41	-	-	27	68
6.	Civil Engg.	28	18	18	-	-	-	79	10	17	170
7.	Computer Sc.& Engg.	19	12	12	-	-	-	62	12	7	124
8.	Electrical Engg.	41	49	49	-	-	-	56	14	16	225
9.	Engineering Design	-	23	23	-	-	-	-	3	1	50
10.	Humanities & Social Sciences	-	-	-	24	-	-	-	-	5	29
11.	Management Studies	-	-	-	-	69	-	-	7	7	83
12.	Mathematics	-	-	-	-	-	35	8	-	4	47
13.	Mechanical Engg.	60	53	53	-	-	-	89	15	38	308
14.	Metallurgical & Materials Engg	25	8	8	-	-	-	19	2	10	72
15.	Ocean Engg.	14	7	7	-	-	-	30	3	5	66
16.	Physics	11	-	-	-	-	39	8	-	13	71
Total		286	206	206	24	69	115	422	88	175	1591

With this Convocation, the total number of degrees awarded so far by the Institute is 37080, the details of which are given below:

S.No.	Programme	No.
1	Ph.D.	3481
2	M.S.	2528
3	M.Tech	11825

S.No.	Programme	No.
4	M.Sc.	2666
5	M.B.A.	481
6	MA	24
7	Dual Degree	B.Tech
		M.Tech
8	B.Tech	1116
9	PGDMEM	13548
10	B.Sc(Tech)	30
11	DIIT	20
		245

3.5 Award of Prizes to the students:

3.5.1 Convocation Prizes:

The following are the details of Prizes awarded to the students at the 48th Convocation:

- President of India Prize ... P N Bhargav, B.Tech, Computer Science Engg.
- Governor's Prize ... Raghav M Iyengar, B.Tech, Mechanical Engg.

□ Other Prizes:

Sl.No.	Donor	Department	Name of student
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Doctor of Philosophy – Ph.D.			
1.	Prof. V Ramamurti Award	Applied Mechanics	Benolina Neethi Simon
2.	GE Ecomagination Excellence Award	Chemical	Venkata Suresh Patnaikuni
3.	Prof G Sundarajan Endowment Prize	Chemistry	Naidu Ajaya Babu
4.	Prof C N Pillai Prize	Chemistry	Manoj Kumar Sinha
5.	Prof Werner Prize	Chemistry	Senthil Kumar K
6.	Prof Langmuir Prize	Chemistry	Sajanlal P R Muthukrishnan A [Joint Winners]
7.	Shree Gaayathree Devi Award	Civil Engineering	Indu Siva Ranjani G
8.	Sudharshan Bhat Memorial Prize	Metal. & Materials Engg.	Sumantra Mandal Vijay R [Joint Winners]
9.	Prof A L Lashkar Prize	Physics	Benson K Money Imran Jafri R [Joint Winners]
10.	Bhagyalakshmi and Krishna Ayengar Award	Electrical Engg.	Mala K
Master of Technology – M.Tech.			
1.	Air India Prize	Aerospace Engineering	Dinesh Kumar
2.	Prof B V A Rao Endowment Prize	Applied Mechanics	Jyothsna Yerra
3.	Usha Kothandaraman Memorial Prize	Applied Mechanics	Jyothsna Yerra
4.	Institute Merit Prize	Biotechnology	Janani Venugopalan
5.	Dr K Subba Raju Memorial Prize	Chemical Engineering	Ravikiran Annapagaddi
6.	Institute Merit Prize	Chemical Engineering	K Devaki
7.	Mico-Bosch Prize	Chemical Engineering	Ravikiran Annapagaddi
8.	Valli Anantharamakrishnan Merit Prize	Civil Engg. – Transportation Engg.	Meenu Francis
9.	K Devarajan Memorial Prize		
10.	L & T Endowment Prize	Civil Engg. - Construction Technology and Management	Gideon Chella Kumar
11.	CMC Prize	Computer Science & Engg	Subhashini V

12.	Prof H N Mahabala Endowment Prize		
13.	Siemens Prize	Electrical Engineering	Sashidharan V
14.	Prof. Achim Bopp Endowment Prize	Electrical Engineering	Bibin Varghese
15.	Prof Helmut Neunzert Endowment Prize	Industrial Mathematics & Scientific Computing	Saripaka Venkata Sai Prasanth
16.	Prof B Sengupto Prize	Mechanical Engineering	Robin Jacob
17.	Dr S Vaidyanathan Memorial Prize	Mechanical Engineering	Srinidhi V Katti
18.	Prof Ramamohana Rao Memorial Prize	Mechanical Engineering	Sanjay
19.	S Anantharamakrishnan Merit Prize	Mechanical Engineering	Uma V Navaneeth Krishnan Ravichandran [Joint winners]
20.	Delphi-TVS Diesel Systems Ltd. Prize	Mechanical Engg. - Automotive Engine Tech.	Ananth S
21.	Prof Ram Rao Jayanti Memorial Prize	Mechanical Engineering	Zope Chirag Suresh
22.	Giri Brothers Prize	Mechanical Engineering	Chaitanya Deepak K
23.	Bhagyalakshmi and Krishna Ayengar Award	Mechanical Engineering	S Anand
24.	Sudharshan Bhatt Memorial Prize	Metallurg. & Mat. Engg	Jayaraj Radhakrishnan
25.	American Bureau of Shipping Prize	Ocean Engineering	D Shyamala Varthini
26.	Institute Merit Prize	Ocean Technology & Mgmt.	Kiran Govind V
27.	Institute Merit Prize	Petroleum Engineering	Subhashini Nainar
28.	Institute Merit Prize	Solid State Technology	Sumeet Soni
Master of Science – M.Sc			
1.	Dr. S R Ramadas 60 th Birthday Commemoration Award and	Chemistry	Prem Kumar Chanani
2.	Ratna Rao Memorial Prize		
3.	Mira Paul Memorial Prize	Mathematics	Parangama Sarkar
4.	Prof Chilukury Ramasastry Memorial Prize	Physics	Kaumudi Hassan Prabhakara
Master of Business Administration - M.B.A.			
1.	K V Arunkumar Memorial Prize	Management Studies	Krishnan G
2.	Coka Parthasarathy Prize	Management Studies	Preeti R
Dual Degree - B.Tech. & M.Tech.			
1.	Dr. V Mohan Raman Prize	Aerospace Engineering	Joseph George K
2.	Mayan Prize	Aerospace Engineering	Aswathy Surendran
3.	Biocon prize	Biotechnology	Srivats Venkataramanan
4.	B Ravichandran Memorial Prize	Chemical Engineering	Gautham Madenoor Ramapriya
5.	Institute Merit Prize	Civil Engineering	Harshavardhan Ravichandran
6.	Alumni Association Prize	Computer Science & Engineering	Pranesh Srinivasan
7.	Institute Merit Prize	Electrical Engineering	Ujwal Radhakrishna
8.	Phillips India Prize		
9.	Bhagyalakshmi and Krishna Ayengar Award	Electrical Engineering	R M Amarsagar Reddy
10.	Institute Merit Prize	Engineering Design	Viswanath K S
11.	Prof G V N Rayudu Memorial Prize	Mechanical Engineering	Ketan Anand Nayak
12.	Dr. Shankar Dayal Sharma Prize	Mechanical Engineering	Tanveer Singh S Chawla
13.	S Anantharamakrishnan Memorial Prize	Metallurg. & Materials Engg	Anand Chandrasekaran

14.	Goodearth Shipbuilding Pvt. Ltd Prize	Naval Architecture & Ocean Engineering	Michael John
Bachelor of Technology - B.Tech.			
1.	HAL Prize	Aerospace Engineering	Abhishek Sheshadri
2.	The Divashri Award	Biotechnology	Gara Nitesh Kumar
3.	C A Sastry Endowment Prize	Chemical Engineering	N V S Anuraag
4.	Reliance Heat Transfer Pvt. Ltd. Prize	Chemical Engineering	C K Naveen Kartik
5.	Larsen & Toubro ECC Endowment Prize	Civil Engineering	Kanmani Chockalingam
6.	Bhagyalakshmi and Krishna Ayengar Award	Civil Engineering	Vinayak S
7.	B Ravichandran Memorial Prize	Computer Science & Engineering	P N Bhargav
8.	Bharat Ratna M Visvesvaraya Memeorial Prize	Computer Science & Engineering	P N Bhargav
9.	Motorola Prize	Computer Science & Engineering	Immanuel Ilavarasan Thomas
10.	Siemens Prize	Electrical Engineering	Avinash K Krishnakumar
11.	Bhagyalakshmi and Krishna Ayengar Award	Electrical Engineering	Vinayak S
12.	Institute Merit Prize	Engineering Physics	Sripoorna Paniyadi Krishna Bharadwaj
13.	Banco Foundation Prize	Mechanical Engineering	Sreenath Krishnan
14.	Sivasailam Merit Prize	Mechanical Engineering	Srishti Sundram
15.	Vaidy Krishna Memorial Prize	Mechanical Engineering	Raghav M Iyengar
16.	Dr Dhandapani Memorial Prize	Metallurg. & Materials Engg	Sivaraman Ramanathan
17.	American Bureau of Shipping Prize	Naval Architecture and Ocean Engineering	Aarthy Kannan Adityan

3.5.2 Institute Day Prizes (Silver medal & cash award of Rs.1000/-)

On the basis of performance during the academic year 2011-12, the following students were awarded Merit Prizes on the 52st Institute Day held on 21st April 2011 at the Central Lecture Theatre (CLT). Shri B Muthuraman, Vice Chairman, Tata Steel was a Chief Guest.

I. Institute Merit Prizes:

B.Tech / Dual Degree (First two Semesters)

Mechanical Engineering	ME09B095	Sneha Abhyankar
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B.Tech / Dual Degree (5th & 6th Semesters)

Aerospace Engineering	AE07B001	Abhishek Sheshadri
Biotechnology	BT07B020	Naik Ajinkya Abhay
Civil Engineering	CE07B017	Kanmani Chockalingam
Computer Science & Engineering	CS07B037	P N Bhargav
Engineering Design	ED07B003	Arun Srivatsan R
Engineering Physics	EP07B017	Sripoorna Paniyadi Krishna Bharadwaj
Mechanical Engineering	ME07B074	Sameer Bardapurkar
Naval Architecture	NA07B001	Aarthy Kannan Adityan

Dual Degree (7th & 8th Semesters)

Aerospace Engineering	AE06B006	Joseph George K
Biotechnology	BT06B043	Srivats Venkataramanan

Chemical Engineering	CH06B063	Waseem Siddiqui
Civil Engineering	CE06B054	Harshavardhan Ravichandran
Computer Science & Engineering	CS06B028	Boddapati Laalithya
Engineering Design	ED06B010	Jagga Raju N
Electrical Engineering	EE06B077	Srinidhi Tirupattur Ramamurthy
Electrical Engineering	EE06B081	R M Amarsagar Reddy
Mechanical Engineering	ME06B058	Navaneetha Krishnan Ravichandran
Mechanical Engineering	ME06B090	Ketan Anand Nayak
Mechanical Engineering	ME06B074	N S Mrudula
Metallurgical & Materials Engineering	MM06B033	Anand Chandrasekaran
Naval Architecture	NA06B026	Michael John

M.Tech (First Two Semesters)

Aerospace Engineering	AE09M006	Dinesh Kumar
Applied Mechanics	AM09M014	Rajani S R
Biotechnology	BT09M003	Archana Suresh
Chemical Engineering	CH09M003	K Rajalakshmi
Chemical Engineering	CH09M044	Shah Shalaka Hasmukh
Civil Engineering	CE09M031	Meenu Francis
Civil Engineering	CE09M151	Gideon Chella Kumar
Compute Science & Engineering	CS09M054	Subhashini V
Electrical Engineering	EE09M072	Aniruddha Roy
Mathematics	MA09M006	Saripaka Venkata Sai Prasanth
Mechanical Engineering	ME09M024	Robin Jacob
Automotive Engine Technology	AT09M001	Ananth S
Metallurgical & Materials Engineering	MM09M007	Jayaraj Radhakrishnan
Ocean Engineering	OE09M010	Sasi Kala N
Ocean Engineering	OE09M036	Kiran Govind V
Ocean Engineering	OE09M061	Subhashini Nainar
Physics	PH09M009	Sumeet Soni

M.Sc. (First Two Semesters)

Chemistry	CY09C025	Prem Kumar Chanani
Mathematics	MA09C025	Parangama Sarkar

MBA (1st four Quarters)

Management Studies	MS09A039	Preeti R
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MA (5th and 6th Semester)

Humanities & Social Sciences	HS07H029	Vishnu Prasad
	HS07H023	R C Sudheesh
	HS07H004	Aparna J

MA (5th and 6th Semester)

Humanities & Social Sciences	HS06H029	Vaishnavi Surendra
	HS06H024	Siddharth Sareen
	HS06H012	Kaushik Viswanath

II. Donors Prizes:

B.Tech (First seven semesters)

Dr. Dinesh Balagangadhar Prize	ME07B094	Sreenath Krishnan
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B.Tech (First Six Semester)

Dr S Chandrasekharan Memorial Prize	ME07B094	Sreenath Krishnan
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B.Tech / Dual Degree (First two Semesters)

Sri S Subramanian Prize	EE09B007	Archith Mohan
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B.Tech / Dual Degree (3rd to 7th Semesters)

K Srinivasan & Indira Srinivasan Prize	EE07B088 EE07B013	Ramya Korlakai Vinayak Dinesh Jayaraman
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B.Tech / Dual Degree (5th & 6th Semesters)

Sri Ramasarma V Kolluri Memorial Prize	EE07B088	Ramya Korlakai Vinayak
Ratna Award	MM07B020	Srinivas Prasad B S
Dr R K Viswanath Memorial Prize	CH07B020	C K Naveen Karthik

B.Tech / Dual Degree (5th, 6th & 7th Semesters)

Rajalakshmi Krishnamurthy English Prize	EE07B013	Dinesh Jayaraman
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B.Tech / Dual Degree (7th & 8th Semesters)

D Ananda Subramanian Memorial Award	EE06B097	Rakesh Mishra
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Dual Degree (1st to 9th Semesters)

Prof V Radhakrishnan Endowment Award	ME06B074	N S Mrudula
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B.Tech/Dual Degree student with best cumulative performance in courses taken under HSS

Dr. Dilip Veeraraghavan Award	CH07B037 EE07B013	Tanmay B Dinesh Jayaraman [Joint Winners]
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B.Tech / Dual Degree (Best Project)

ClassNK-100 Award - First Prize (Cash award of Rs.10,000/- with a silver medal)	NA06B009	Georgy George
ClassNK-100 Award – Second Prize (Cash award of Rs.5,000/- with a silver medal)	NA06B014	Pothuganti Vijay Kumar
Prof CS Krishnamurthy Endowment Prize	ED05B002	Adithya M Arikere

B.Tech / Dual Degree (Highest marks)

Prof M Ramanujam Memorial Award	CH08B036	Rohit Kannan
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B.Tech / Dual Degree (Highest CGPA at the end of Pre final semester)

Prof M Ramanujam Memorial Award	CH06B064	N V S Anuraag
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B.Tech / Dual Degree (Best Project)

Smt D L Saraswati Memorial Prize	CH05B051	Ankit Bhatnagar
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For the best B.Tech student among the branches of CH/CE/ME/MM/NA for all around performance in cultural, co-curricular and organizational abilities during the academic year 2007-10

K M Ramamurthi Prize	CH07B020	C K Naveen Kartik
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M.Tech – Best Academic Record (upto 3rd Semester)

LVKV Sarma Prize	MA09M006	Saripaka Venkata Sai Prasanth
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M.Tech – Best Academic Record (First Two Semesters)

Prof N Venkatarayulu Memorial Prize	ME09M024	Robin Jacob
Prof Gerhard Rouve Memorial Prize	CE09M073	Jamsheeda K

M.Tech – Best Academic Record (1st to 3rd semesters)

Sushruta Award	AM09M004	Jyothsna Yerra
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M.Tech (Best Project)

Lucas–TVS Limited Prize	AT08M003	Havale Vrushabha Bhupal
Bhagyalakshmi & Krishna Ayengar Award (Cash Prize of Rs.30,000/- for faculty having guided the project work) of G Vincent, Ph.D & Aniket Baheti, DD)	G Vincent EE05D021	Dr. Mahesh Kumar
	Aniket Baheti ME04B070	Dr. Ajit Kumar

M.Tech Best Thesis

Prof Juergen Plaehn Prize	CE08M102	Vikas Goel
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M.Tech Best Thesis

Rajinikant Gandhi Memorial Award	CE08M046	Sridhar G
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M.Sc – Best Academic Record (upto 3rd Semester)

LVKV Sarma Prize	MA09C025	Parangama Sarkar
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M.Sc. (First Two Semesters)

Chilukuri Ramasastry Memorial Prize (A Silver Medal & Cash Award of Rs.1,500/-)	PH09C016	Kaumudi Hassan Prabhakara
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M.Sc – Lowest parental income with CGPA above 7.0 (at the end of 2nd semester)

R Padmanabhan Memorial Prize	CY09C016	Indranath Chakraborty
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MBA Best Academic record (First six Quarters)

Dr. T S Rajagopalan Memorial Prize	MS09A039	Preeti R
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M.S (Best Thesis)

Sri Biswajit Sain Endowment Prize	CS05S024	Jyothi B S
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Ph.D (Best Thesis) in inter-disciplinary areas

Dr. M Mukunda Rao Endowment Prize	EE05D003	Renny Edwin Fernandez
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DEPARTMENT LEVEL PRIZES

I. Institute Merit Prizes:

B.Tech/Dual Degree (3rd & 4th Semesters)

Aerospace Engineering	AE08B013	Nimmagadda Sravya
Biotechnology	BT08B007	Chaitra P
Chemical Engineering	CH08B036	Rohit Kannan
Civil Engineering	CE08B076	Srikant Menon
Computer Science & Engg.	CS08B009	N Karthik Rajagopal
Electrical Engineering	EE08B017	Kollagunta Krishnaswamy Anilesh
Engineering Design	ED08B038	Karani Neerav Jagdish
Engineering Physics	EP08B004	Anjan Dwaraknath
Mechanical Engineering	ME08B112	M Brij Bhushan
Metallurgical & Materials Engineering	MM08B033	Sai Gautam G
Naval Architecture	NA08B035	Rajshree Gosal

B.Tech (First Four Semesters)

Sri Raghavendra Memorial Prize	ME08B112	M Brij Bhushan
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M.A (1st and 2nd Semesters)

Management Studies	HS09H012	Kanishk Bandyopadhyay
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M.A (3rd and 4th Semesters)

Management Studies	HS08H027	Soumya Mishra
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Swathi / Jayalakshmi Memorial Award to a Girl student with the best academic record at the end of pre-final semester in each of the following programmes:

B.Tech	EE07B088	Ramyra Korlakai Vinayak
Dual Degree	EE06B062	Surbhi Maheshwari
M.Tech	CE09M031	Meenu Francis
M.A	HS06H029	Vaishnavi Surendra
M.Sc	PH09C016	Kaumudi Hassan Prabhakara
MBA	MS09A039	Preeti R

Notional Prize – Certificate and cash award of Rs.1,000/- awarded to the following B.Tech/ Dual Degree students for having secured high position in the merit list of JEE 2010.

1	CS10B003	G Aparna	15	EE10B010	Gokina Sree Satwik
2	CS10B004	Appini Surya Teja	16	EE10B011	Gurralla Praveen
3	CS10B008	Golla Abhinay Swaroop	17	EE10B013	Karthik R
4	CS10B017	Pothineni Sai Bhushan	18	EE10B018	J Manojvikram
5	CS10B018	Raghavendra Bommaraju	19	EE10B020	Muddireddy Pavankumar Reddy
6	CS10B019	Rongali Subendhu	20	EE10B022	B Naga Avinash Varma
7	CS10B021	B Saikrishna	21	EE10B025	Pananjady Martin Ashwin
8	CS10B023	Siddhartha S	22	EE10B028	Praveen Venkatesh
9	CS10B024	Smit Samir Mehta	23	EE10B030	Pydi Muni Sreenivas
10	CS10B029	Yash Vijay Kamat	24	EE10B032	Ranjit Nair
11	CS10B055	Yannam Vamsi Krishna	25	EE10B035	Saragadam R V Vishwanath
12	EE10B001	Achuthan Sekar	26	EE10B038	S Siddharth Jain
13	EE10B004	Apelagunta Kama Naveen	27	EE10B039	Siva Teja M G V
14	EE10B008	Dhulipala Pranav Vaidik	28	ME10B070	Vasudevan Rajagopal Iyer

4.1 DEPARTMENT OF AEROSPACE ENGINEERING

4.1.1 Introduction:

The Department of Aerospace Engineering was established in 1969 and has been offering B.Tech./ M.Tech / M.S / Ph.D. Programmes. The areas of teaching and research of the Department are Aerodynamics, Propulsion and Structures.

4.1.2 Academic Programmes:

B.Tech. / Dual / M.Tech. / M.S. & Ph.D.

New Courses introduced:

Sl. No.	Course No.	Title
1	AS5470	Unsteady Aerodynamics of Moving Bodies

New Labs Established:

Dr. N.R. Panchapakesan developed the computational infra- structure for aerodynamics and aerothermodynamics research funded by ARDB aerodynamics panel (ARDB - CIFAAR) was inaugurated by Shri Sudhir Gupta, Director Aeronautics, and by Shri Parminder Singh, Member secretary for Aerodynamics Panel ARDB on 2nd February 2012 in the Aerospace Engineering Department.

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	30	36	28	18	5	117
Dual Degree	19	21	16	21	22	99
M.Tech.	24	28	1	0	0	53
M.S.	15	8	8	12	2	45
Ph.D.	9	9	14	8	20	60
Total	97	102	67	59	49	374

Endowment Prize Instituted:

S.No.	Name of the Student	Name of Prize/Awards
1	Ms. Aswathy Surendran, AE06B024-Dual Degree	Mayan Prize
2	Mr.Dinesh Kumar, AE09M006 M.Tech	All India Prize

Names of Student/Scholar who attended Conference/ Workshops /Seminar and Symposia Abroad/India:

S. No.	Name of the Scholar	Roll No.	Name of the Conf./Seminar/ Symposium/ Workshop	Date & Venue	Fin. Asst. from
India:					
1	Vijaya Kumar Cheeda	AE07D009	8th International High Energy Materials Conference & Exhibit(HEMCE-2011)"	TBRL, Chandigarh on 10-12 November 2011	Institute
2	Vinayak Malhotra	AE09S018	21st National and 10th International ISHMT-ASME Conference	IIT Madras-28-30 December 2011	Institute
3	Manish Wankhede	AE09S010	SARDO	November 2011, Bangalore	NONE
4	S. Venkatesh	AE10S020	XVII National Seminar on Aerospace structures, Kanpur, September 2011	September 2011	INstitute

S. No.	Name of the Scholar	Roll No.	Name of the Conf./Seminar/Symposium/ Workshop	Date & Venue	Fin. Asst. from
5	S.Ajith Kumar	AE10D006	IUTAM Symposium on bluff body flows blub of 2011	12-16 Dec, 2011 – IIT Kanpur	
Abroad:					
1.	SATHEESH M	AE07D005	Invited Talk on” Non-Normal Nature of Thermo acoustic Interactions in a Rijke Tube” Thermodynamics Seminar Series.	May 24, 2011 – Tech.Univ. of Munich, Germany	Institute
2			Session Co-chair for the session on “Combustion Instabilities at 47 th AIAA/ASME/ASEE Joint Propulsion Conference & Exhibit,	31.07.2011 - 31.08.2011 , San Diego	Institute
3	Ms.LIPIKA KABIRAJ	AE07D012	Invited Talk on “Investigation of Non Linear Aspects of Self-Excited Oscillations in a Thermo Acoustic Systems at Chair of Fluid Dynamics	21.07.2011 , TU Berlin	Institute
4	Mayank Sachan	AE09S019	50 th , AIAA Aerospace Sciences Meet and exhibit, 2012	Nashville Tennessee, USA, 9-12 January 2012.	Institute
5	Abhishek Pateria	AE09S020	28th International Symposium on Shock Waves (ISSW)	Jul 17-22, 2011, Manchester Univ., U.K.	Institute
6	G Balaganesan	AE08D013		Germany	Institute
7	Ishitha Kumar	AE08D019	47 th AIAA/ASME/ASEE Joint Propulsion Conference & Exhibit,	31.07.2011 - 3.08.2011 , San Diego	Institute
8	Rajiv Kumar	AE07D008	47 th AIAA/ASME/ASEE Joint Propulsion Conference & Exhibit,	31.07.2011 - 3.08.2011 , San Diego	Institute
9	Sumit Verma	AE07D011	47 th AIAA/ASME/ASEE Joint Propulsion Conference & Exhibit,	31.07.2011 - 3.08.2011 , San Diego	Institute
10	Gaurav M	AE10S004	47 th AIAA/ASME/ASEE Joint Propulsion Conference & Exhibit,	31.07.2011 - 3.08.2011 , San Diego	Institute
11	Mahendhran M	AE08S003	The 32nd International Electric Propulsion Conference held at	Wiesbaden, Germany on 14th September 2011	Institute
12	R. Sooraj	AE09S007	Instabilities in Superfluid Plane Poiseuille Flow – 13 th European Turbulence Conference	12-15 Sep 2011- Univ. of Warsaw, Poland	Institute
13	Ajith Kumar	AE10D006	Influence on slid on flow past cylinder at low Reynolds number – IUTAM Symposium on bluff Body flows blub of 2011	12-16 Dec. 2011 IIT Kanpur	Institute

Names of students/scholars who won outside prizes and awards:

Sl.No	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1	Vinayak Malhotra	AE09S018	Prof. V.M.K. Sastri best paper award	ISHMT at the 21 st National and 10 th International ISHMT-ASME Conference

4.1.3 Faculty and their Activities :

1. Prof. Job Kurian is inducted as Indian National Representative in the Executive Board of the International Society for Air Breathing Engines.
2. Prof. R.I. Sujith selected as Member of Aeronautical Research & Development Board (ARDB) Aerodynamic Panel for the year 2012.
3. Prof. R.I. Sujith chaired the following workshop :
 - Indo European Workshop on Non-Normality, IIT Madras – Jan 2011
 - The Indo US Workshop on Frontiers of Liquid Atomization- Dec. 2011.

Faculty and their Speciliasation

Name and Qualifications	Major area of specialization (only 3 areas)
Professors:	
Gokhale S. S., Ph.D. (Univ. of Illinois, USA) Director, VNIT Nagpur	Aircraft and missile propulsion, computational methods, simulation and optimization, computer aided instructions
Job Kurian, Ph.D., (IIT Madras)	Gas Dynamics, Combustion, Shock tube flows and measurements
Santhakumar S., Ph.D., IIT Madras	Aerodynamics, flight mechanics, instrumentation
Ramakrishna M., Ph.D., Univ. of Texas at Arlington	Fluid Mechanics, numerical methods, computer solutions
Sriram P., Ph.D. Georgia Inst. Of Technology	Structural mechanics, fatigue & fracture, Parallel computing
Bhaskar K., Ph.D., (IIT Madras)	Structural mechanics, Plants & Shells, composite structures
Sujith R.I., Ph.D., Georgia Inst. Of Technology	Acoustics and Combustion Instability Optical Flow Diagnostics
Chakravarthy., S.R. Ph.D., Georgia Inst. Of Technology	Propulsion, Combustion & Fluid Mechanics
R. Velmurugan., Ph.D. , IIT Delhi	Composite Structures Analysis and Design, Impact Mechanics, 3-D Composites
Visiting Professor:	
Luoyi Tao, Ph.D. University of Pittsburgh	Continuum mechanics and its applications (fluids, solids, multiphase flows, etc.)
Associate Professor:	
Panchapakesan N.R, Ph.D Cornell University, USA	Fluid Mechanics, Stability and Transition of Fluid flows Turbulence.
H.S.N. Murthy, Ph.D Purdue University	Fatigue and Fracture, Non-destructive evaluation, Tribology, Advanced Materials., Elasticity
Amit Kumar, Ph.D Case Western Reserve Univ.	Combustion, Propulsion, fine research, CFD
P.A. Ramakrishna, Ph.D., Indian Institute of Science,	Combustion, Propulsion & Fuel Cells
Nandan Kumar Sinha, Ph.D IIT Bombay	Non linear dynamics, Bifurcation Theory and Continuation methods, Flight Dynamics and Controls
Assistant Professor:	
K.V. Nagendra Gopal, Ph.D. Ph.D. (Aero) Indian Institute of Science	Computational Mechanics and Multi-scale Modeling, Fracture Mechanics, Structural Dynamics and Aero elasticity

T.M. Muruganandam Ph.D., Georgia Institute of Technology	Combustion, Blowout dynamics, Optical diagnostics, Spectroscopic methods, Vortex breakdown, Dynamics of mode shifting. High speed flows, Unsteady gas dynamics
Dr. Sunetra Sarkar, Ph.D. Indian Institute of Science	Insect Aerodynamics, Fluid Structure Interaction, uncertainty quantification
Dr. A. Sameen, Ph.D. Indian Institute of Science	Stability, Transition and Turbulence, Computational Fluid Dynamics
Visiting Faculty:	
Dr. S. Panneerselvam, Ph.D. IIT Madras	Aerodynamic Design of Missile Systems (Tactical and Strategic systems), System Design of Hypersonic Vehicles.

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
1.	Prof. R. Velmurugan & Dr..M. Balasubramaian & Dr. Kamraj	Processing and Applications of Composite Materials	26-27 August, 2011.
2	R Velmurugan	Introduction to composite Materials, at Eaton, Pune	26-28, July 2011
3	Prof. R.I. Sujith	Indo- US Workshop on Frontiers in Liquid Atomization	
4	Dr. Nandan K Sinha	Advanced Flight Dynamics: Modeling Simulation and Control".	19-21 March 2012

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Period & Venue
Workshop:			
1.	Prof. S.R. Chakravarthy	To present his paper "In-Situ Propellant Production on Mars for Earth Return" Brain-storming session on Mars Science and Exploration, PLANEX.	24-25 March 2011 at ISRO Ahmedabad
2.		Attended the Indo-US Workshop on Biofuel Combustion and Sprays to delivered an invited talk "Spray & Combustion Dynamics Research at IIT Madras	22-23, June 2011, IISc., Bangalore
3		Delivered an invited talk at the 4 th Indo-European Workshop on Advanced Instability Methods : Dynamics of Acoustic Self Excitation in a laboratory scale swirl combustor with varying fuel air premixed extent.	20-22 January 2012 IIT Bombay
4	Dr. S. Panneerselvam	Delivered an invited talk in the National Workshop on High Temperature Materials and Gas Dynamics of Jet Propulsion : Title : High Temperature Materials for Hypersonic Air Breathing Vehicles	4.01.2012 MIT Campus, Chennai
5	Prof. S.Santhakumar	Resource Person in National Workshop on Mathematical"	3.3.12 – PSG College, Coimbatore
6	Dr. Sunetra Sarkar	Delivered an invited talk at the 4 th Indo-European Workshop on Advanced Instability Methods : Reconstruction of porous media	20-22 January 2012 IIT Bombay
Seminar:			
1.	Dr. Sunetra Sarkar	XVII National Seminar on Aerospace structures, Kanpur.	September 2011
Symposia:			
1.	Prof. S. Santhakumar	Participated as Chief Guest at Valedictory of FORGE 2011- Symposium is Design, Manufacturing and Thermal Engineering of Mechanical Engineering	11 th March 2011 @ Arunai Engg. College.

Conference			
1.	Prof. R.I. Sujith	Non Linear Dynamics of Combustion Instability Key-note Lecture , National Conference in IC Engines and Combustion	10-12 Dec. 2011, Calicut
2	Dr. NandanK Sinha	SAROD Conference 2011	Bangalore
3	Dr.Nandan K Sinha	Embedded Guidance, Navigation and Control in Aerospace (EGNCA)	13-15, Feb 2012 IISc.,Bangalore
4	Dr.TM Muruganandam	22 nd National conference on IC Engines & Combustion.	10-13 Dec 11 NIT Calicut
5	Prof. SR Chakravarthy	22 nd National conference on IC Engines & Combustion.	10-13 Dec 11 NIT Calicut
6	Amit Kumar	21 st National and 10 th International ISHMT-ASME Conference IIT Madras	28-30 December 2011

Meeting:

1. Prof. S.R. Chakravarthy attended the following meetings :
 - a) Participated as Chairman of the Mission Review Committee Formation Meeting on 19th March 2011 at ASL, Hyderabad.
 - b) Participated the Agni-5 Missile Mission Review Meeting at Advanced Systems Laboratory, DRDO, Hyderabad from 19th to 20th March 2011.
 - c) ARDB Meeting at Hyderabad on 6th and 7th Sepetember 2011.
To attend the Kick off meeting of the EUFP 7 OPTIMASH Prohect on 15th November 2011.
 - d) To attend the meeting with ASL Hyderabad for 1MW Plasma Wind tunnel on 5th December 2011 at Bangalore.
 - e) The ARDB Propulsion Panel meeting on 20th January 2012.
 - f) Prof. S.R. Chakravarthy attended the Indo-European Coal Working Group Meeting held in New Delhi to make a presentation on our recent project "Optimizing Gasification of High Ash Coals for Electricity Generation" funded by the European Commission on 1st February 2012.
 - g) Attended the Special Selection Committee to assess the suitability Dr. G.Santhosh for appointment in VSSC on 27th March 2012.
- 2 Prof. K.Bhaskar, HoD attended the DRDO Scientist Selection Board Meeting on 13th January 2012.
3. Dr.NR Panchapakesan attended the Doctoral Committee Meeting on 4th April 2011 at IIST Trivandrum
4. Prof. SS Gokhale attended the following meetings :
 - a) the Selection Committee Meeting on 8th & 9th April 2011 at IITM Gwalior
 - b) GC Meeting of FCRI, Palakad on 11th April 2011.
 - c) TEQIP Evalauation Meeting on 7th to 10th June 1011.
- 5 Prof. P. Sriram attended the following meetings :
 - a) Syllabus Committee Meeting at Nagpur University on 11th March 2011.
 - b) Participated as Guest on SUN New Live Programm to discuss career opportunities in Aviation and Aeronautical Engineering on 22nd May 2011.
6. Dr. P.A. Ramakrishna attended the following meetings :
 - a) Project Review Committee Meeting on 18th March 2011 at DRDL, Hyderabad.
 - b) Attended two review meetings at DRDL Hyderabad on the 27th and 28th of December 2011 regarding fuel rich propellants and hybrid rockets.
7. Prof. S. Santhakumar attended the following meetings :
 - a) To review the Board Meeting for the Selection to the Post of Deputy Director(Aircraft Engg) UPSC, New Delhi.

- b) Attended the integrated technical review for GSLV MK III Project held on 22nd and 23rd August 2011 at VSSC, Trivandrum.
 - c) Member of Selection Committee for NGI Life Time Awards on 30th November 2011 at NGI
- 8 Prof. R. Velmurugan attended the following meetings :
- a) Aerospace Resource Pane, held at DRDO Complex, New Delhi on 18th May 2011.
 - b) Kerala Shipping corporation, Cochin, Evaluation of FRP Boats, 6. June 2011.
 - c) Attended the REVIEW meeting , on “Development of Adaptive Composite Structures”, held at R&D Engineers, DRDO, Pune on 14 Dec. 2011.
 - d) Aerospace Research Panel meeting, DRDO , Delhi, 5th March 2012
 - e) Aerospace Academic Course meeting, Abdhur Rahman Uni., Chennai, 17th March 2012
- 9 Prof. M. Ramakrishna attended the following meetings:
- a) PHD Viva Voce Meeting on 6th and 7th May 2011 at IIT Mumbai
 - b) To serve as External Expert on DRDO Selection Board on 14th May 2012.
 - c) Integrated Technical Review IR-2 of GSLV-Mark III VSSC Trivandrum on 22nd and 23rd August 2012
 - d) attended the integrated technical review for GSLV MK III Project held during 19-20th September 2011 at VSSC Trivandrum
 - e) Attended the GSLV Aerodynamics Review meeting on 11th, & 21st November 2011.
 - f) Attended the GSLV Unsteady Pressure data /loads Expert Committee Meeing on 24th Novemeber 2011 at Bangalore.
 - g) Attended the GSLV Aerodynamics Panel Review Meeting on 1st Feb. 2012.
- 10 Prof. R.I. Sujith attended the following meetings :
- a) participated as Expert Member in integrated Technical Review (ITR) of ISRO to review GSLV MK III and also as member of the committee to study thrust oscillation in S200 Rocket.
 - b) To attend GSLV-MK III Review as a National Expert Review Panel Member at VSSC Trivandrum on 22nd and 23rd August 2011 & 19th and 20th Sep.2011.
 - c) Attended the GSLV-MK III Review Subcommittee on pressure and thrust Oscillation in S200 Motor on 3rd October 2011 VSSC Trivandrum.
 - d)) Attended the Thesis Defense Meeting at Vinayaka Mission Univ., Salem on 16th March 2012.
- 11 Dr. S. Panneerselvam, Visiting Faculty participated in the following meetings as member of the committee:
- a) Participated in AR&DB Technical Committee Meeting and Conducted AR&DB Aerodynamics Panel Meeting on 14th March 2011 at NAL, Bangalore.
 - b) Participated in the Critical Design Review Meeting of Advanced Light Weight Torpido' on 15th April 2011 at NSTL, Visakhapatnam.
 - c) Participated in DRDO's Assessment Committee for the promotion from Scientist 'F' to Scientist 'G' during 22-23, April 2011 at DARE, Bangalore.
 - d) Participated as an External Expert in the Assessment Boards of DRDO for the Promotion to Scientist 'C', 'D', 'E', 'F', 'G' grades
 - e) Participated as an External Expert in the Assessment Boards of ADA for the Promotion to Scientist "C", 'D', 'E', 'F', 'G' grades
 - f) Participated as an External Expert in the Assessment Boards of NAL for the Promotion to Scientist "C", 'D', 'E', 'F', 'G' grades
 - g) Participated as Chairman of Design Review Committee "Hydrodynamics & Aerodynamics Review of Project K4, DRDL Hyderabad on 22nd June 2011.
 - h) Participated as Chairman of Design Review Committee "Aerodynamic Design Review of SWARD' Weapon System at RCI Hyderabad on 23rd June 2011

- i) Participates in the Brain Storming Session on 'Critical Areas and Technologies in Aerodynamics' conducted at ADE, Bangalore on 25th June 2011.
 - j) Participated in the review meeting on "Aerodynamics Design on Subsonic Cruise Missile – NIRBHAI.
 - k) Participated as Chairman of the review committee at ADE Bangalore on 11th July 2011.
 - l) Participated in the meeting on 'System Review of NIRBHAI"as member of the Committee at ADE, Bangalore on 18th July 2011.
 - m) Participated in the review meeting on DRDO Research Boards – Review by SA to RM on 16th August 2011 at DRDO Headquarters, New Delhi.
 - n) Participated in the meeting on Mission and Configuration Review of Missile K-4 as a member of the Review Committee on 21st August 2011 at DRDL Hyderabad.
 - o) participated in the meeting on "Aerodynamic Review of ATGM (Anti Tank Guided Missile) as the Chairman of the Review Committee on 19th October 2011 at Bharat Dynamics Ltd (BDL), Hyderabad.
 - p) Participated in the meeting on 'Review on Aerodynamics Characterisation of GSLV' on 11-11-2011 at VSSC Thiruvananthapuram
 - q) Delivered an invited Talk on ' Aerodynamic and Aero-thermal design of Missile Systems – System Engineering Perspective' on 22-11-2011 in the Workshop on 'System Engineering Aspects of Weapon System Design' conducted during 21-24 Nov. 2011 at DRDL, Hyderabad.
 - r) Participated in the Review meeting on 'Unsteady load measurements on GSLV configuration, analysis and utilization in aeroelastic studies' on 24-11-2011 at NAL, Bangalore.
 - s) Participated in the Review meeting on 'Aerodynamic and Structural Design of Wing of an Air- to-Surface Missile' on 12 Jan 2012 at RCI Hyderabad.
 - t) Participated in the review meeting on "Aerodynamics Characterization of GSLV' at VSSC Trivandrum on 01.02.2012.
 - u) Participated as coordinator Aerodynamics Panel conducted Panel meeting at IISc., Bangalore on 03.0.2.2012.
 - v) Participated in the Critical Design Review Meeting on Aero-Hydrodynamics, Control and Guidance, Mission Software of B05 Missile System at DRDL Hyderabad on 13.02.2012
 - w) Chaired a Technical Session in the 'National Workshop on MAV with Flappers' conducted at Tagore Engineering College Chennai on 17-02-2012
 - x) Chaired a Technical Session in the 2nd National Symposium on 'Shock Waves' conducted by IISc, Bangalore at Periyar Maniammai University, Thanjavur on 27-02-2012.
- 12 Prof. Job Kurian attended the following meetings :
- a) Attended the Board Studies (Aerospace) Meeting at Bannari Amman Institute of Technology, Erode on 26th March 2011.
 - b) Attended the meeting at Ministry of Communication and Information Technology (MCIT) with the Electrical Department Faculty on 17th March 2011.
 - c) Attend the all Specialist Panel Coordinators & Technical Committee Meeting on 13-14 March 2011 at NAL,Bangalore
 - d) Attended the Join Annual IP Award 2011 on 25-26, April 2011 at New Delhi.
 - e) Participated as an Expert Member of CSIR Assessment Committee held at NAL Bangalore during 23-25 May 2011.
 - f) Participated to conduct Oral Examination at Department of Aerospace Engineering, IISc., Bangalore on 3rd May 2011.
 - g) To serve as an Expert Member for faculty selection in the Aerospace Engineering Department, IISc., Bangalore on 12-13 June 2011.
 - h) To attend the Executive Board Meeting of GATET at GTRE, Bangalore on 24th June 2011.
 - I Attended the 129th meeting of the academic committee at Delhi Flying Club, Safdarjung Airport, New Delhi on 6th August 2011.

- j) Attended the Joint 28th Policy Committee Meeting at IGCAR – IITM Cell at IGCAR Kalpakkam on 7th September 2011.
 - k) Attended the ARDB Propulsion Panel at DRDL Hyderabad on 6th September 2011.
 - l) Attended the programme at VIT Vellore and Selection Committee at ISRO, HQ, Bangalore on 17th November 2011
 - m) 20th January 2012 to attend the ARDB Propulsion Panel at IISc., Bangalore
 - n) 17th January 2012 in connection with the visit to Eaton, Pune for assessing their R&D facilities and capabilities.
 - o) 10th January 2012 in connection with the Selection Committee meeting at IIT Bombay
 - p) Attended the Academics Committee Meeting at Delhi on 14th February 2012.
 - q) Attended the ARDB Propulsion Panel Meeting on 7th February 2012 at GTRE, Bangalore.
- 13 Dr.T.M.Muruganandam attended the project proposal meeting to AR&DB Aerodynamics Panel on 3rd February 2012.
- 14 Dr. A Sameen attended the ARDB Meeting at Bangalore during 3-4 February 2012.
- 15 Dr.Nandan K Sinha attended the Ph.D thesis vivs at IIT Kanpur on 8th and 9th Nov. 2011
- 16 Dr.HSN Murthy attended the project review meeting “National Mission for Virtual Laboratories – ASE at Hyderabad on 12th December 2011.
- 17 Dr.PA Ramakrishna attended the review meeting at DRDL Hyderabad on 27th December 2012.
- Dr. Sunetra Sarkar attended the following meetings:
- a) ARDB aerodynamics project review meeting in IISc Bangalore in May 2011.
 - b) ARDB propulsion project proposal meeting in IITM in April 2012
 - c) ARDB propulsion project review meeting in IITM in April 2012.
 - d) Attended a technical discussion in ADA, Bangalore in February 2012.
 - e) Kick-off meeting (telephonic by remote presence) with TNO, Netherlands and TU Delft and other industry partners of the JIP on aeroelasticity in centrifugal compressors on February 2012

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1.	Prof.S. Panneerselvam	“Design of Vehicle Integrated Scramjet for a Hypersonic Air Breathing Vehicle” –	MIT, Anna University	16 th March 2011.
2.	Dr. TM Muruganandam	Spectroscopic Diagnostics (Absorption and Fluorescence)” as a part of FDP on Advanced Flow measurements and Visualisation”	NIT Calicut	13.07.2011
3.	Prof. R.i Sujith		TIFR Bombay	06.09.2011
4.	Prof. R.I. Sujith	Particle Image Velocimetry (PIV)	Aamrita Univ	23 & 24.2.12
5	Dr.P.A. Ramakrishna	Trends on Propulsion Research	SDSC-SHAR	22.02.2012
6	Prof. R. Velmurugan	Emerging Trends in Design and Manufacturing –ETDM 2011	HIT, Coimbatore	30.09.2011

7.	Prof. R. Velmurugan	Nano Technology and its applications	Hindustan University, Chennai	29.10.2011
8.	Prof. R. Velmurugan	Composites for Automobile applications	Bharat University, Chennai	21.03.2012
9.	Prof. R. Velmurugan	Biocomposites for Engg. Applications	Indo-UK Workshop, Key note Speaker, IISC, Bangalore	26.03.2012
10.	Dr.P.A. Ramakrishna	Trends on Propulsion Research	SDSC-SHAR	22.02.2012
11	Dr. Sunetra Sarkar	Unsteady aerodynamic of flapping flight	DRDL	May 2011

Visits abroad by faculty:

S. No.	Name of Faculty	Country Visited	Date	Purpose of Visit	Funding From
1	Prof. R.I. Sujith	TU Munich, Germany	26.05.2011	To delivered an invited talk "Non-Normal & Nonlinear Dynamics of Thermo-acoustic Instabilities	Institute
		Georgia Instt. Of Technology	13.01.201	Gave an invited talk "dynamical Systems approach towards analyzing thermo-acoustics instability	
2.	Dr.Nandan K Sinha	Vancouver, Canada	18-22, July 2011	7 th International Congress on Industrial and Applied Mathematics	Institute
3.	Prof. Job Kurian	Rothernberg, Sweden	12-17 Sept. 2011	To chaired a Session on 'Pulsejet Engines, Ram and Scramjets' at the 20 th International Symposium on air breathing Engines	Institute
		Sweden	6-12 Sept. 2011	To present a paper titled "Supersonic flow over three dimensional cavities of varying width' at 20 th Int. Symp. On Airbreathing Engines	
4	Prof. S.Santhakumar	Canada	11-14 Oct, 2011	To present paper and poster on IIT Madras Satellite and Collaboration with York University in Student satellite building in Canada Workshop on Frontiers in Science & Engineering 2011	Institute
5.	Dr. TM Muruganandam	Nashville Tennessee, USA	9-12 Jan 2012	Delivered an invited talk in the AIAA Aerospace Sciences Meet 2012	Institute
6	Dr. Luoyi Tao	China	10 th May -9 th June 2011	Academic Visit of Prof. GQ Chen's Lab, Department of Mechanics, Peking Univ.	Peking univ.
7	Dr. A Sameen	Baltimore, US		APS Division on Fluid Dynamics , Vol. 56, No 18	

Honours and Awards:

S.No.	Name of the Faculty / Student	Name of Award
1.	Mr. Vinayark Malhotra, AE09S018 MS Scholar	Prof. V.M.K. Sastri Best Paper Award
2.	Mr. M. Satheesh, (AE07D005), PhD Research scholar	Alexander Von Humboldt Fellowship
3.	Mr.Abhishek Sheshadri, AE07B001	HAL Prize
4.	Mr. Joseph George K, AE06B006 Dual Degree	Dr. V. Mohan Raman Prize

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1.	Sunetra Sarkar	Advance Topic in Chaos Theory and Dynamics	Science Publisher (An Imprint of Edenbridge Lttd, British, Isles, New Hampshire, USA 22011	Ajit Nivrit Desai

Fellowships of Academic and Professional Societies

S.No.	Name of the Faculty	Name of Award
1.	R.I.Sujith	1. Humboldt Fellow Ship 2000 2. INAE 2007 3. Hans Fischer Senior Fellowship of Institute for Advanced study (IAS) of the Technical University of Munich, Germany 2010

Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name
1.	R.I. Sujith	Editor in Chief of International Journal of Spray and Combustion Dynamics	Multi Science Publishing, UK

4.1.4 Design and Development Activities:

S.No.	Name of the Faculty	Topic of Patent
1.	S. Panneerselvam	1. Aerobic Vehicle (Germany) 2. Single Stage to Orbit Aerospace Vehicle (China)

4.1.5 Research and Consultancy:**Sponsored Research Projects:**

S. No.	Title	Period	Funding Agency	Amount (Rs. In lacs)	Co-ordinators
1.	Hybrid Rockets for VTP applications	2010 onwards	DRDL	9.95 lakhs	P.A. Ramakrishna
2.	Aircraft Maneuver Design using Bifurcation Analysis and Non linear Control Techniques	2010 onwards	ARDB	11.75 lakhs	N.K. Sinha
3	Numerical Simulation of Flapping Wings	2008 onwards	ARDB	14 lakhs	Sunetra Sarkar
4	A Lagrangian Solver to Simulate Bi0mimetic Propulsion	1 yr	AOARD	8 lakhs	
5	Improvement Of S&T Infrastructure In Universities And Higher Educational Institutions	5 yrs	DST		Job Kurian
6	Experimental Studies On High Speed Air Intakes	3 yrs	ISRO	23 lakhs	Murugananadam T M
7	Tunable Diode Laser Absorption Spectroscopy (TDLAS) for measurement of Temperature pattern factor in gas turbine combustor	3 yrs	ARDB	23 lakhs	Muruganandam TM
8	Power Modules for wave energy plans	3 yrs	NIOT	36 lakhs	TM Muruganandam & V. Jayashankar, EE
9	Numerical Studies on Effect of Coke Deposition on Heat Transfer in Regenerative Cooling of Kerosene Based Liquid Rocket	3 yrs	ISRO	3.7344 lacs	Amit Kumar
10	National Mission For Virtual Laboratories	1 yr	IITM	23 Lacs	P.Sriram

11	Dynamic response of Nano hybrid composites due to Impact loading	3 yrs	ARDB	7.20 lacs	R. Velmurugan
12	Estimating of damping and analysis of damage effects in composite rotors	3 yrs	ARDB	14 lakhs	R. Velmurugan
13	Investigation of multiple scales in separated shear layers	2009 onwards	ARDB	17.08 lakhs	S. R. Chakravarthy N. R. Panchapakesan
14	Investigation of mixing in confined co-flowing subsonic jets by acoustic excitation	2009 onwards	ARDB	17.50 lakhs	N. R. Panchapakesan S. R. Chakravarthy
15	Investigation of mixing in gas turbine cooling rings with porous medium approach	2010 onwards	ARDB	17.29 lakhs	Arunn Narasimhan S. R. Chakravarthy
16	Generation and characterization of stainless nano-powder by wire explosion process	2010 onwards	IGCAR	11.04 lakhs	R. Sarathi S. R. Chakravarthy
17	Investigation of combustion instability in swirl stabilized gas turbine combustors	March 2011 onwards	ARDB	14.96 lakhs	S. R. Chakravarthy R. I. Sujith
18	Development of two line planar laser induced fluorescence technique for non intrusive diagnostics of temperature in gas Turbine type combustors	April 2011 onwards	GTRE	2,65,41,800	S.R. Chakravarthy
19	Design, Development and Flight Testing of Transition Micro Air Vehicle (TMAV)"	April 2011 onwards	ARDB	17.542 lacs	S.Santhakumar S. Panneerselvam
20	Optimization of Counter Measure Dispensing System Parameters during Air Combat	April 2011 onwards	CABS	19.38 lacs	Nandan K Sinha
21	Characterization of Metallic Materials for Biaxial Loading	Nov, 2011 onwards	ISRO	30 lakhs	R. Velmurugan
22	Joint National Centre for Combustion Research & Development	Nov 2011 onwards	DST	83,34 crores	SR Chakravarthy
23	Optimizing Gasification of High Ash content coals for electricity generation (OPTIMASH)	Nov. 2011 onwards	European Commission	4.29 crores	SR Chakravarthy
24	Impact Studies on Laminated Composites Plates	Dec. 2011 onwards	ARDB	35.892 lakhs	R. Velmurugan
25	TDLAS for measurement of temperature profile and multispecies concentration in gas turbine engine combustor	Dec. 2011 onwards	ARDB	46.67 lakhs	TM Muruganandam
26	An Experimental Investigation of Non Normally Transient Growth and their Consequences in Non Linear Instabilities	Jan 2012 onwards	US Navy funding	US\$ 74,160	RI Sujith
27	Characterization studies of carbon peek composites	Jan 2012 onwards	Eaton Ltd	12 lakhs	R Velmurugan
28	Nano Composites for space Applications – Indo- South Africa Joint Project	Feb 2012 onwards	- DST,	11.01 lakhs	R.Velmurugan
29	An Experimental Investigation of Flow Field around Shaped Blockages for Application in Flame to Detonation Transition	2012-2014	ARMREB	11.64 lakhs	Amit Kumar
30	Experimental Studies on Hybrid Rocket Motors	Jan 2009 2012	ARDB	17.2 lakhs	Amit Kumar P A Ramakrishna
31	* Combustion Instability: Developing an Alternate Framework Incorporating Non-Normality and Nonlinearity SWARNAJAYANTI FELLOWSHIP	2007 April-2012 April	DST	1,92.66 Lakhs	None

32	* Investigation of Nonlinearities in Thermoacoustic Systems	2007 Oct. - 2010 Oct.	DST	26.952 Lakhs	Dr. T. M. Muruganandam
33	An Experimental Investigation of Non-normality, Transient Growth and their Consequences in Nonlinear Instabilities	2011-Dec 2013 Dec	ONR Global	US dollar 74,160	Dr. S. R. Chakravarthy

Industrial Consultancy projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. In lacs)
1	Velmurugan R	Composite Technology Facility	AAAA	15.613 lakhs
2	S.R Chakravarthy	Combustion Dynamics Modeling and Experiments in a Single Nozzle Rig	GE	78.5

RBIC projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. In lacs)
1.	Prof. SR Chakravarthy & Prof. R.I. Sujith	"Turbulent Combustion Diagnostics & Modeling for GE Energy Fuel Nozzel using Single Nozzle Rig (SNR)	RBIC	78.87
2	K.V.N. GOPAL	Development Of Computational Models For Predictive Analysis Of Dynamic Response And Rolling Tyres	MRF Ltd, Chennai	22.2
3	K.V.N. GOPAL	Development Of Computational Models For Predictive Analysis Of Three Dimensional Dynamic Stall In	Vestas Wind System Denmark	23.9
4.	KVN Gopal	Constitutive Modeling of Rubber and Simplified Analysis Procedure for Tyre Design	MRF Ltd, Chennai	12.1
5	SR Chakravarthy & R.I. Sujith	Characterization Of The Fuel Film And Spray Ensuing From A Dual –orifice Swirter	RBIC	32.84
6	T.M. Muruganandam	Development of a laser extinction based saensor for soot volume fraction measurement	DRDL	7.49
7	TM Muruganandam, Nandan K Sinha, Amit Kumar & Sunetra Sarkar	Studies on Debris Pattern Analysis Code	ITR Chandipur	7.62
8	R Velmurugan	Characterization studies of carbon peek composites Jan 2012 onwards	Eaton Ltd	12.00
9	P A Ramakrishna	Development of Fuel Rich Propellants	DRDL	9.95

Retainer Consultancy projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. In lacs)
1.	P.A.Ramakrishna	Design & Development of a new injector for molten aluminium	Sri Kallswari Metal Powder Pvt. Ltd.	6.5

Research Publications:

- a. Total No. of papers published in Refereed National Journals - 02
- b. Total No. of papers published in Refereed International Journals - 23
- c. Total No. of papers presented in National Conferences - 15
- d. Total No. of papers presented in International conferences - 32

a. In Refereed National Journals:

SI.No.	Name of faculty	Title	Name of the Journal
1.	A Sameen	The Effect of Wall heating on Insability of Challen	Corrigendum J Fluid Mech 673, 603-605, 2011
2.		Global Instabilities in diverging channel	Theory Computational Fluid Dynamic 25, 53-64, 2011

b. In Refereed International Journals:

SI.No	Name of faculty	Title	Name of the Journal
1.	R.I. Sujith	Experimental Investigation of Non Normality and Transient Growth in Thermo acoustic Instabilities	47 th AIAAA/ASME/ASME/ SAE / ASEE Joint Propulsion Conference and Exhibit held at San Diego, USA – 31.07.2011-03.08.2011
2	Sunetra Sarkar	Investigation growth of rain-flow fatigue damage in a wind turbine blade using wiener chaos expansions	13 th International Conference on Wind Engineering, Amsterdam, The Netherlands, July 10-15, 2011.
3	Prof. R. Velmurugan etal	The effect of Silicon Carbide Particles on Tensile, Fatigue, Impact and Final Failure behavior of 2618 aluminum alloy matrix composites	International Journal of Aerospace Innovation, 3 (3), 193-205, 2011.
4	L.Kabiraj, P.Wahi & R.I. Sujith	“Bifurcations of Self-Excited Ducted Laminar Premixed Flames”	Journal of Engineering for Gas Turbine and Power, 134 Article Number 031502.
5	L.Kabiraj, P.Wahi & R.I. Sujith	“Investigating Dynamics of Combustion Driven Oscillations Leading to Lean Blowout,	Fluid Dynamics Research
6	J. George & R.I. Sujith	Disturbance Energy Norms : A critical Analysis	Journal of Sound and Vibrations, 331, 1552-1556.
7.	L Tao and M.Ramakrishna	Multi Scale Turbulence Modeling and the maximum information principle.	Int.Journal Adv.Eng. Sci. Appl. Math, Vol 3, pp 37-43 (March-Dec. 2011).
8	P.Subramanian & R.I. Sujith	Non Normality and Internal Flame Dynamics in Premixed flame acoustic interaction	Journal of Fluid Mechanics, 2011, Volume, 679: 315-342
9	S. Mariappan & R.I. Sujith	Modeling non linear thermo-acoustic instability in an electrically heated Rijke tube	Journal of Fluid Mechanics, 2011, Volume 680, 511-513
10	J.George & R.I. Sujith	On Chu’s Disturbance Energy	Journal of Sound and Vibration, Volume 330, issue 22, pages 5280—5291
11	R. KULKARNI, K. BALASUBRAMANIAN & R. I. SUJITH)Non-normality and its Consequences in Active Control of Thermoacoustic Instabilities	<i>Journal of Fluid Mechanics</i> , 2011, 670, 130-149.
12	F. SELIMEFENDIGIL, R. I. SUJITH & W. POLIFKE	Identification of heat transfer dynamics for nonmodal stability analysis of thermoacoustic stability,	<i>Applied Mathematics and Computation</i> , 207, 5134-5150
13	R. KUMARA GURUBARAN & R. I. SUJITH	Dynamics of Spray – Swirl – Acoustics Interactions	International Journal of Spray and Combustion Dynamics, 3 (1), 1-22.

14	Amit Kumar et al	On the Role of Radiation and Dimensionality in Predicting Flow Opposed Flame Spread Over Thin Fuels'	In Combustion Theory and Modelling
15	R Sooraj and A Sameen	Instabilities in superfluid plane Poiseuille flow"	2011 J. Phys.: Conf. Ser. 318 092032 doi:10.1088/1742-6596/318/9/092032
16	T.M. Muruganandam & J Seitzman	"Fluid mechanics of lean blowout precursors in gas turbine combustors"	International Journal of Spray and Combustion Dynamics, Vol. 4, No. 1, 2012, pp. 29-60.
17	R.Velmurugan and G.Balaganesan	Modal analysis of pre and post impacted nano composite laminates'.	Latin American Journal of Solids and Structures, 8(2011), 9-26.
18	'Venkitanarayanan, Joshop Stanley and R Velmurugan	.. Experimental Characterisation of Catalyst-Free Carbon Nanomaterials from Mixed Vegetable and Animal Base Oils through Modified Traditional methods",	Journal of Nanomaterials, Volume 2011 (2011), Article ID 959818, 10 pages doi : 10.1155/2011 /959818
19	Chenthil Kumar and Amit Kumar	, "On the Role of Radiation and Dimensionality in Predicting Flow Opposed Flame Spread over Thin Fuels"	<i>Combustion Theory and Modeling (Taylor and Francis)</i> . (available online) P 537-569
20	Mahendhran M and Amit Kumar	"Numerical Study on Self-field Two-dimensional Straight Anode MPD Thruster	<i>International Journal of Aerospace Innovations</i> . (Multiscience Pub.)(Accepted for publication, 2011)
21	Vinayak Malhotra and Amit Kumar	Effect of Gas Phase Heat Sink on Suppression of Downward Flame Spread over Thin Solid Fuels	<i>International Journal of Advances in Engineering Sciences and Applied Mathematics</i> . (Springer) (Accepted for publication, 2012)
22	K. Vadivuchezhian, S. Sundar and H. Murthy,	"Effect of variable friction coefficient on contact tractions"	Tribology international, 44 (11), pp. 1433 – 1442, 2011.
23	Y.S. Rammohan, H. Murthy	"Three dimensional finite element analysis of partial slip contacts subjected to combined loading",	Finite Elements in Analysis and Design, 56, p. 9-19, Feb. 2012.

c. In Proceedings of National Conferences:

Sl.No	Name of faculty	Title	Name of the Journal
1.	Sunetra Sarkar	Uncertainty Quantification of an Aero-Elastic system using Polynomial Chaos Expansion	Proceedings of XVII National Seminar on Aerospace structures, Kanpur, September 2011
2.	Santhosh Jude, Sunetra Sarkar, A.Sameen	Reconstruction of Porous Media using Karthunen –L_oeve Expansion	International Symposium on Engineering under Uncertainty: Safety Assessment & Management, Bengal Engg. Sci. Univ, Shibpur, Jan2012.
3.	S.Venkatesh, Santhosh Jude and S.Sarkar	Uncertainty Quantification in structure interaction system subjected to random wind.	
4.	B. Dhatreyi, S. Akhilesan, Anuradha Banerjee & R. Velmurugan	Uniaxial and Biaxial Tensile Studies on Plain Weave Glass / Epoxy Composite Laminates	National Seminar on Aerospace Structures (Nasas 201) held at Kanpur during 22-24, September 2011.
5.	R.S. Sikarwari & R. Velmurugan	High Velocity Impact on Laminates Composites	
6.	R.Velmurugan & S. Gurusideswar	Thermal Stability of Epoxy Layered Silicate Nano-composites	
7.	Amit Kumar Gupta, R. Velmurugan & Makarand Joshi	Numerical Modeling of low velocity impact induced delamination on GFRP Plate using cohesive zone approach	
8.	Aswathy Surendran and T.M.Muruganandam	Dynamics of Well-Stirred reactors near blow out	Paper No. 2-012, 22 nd National Conf. on IC Engines and combustion (NCICEC) 2011, NIT Calicut, Dec. 10-13, 2011.

9.	Mayank Sachan and TM Muruganandam	Flame Shape transition in stagnation point stabilized burner	Paper no. 2-014, 22 nd National Conf. on IC Engines and combustion (NCICEC) 2011, NIT Calicut, Dec. 10-13, 2011
10.	Amit Kumar Gupta, R. Velmurugan and Makarand Joshi	Numerical Study of Extent and Location of Delamination induced due to Impact on GFRP Plates of Different Layup", ISAMPE National Conference on Composites-INCCOM	10, November 18-19, 2011, RDE (Engineers), Pune.
11.	Mahendhran M and Amit Kumar	Numerical Study on the Effect of Electrode Geometry in MPD Thrusters	(Paper No. IEPC-2011-228), The 32nd International Electric Propulsion Conference held at Wiesbaden, Germany on 14th September 2011
12.	Vijaya Kumar Cheeda, Amit Kumar, K. Ramamurthi	"Role of Blockages in Flame to Detonation Transition	8th International High Energy Materials Conference & Exhibit (HEMCE-2011)" held at TBRL, Chandigarh on 10-12 November 2011
13.	Vinayak Malhotra and Amit Kumar	Effect of Gas Phase Heat Sink on Suppression of Downward Flame Spread over Thin Solid Fuels"	21st National and 10th International ISHMT-ASME Conference held at IIT Madras, Chennai, (28-30) December 2011
14.	R. I. Sujith	Some Recent Developments in Thermoacoustics, Invited Paper	Indo-UK Workshop on Non-Normality, IIT Madras, January 10-14, 2011.
15.	R. I. Sujith	Nonlinear Dynamics of Combustion Driven Oscillations in a Premixed Laboratory Combustor, Invited Paper, <i>Invited Paper</i>	Indo-UK Workshop on Non-Normality, JNCASR, Bangalore, January 16-18, 2011.

d. In Proceedings of International Conferences:

Sl.No.	Name of the authors	Title	Name of conf. , Vol., Year and Page
1.	Rajiv Kumar and P.A. Ramakrishna	Effect of Protrusion in the Enhancement of Regression Rate in Hybrid Rocket	47 th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit held at San Diego, USA from 31 st July to 3 rd August 2011.
2.	Sumit Verma & P.A. Ramakrishna	Effect of Mixer Size on Density and Burn Rate of Composite Solid Propellant	
3.	Gaurav M, Rajiv Kumar and P.A. Ramakrishna	Enhancement of Regression Rate in Hybrid Rockets	
4.	Sumit Verma and P.A. Ramakrishna	Role of moisture in activated charcoal in Composite solid propellant	
5.	Ishitha Kumar and P.A. Ramakrishna	Development of a High Burn Rate Non-Aluminized Composite Propellant with Low Burn Rate Pressure Index	
6.	L.Kabiraj, Wahi and R.I. Sujith	Experimental Studies of Bifurcation leading to Chaos in a Laboratory Scale Thermoacoustic System	Proceedings of ASME Turbo Expo 2011, June 6-10, 2011 Vancouver, Canada GT 2011 – 46149
7.	Abhishek Pateria and Muruganandam, T.M.,.	"Study of normal shock behavior near second throat"	Proceedings of 28th International Symposium on Shock Waves (ISSW), Paper ID 2523, Jul 17-22, 2011, Manchester Univ., Manchester, U.K.

8.	L.Kabiraj and R.I. Sujith	Investigation of Subcritical Instability in Ducted Premixed Flames	Proceedings of of ASME Turbo Expo 2011, June 6-10, 2011 Vancouver, Canada GT 2011 – 46155
9.	L. Kabiraj and R.I. Sujith	Non Linear Self excited Oscillation in a Thermoacoustic System	Bifurcation and Instabilities in Fluid Dynamics (BIFD 2010), Baercelona, Spain, July 18-21, 2011
10.	P.Subramanian & R.I. Sujith	Analytical Estimates for stability boundaries and nature of the bifurcation in a simple thermoacoustic system	
11.	P.Agharkar, P. Subramanian, N Kaisare & R,I, Sujith	Thermoacoustic instabilities in a ducted premixed flame : Reduced order models and control	5 th European combustion Meeting (ECM), Cardiff, UK, June 29 to 1 st July 2011.
12.	P. Mariappan, R. I. Sujith & P. J. Schmid	Experimental investigation of Non-normality and Transient growth in Thermoacoustic Instabilities,	47th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit, 31 July-3 August, 2011.
13.	R. I. Sujith	Thermoacoustic Instabilities: Non-normality and Nonlinear Instabilities, <i>Invited Paper</i>	GE Energy Combustion Symposium, Greenville, South Carolina, USA, January 25 -26, 2011.
14.	P.Agharkar, P. Subramanian, N Kaisare & R,I, Sujith	Reduced order models and control of thermo-acoustic instabilities in a ducted premixed flame	International Congress of Sound and Vibration (ICSC) Rio, de Janerio, Brazil, July 10-14, 2011
15.	Rajarshi Das, Job Kurian	Supersonic Flow over Three Dimensional Cavities	International Symposium on Air Breathing Engines at Gothenburg, Sweden between 12 th and 17 th September 2011
16.	M.Mahendran and Amit Kumar	Numerical Study on the Effect of Electrode Geometru in MPD Thrusters”(paper No. IEPC 2011-228)	32 nd International Electric Propulsion Conference held at Wiesbaden Germany on 14 th September 2011.
17.	G. Balaganesh & R. Velmurugan	Impact Studies on Nano Clay Dispersed Composite Laminates” at ECCOMAS	3 rd Thematic Conference on the Mechanical Response of Composites 2011 held in Hannover, Germany during 21-23, September 2011
18.	Ayan Nath & S.R. Chakravarthy	Simulation of Combustion Instability Phenomenon in a half dump combustor by incompressible unsteady RANS – Acoustic Coupling.	4 th International Symposium on Hybrid RANS-LES Methods held in Beijing, China during 28-30, September 2011
19.	Rammomhan Y.S. and H. Murthy,	Effect of Integration Schemes in Three Dimensional Contact Analysis of Partial Slip Contacts	Int. Conference on Innovative Technologies, Bratislava, Slovakia , 01-02 September 2011
20.	Rammomhan Y.S. and H. Murthy	Influence of an Edge Fillet in Three – Dimensional Partial Slip Contact	AES-ATEMA. 9 th Int. Conf. on Advance and Trends in Engg Materials and their Applications, Montreal, 1-5 Aug. 2011
21.	Rahul Sharma, Shyamsunder Baskaran and H, Murthy,	“Design of Ultrasonic Probe Configuration Using Finite-difference Time-domain Simulations”,	SEM XII Intl. Congress and Exposition on Exptl and App. Mech., Costa Mesa, California, June 11 – 14, 2012. Status. Accepted
22.	Paresh S Ghangrekar, H. Murthy and Balkrishna C. Rao,	“Evaluation of Mechanical Properties of Nano-structured Al6061 Synthesized using Machining”,	SEM XII Intl. Congress and Exposition on Exptl and App. Mech., Costa Mesa, California, June 11 – 14, 2012. Status. Accepted

23.	S.M. Khaja Mohiddin, S.J. Subramanian and H. Murthy	"Study of Damage Evolution During Fatigue of Composites Using DIC"	<i>SEM XII Intl. Congress and Exposition on Exptl and App. Mech.</i> , Costa Mesa, California, June 11 – 14, 2012. Status. Accepted
24.	Y.S. Rammohan and H. Murthy	"Numerical Simulation of Bulk Stress Effects in Partial Slip Contacts of Finite Width",	<i>ESMC 2012, 8th European Solid Mechanics Conference</i> , Graz, Austria, July 9-13, 2012. Status. Accepted.
25.	Manish Wankhede and Nandan K Sinha	Autorotational Spin : An Uncertainty Analysis	ntl. Conference in the SAROD 2011 held in Bangalore during 16-18 November 2011.
26.	Vijay Kumar Cheeda, Amit Kumar and K. Ramamurthy	Role of Blockages in Flame to Detonation Transition	8 th Int. High Energy Materials Conference & Exhibit (HEMCE-2011) held at TBRL, Chandigarh during 10-12, November 2011.
27.	A. Sameen, S. Ajith Kumar and S. Anil Lal	Flow past a moderately heated horizontal cylinder at low Reynolds number.	64 th Annual Meeting of the APS, Division of Fluid Dynamics held at Baltimore, USA during 20-22, November 2011.
28.	R.S. Sikarwar & Prof. R. Velmurugan	Analytical and Numerical Simulations of High Velocity Impact on Composites	INCCOM 10, R & D Engineers, Pune during 18-19, November 2011.
29.	R.S. Sikarwar & Prof. R. Velmurugan	High Velocity Impact on Laminated Composites	XVII National Seminar on Aerospace Structures (NASAS), IIT Kanpur during Sep.22-24, 2011.
30.	Vinayak Malhotra & Amit Kumar	Effects of gas phase heat sinks on downward flame spread over thin solid fuels"	21 st National & 10 th ISHMT-ASME Heat & Mass Transfer Conference during 28 – 30 December 2011 at <i>IIT Madras</i> .
31.	Mayank Sachan & T.M. Muruganandam	"Flame Shape transitions and precursor events near lean blow out"	AIAA Aerospace Sciences Meet 2012, Nashville Tennessee, USA during 9-12 January 2012.
32.	L. Kabiraj & R. I. Sujith	Bifurcation Analysis and Observation of Intermittency in Combustion-driven Thermo acoustic Oscillations,	Aerospace Sciences Meeting of the American Institute of Aeronautics and Astronautics – AIAA Paper Number 2012-344, January 9-12, Nashville, Tennessee, USA.

Distinguished Visitors to the Department:

Sl. No	Name of the visitor and Designation	Date of visit	Purpose of visit
1.	Dr. V. Ramanujachari, DRDL Hydeabad	15.04.2011	Delivered the industrial lecture : "Hypersonic Vehicle Development Programme of DRDO.
2.	Dr. Vaitla Laxman, Post Doctoral Fellow, Konkuk University	15.04.2011	To Delivered an lecture on "Understanding and Prediction of Trim and Response of Helicopter Rotor System in Forward Flight
3.	Mr. Mohammad Rizwan, Centre of Smar Interfaces Technical Univ. Dramstad, Germany	16.04.2012	Simplified models governing film evolution on complex topographies
4.	Dr.Bala Pesale, Scientist, CSIR, Chennai	18.04.2011	Delivered an lecture "Harnessing the Power of Thermoacoustic to realize cost effective decentralized solar power solution"
5.	Dr. Nirmal Antonio Tamarasselvame, INSA de Rennes, France	04.08.2011	Second gradient elastic continuum and some applications
6.	Dr. Ravisheka Kannan, Research Engineering, CFD Research Corporation, USA	04.10.2011	Delivered an lecture " High Order Volume Method on Unstructured Grids"

7.	Md. Nurujjaman, TIFR, Bangalore	27.10.2011	Delivered an invited talk "Synchronization with discrete time Observation in Chua Model and Applications to data Assimilations.
8.	Dr. Maria Heckl, Keele University, UK	21.11.2011	Delivered an lecture "A Theoretical Model for Non linear Effects in a Matrix Burner"
9.	Prof. Mamthaw Junioer, Cambridge EPSRC, UK	Jan 2012	Collaboration work
10.	Prof. YannisHardalpus , Imperial Colles, EPSRC, UK	Jan 2012	- do -
11.	Dr. Santhosh Hemchandra, RWTH, Aachen	Jan 2012	- do -
12.	Dr. Ashwini Ratnoo, Technion Israel Instt. Of Technology, Israel	25.01.2012	Delivered an lecture "Guidance of Autonomous Vehicles"
13.	Prof. Wolfgang Polifke, Technical Univ. of Munich, Germany	08.02.2012.	1. Thermo acoustic Stability Analysis : Conventional Approaches (Pedagogical Talk) 2. Dynamics of Turbulent Swirling Flames
14.	Prof. Ashwini Ratno, IIT Kanpur	25.01.2012	Guidance of Autonomous Vehicles
15.	Prof. K Kanny, Durban University, South Africa	7-14 March 2012	Nano composites applications on 13th March 2012
16.	Dr. K. Veluchamy, IGCAR Kalpakkam	22.03.2012	Delivered an lecture " Application of CFD in Design of Fast Breeder Reactor"
17.	Dr. Debasis Chakraborty, Scientist G DRDL	10.4.2012	Deliver Industrial Lecture on "Activities of DRDL"
18.	Dr. A S Prakash, CSIR	20.04.2012	Deliver Industrial Lecture on " Batteries and their applications"
19.	Dr. Gurupatham Anand	19.04.2012	Deliver Industrial Lecture on "Combustion in automobiles"
20.	Dr. G Harish	16.03.2012	Deliver Industrial Lecture on "Non-destructive testing of materials"
21.	Dr. Veluswamy, IGCAR	22.03.2012	Deliver Industrial Lecture on " CFD in Nuclear reactors"
22.	Shridhar Powar, GE India	03.04.2012	Deliver Industrial Lecture on " Land based gas turbine engines"

4.1.6 Other Activities:

1. Seven Students have joined our department to do course work during July – November 2011 under the Foreign Exchange Programme. HOD is the Mentor.
2. Two students have joined in our department to do project work during Jan – May 2012 under the Foreign Exchange Programme. Prof. R.I. Sujith is the Mentor.
3. Four Students have joined our department to do course work during January – May 2012 under the Foreign Exchange Programme. HOD is the Mentor.
4. Prof. R.I. Sujith chaired a session on Combustion Dynamics, Aerospace Sciences Meeting of the American Institute of Aeronautics and Astronautics (AIAA) – 9-12 January 2012.

4.2 DEPARTMENT OF APPLIED MECHANICS

4.2.1 Introduction:

The Department of Applied Mechanics has been in existence since 1959 and has grown into a full fledged interdisciplinary graduate research department over the years. The department focuses on academic activities in three broad areas viz., Biomedical Engineering, Fluid Mechanics and Solid Mechanics.

The Department also offers minor streams to undergraduate students.

Biomedical scholars are exposed to research involving Brain Computer Interface, 3D Echocardiography, Electrical Impedance Tomography, Electrical Imaging of Heart, Visually Evolved Potential analysis, and Image compression, Virtual Reality with Touch Feedback, Telemedicine, Medical Simulation, and Intelligent Prosthesis Design.

Students specializing in Fluid Mechanics get exposed to research involved in solving fundamental and applied problem in: Bluff Body Aerodynamics, Flow Control of Shear Layer, Mixing of Multiple Jets, Investigation of wakes, Transition and Turbulence, Buoyancy Driven Turbulence, Interfacial Phenomena, Boundary Layer Studies, Natural Convection and Coherent Structures, Bio-fluid Mechanics, Fluid Structure Interaction. The studies include computational, experimental and analytical efforts, as the problem demands.

Scholars specializing in Solid Mechanics get exposed to a wide spectrum of research problems in: Structural and Experimental Mechanics, Digital Photoelasticity, Composites, Smart and Nanostructures, Fatigue and Fracture, Finite Element Method, Boundary Element method, Plates and Shells, Granular Materials, Continuum Mechanics, Biomechanics and Constitutive Modeling. Various Experimental, Computational and Analytical methods are used for the above. The scholars also gain expertise by assisting in theoretical, computational and laboratory courses and lab related activities.

4.2.2 Academic Programmes:

The Department of Applied Mechanics has programmes leading to M.Tech. M.S. and Ph.D. in three disciplines of Applied Mechanics.

The M.Tech programme consists of two semesters of course work and two semesters of project work. The M.S. programme has five courses followed by a dissertation. The doctoral programme (Ph.D) trains the candidate to pursue original research ideas and prepares them for academic as well as research and development careers.

New Courses introduced:

Sl. No.	Course No.	Title
1.	AM 6513	Advanced Computational Fluid Dynamics

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
M.Tech.	16	16	1	-	-	33
M.S.	14	15	7	7	3	46
Ph.D.	14	15	11	6	17	63
Total	44	46	19	13	20	142

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
Abroad:					
1	Ms. A.K.Jayanthi	AM07D009	"Laser speckle contrast imaging for perfusion monitoring in burn tissue phantoms", The 5th Kuala Lumpur Intl. Conf. on Biomedical Engg, pp11	20.06.2011-23.06.2011 Kuala Lumpur, Malaysia	-

2	Ms. A.K.Jayanthy	AM07D009	Noninvasive capillary blood flow measurement: Laser speckle and laser Doppler", Intl. Conf. on Bioinformatics, Computational Biology and Biomedical Engg, World Academy of Science, Engg and Tech, pp. 1214-1219, vol. 77	24.06.2011-26.06.2011. Paris, France,	IIT Madras
3	Mr.M.B.Shyam kumar	AM06D010	Intl. Conf. on Computational Fluid Dyn. (ICCFD 2011) – 'Numerical investigation of flow interference between two square cylinders with rounded corners using immersed boundary method	27.07.2011 – 29.07.2011 World Acad. Of Science Engg, Paris, France	IIT Madras
4	Mr. Suresh Anand	AM08D002	Intl. Conf. on Biomedical and Pharmaceutical Engg (ICBPE) 2011 – Clinical applications of diffuse reflectance spectroscopy in normal and prediabetic subjects-A pilot study Proc. of the 13th AeSI	03.08.2011 – 05.08.2011 Suntec City, Singapore	IIT Madras
5	Mr.Sunir Hassan	AM09D002	ASME 2011 International Mechanical Engineering Congress & Exposition "Unit Cell Approach as a Multi Scale Modeling Technique for Predicting the Behaviour of Fiber Reinforced High Strength Concrete under Compression"	11.11.2011 – 17.11.2011 Denver, Colorado	IIT Madras
6	Mr. Jaganathan	AM09D007	International conference on Biomedical Engineering, Performance analysis of variable density sampling in compressed sensing MRI	15.02.2012-17.02.2012 Innsbruck, Austria	IIT Madras
India					
1	M.B. Shyam Kumar Ph.D	AM06D010	Annual CFD Symp.-Effect of flow interference between two square cylinders with rounded corners using Immersed bound. method	11.08.2011 – 12.08.2011 IISc, Bangalore	IIT Madras
2	Dhatreyi Boyina Ph.D	AM08D007	XVII National Seminar on Aerospace Structures	22.09.2011-24.09.2011 IIT Kanpur	IIT Madras
3	R Rangaraj M.S	AM08S023	XVII National Seminar on Aerospace Structures "Identification of fatigue cracks in vibrating beams using a particle filtering algorithm"	22.09.2011-24.09.2011 IIT Kanpur	IIT Madras
4	P. Ravikumar MS	AM10S005	Fifth symposium on Applied Aerodynamics and Design of Aerospace Vehicles (SAROD 2011)	16.11.2011-18.11.2011 Eagleton Resort, Bangalore	IIT Madras
5	Yash Vyas, M.Tech DD Y Appalanaidu, Ph.D	CE07B065 AM10D004	National conference on Advances in Composites and Solid mechanics	07.12.2011-08.12.2011 SVIT Baroda	IIT Madras
6	P Sasikumar Ph.D R Suresh	AM09D004	National Conference on Composites, Research and Development Establishment Engineers	ISAMPE, Pune	IIT Madras
7	Ms.L.Suganthi Ph.D	AM07D008	Intl. Conf. on Biomedical Engg	10.12.2011-12.12.2011 Manipal Inst of Tech.	IIT Madras
8	Hersh J.Parmar M.S	AM10S013			IIT Madras
9	Bharat Pokale M.S.	AM10S003	International Symposium on Engg. under Uncertainty safety assessment and management	02.01.2012-07.01.2012 Shibpur, Kolkata	IIT Madras
10	N. Ganesh M.S.	AM10S015	International Symposium on Engg. under Uncertainty safety assessment and management	02.01.2012-07.01.2012 Shibpur, Kolkata	IIT Madras
11	Jithin Jith M.Tech	NA07B031			IIT Madras

12	P.Rangaraj MS	AM10S020			IIT Madras
13	Y. Appala Naidu Ph.D	AM10D004	6th Intl. Conf. on Creep- Fatigue & Creep Fatigue Interaction	23.01.2012- 25.01.2012 IGCAR, Kalpakkam Held at Chennai	IIT Madras
14	Vyas Yash Hemant M.Tech.	CE07B065			IIT Madras

Names of students/scholars who won convocation / Institute Day prize:

Sl. No.	Name of the Student/ Scholar	Roll No.	Name of Prizes	Name of Donor
1.	Ms. Padma Aamani	AM10M013	Institute Merit Prize	IIT Madras

4.2.3 Faculty and their activities:

Name and Qualifications	Major area of specialization
Professor:	
Prof. M. Ramasubba Reddy[Head]	Biosignal and Image Processing, Bio Instrumentation
Prof. K. Ramesh	Digital photoelasticity, Fracture Mechanics
Prof. C. Lakshmana Rao	Fracture mechanics, Modeling of materials, Piezoelectric materials
Prof. M.S. Sivakumar	Smart Materials & Structures, Plasticity
Associate Professor:	
Dr. S. Vengadesan	Fluid Mechanics, Turbulent flows and modeling, CFD
Dr. S. Ramakrishnan	Biomedical Instrumentation, Enhancing Diagnostic Relevance of Medical Equipment
Dr. Mahesh Panchagnula	Spray combustion and atomization, surface tension phenomena, Multi-phase flows.
Dr. B.S.V. Prasad Patnaik	Flow Control, CFD, Flow Induced Vibrations
Dr. M. Manivannan	Haptics, Medical simulation
Assistant Professor:	
Dr. Anuradha Banerjee	Fracture Mechanics, Composites
Dr. A. Arockiarajan	Smart Materials, Finite Elements, Mesh Free Methods
Dr. Arul Prakash	Large Eddy Simulation (LES) and Related Techniques, CFD and Thermal Hydraulics.
Dr. A. Baburaj Puthanveetil	Turbulent convection, Interfacial phenomena
Dr. Rinku Mukerjee	Applied Aerodynamics, CFD
Dr. Sayan Gupta	Dynamics & Random Vibration, Structural reliability, Probabilistic mechanics
Dr. N. Sujatha	Biomedical Imaging, Speckle Metrology
Dr. Abhijit Chaudhuri	Modeling of geo-thermal system, stochastic groundwater hydrology
Dr. Pijush Ghosh	
Dr. V.Venkata Ramakrishna Sai	Bio sensor and Biomedical Engineering
Dr. Shaikh Faruque Ali	Vibration control, Energy harvesting, Experimental structural dynamics, Biomedical control.
Adjunct Faculty:	
Dr. V.B.N. Murthy	Plastic Surgery, Diabetic foot
Dr. S. Thanikachalam	Cardiology, Structural reliability

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl.No.	Coordinator(s)	Title	Period
Workshop:			
1.	Prof. M.S.Sivakumar & Dr. Mahesh Panchagnula	One day workshop on career goals and planning for MS & Ph.D scholars – lecture by potential employers of Applied Mechanics.	15.08.2011
2.	Prof. Ramasubba Reddy & Dr. S. Ramakrishnan.	STTP on Bimedical Systems Signals and Images	21.11.2011-25.11.2011
3.	Dr. K. Arul Prakash, Coordinator Dr. Shaligram Tiwari, Coordinator	Short Term Training Program (STTP) on "Theoretical and Computational Fluid Dynamics"	10.03.2012-14.03.2012

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title & Institution	Period & Venue
Conference:			
1.	Dr.M.Ramasubba Reddy	Intl. Conf. on Emerging Green Technologies – ICEGT-2011	30.07.2011 Thanjavur
2.	Dr. Vengadesan	Intl. Conf. on Computational Fluid Dyn. (ICCFD 2011) – ‘Numerical investigation of flow interference between two square cylinders with rounded corners using immersed boundary method	27.07.2011 – 29.07.2011 World Acad. Of Science Engg, Paris, France
3.	Dr.S.Vengadesan	Presented paper in ICCFD - 2011 conference	27.07.2011 – 29.07.2011 Paris, France.
4.	Dr.Mahesh V. Panchagnula	24th European conf. on Liquid Atomization and spray systems paper titled “Eulerian multiphase population balance model to predic drop size distribution evolution”	08.09.2011 Estoril, Portugal

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1.	Dr Prasad Patnaik BSV	Aerodynamics of cricket ball	CIET, Raipur	29.04.2011
2.	Dr Prasad Patnaik BSV	Teaching techniques for engineering college teachers	CIET, Raipur	29.04.2011
3.	Dr Prasad Patnaik BSV	Teaching portfolios – a new dimension to quality teaching	Columbia Institute of Engg & Tech, Raipur	06.06.2011
4.	Dr Prasad Patnaik BSV	Down to earth lecturing techniques	Columbia Institute of Engg & Tech, Raipur	08.06.2011
5.	Dr. M.S. Sivakumar	To attend Ph.D student final examination	IIT Bombay	09.06.2011
6.	Dr.S.Vengadesan	Aerodynamics of flapping wing in inclined stroke kinematics	13th AeSI Annual CFD symposium, Bangalore	12.08.2011
7.	Dr. A. Arockiarajan	Present the work for INSA Young Engineer Award	Indian National Science Academy, Delhi	24.08.2011–25.08.2011
8.	Dr.K. Arul Prakash	A SUPG based Finite Element Approach for simulating fluid flow and heat transfer applications	Dept. of Mathematics, IITM	22.09.2011
9.	Dr. M.S.Sivakumar	Invited talk on “Elasticity materials modeling, simulation and testing and to conduct Viva voce examination.	NAL, Bangalore	18.10.2011

10.	Dr. M.S.Sivakumar	Introduction to Plasticity / Different plasticity model & Rate dependent / independent plasticity	VSSC, Trivandrum	30.11.2011
11.	Dr. M. Ramasubba Reddy	"Principles of Biosignal and Image Processing".	Hindustan Univ	18.11.2011
12.	Dr. K. Arul Prakash	Intl.Conference on Simulation, Modeling and Analysis	Amrita School of Engg, Coimbatore	16.12.2011
13.	Dr.M.Manivannan	XVI Intl. Workshop on the Physics of Semiconductor Devices	IIT Kanpur	21.12.2011-22.12.2011
14.	Dr.Mahesh V Panchagnula	Colloquium talk	JNCASR, Bangalore	24.01.2012

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1.	Dr. S. Ramakrishnan	Germany	November 15-20, 2011		

Journal Editorial Boards/ Membership:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name / Board
1.	Dr. K. Ramesh	Member, Editorial Board	Strain

4.2.4 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (Rs. In lakhs)	Co-ordinators
1.	Platform for real-time signal & image processing	2 years	DST	15.60 lakhs	Dr S Ramakrishnan
2.	An Experimental Characterization on Fatigue Behavior of Piezoelectric Materials	2012-2014	Naval Research Board (NRB)	Rs. 44,18,400	Dr.A.Arockiarajan Dr.M.S. Sivakumar

Research Publications of the faculty members & research scholars:

- Total No. of papers published in Refereed National Journals: - 01
- Total No. of papers published in Refereed International Journals: - 03
- Total No. of papers presented in National Conferences - Nil
- Total No. of papers presented in International conferences - 18

a. In Refereed National Journals:

Sl.No.	Name of the faculty	Title of the paper	Name of the Journal
1.	P. Rajesh Nair & C. Lakshmana Rao	Simulation of depth of penetration during ballistic impact on thick targets using a one-dimensional discrete element moel.	Vol.37, Part 2. April 2012, pp. 261 – 279. Indian Academy of Sciences

b. In Refereed International Journals:

Sl.No.	Name of the faculty	Title of the paper	Name of the Journal
1.	Ramareddy, G.V, and Puthenveetil, B.A	'The Pe~1 regime of convection across a horizontal permeable membrane	Journal of Fluid Mechanics, v ol 679, pp 476-504, 2011.
2.	Puthenveetil, B. A., Gunasegarane, G. S., Agrawal, Y. K., Schmeling, D., Bosbach, J. and Arakeri, J. H.,	'Length of near-wall plumes in turbulent convection	Journal of Fluid Mechanics, 2011
3.	M. Sakthivel and A. Arockiarajan,,	Studies on effective fiber and matrix poling characteristics of 1-3 piezoelectric composites	Int. J. of Structural changes in solids, 3, 2011, 1-19.

c. In Proceedings of International Conferences: Nil

d. In Proceedings of International Conferences:

Sl. No	Name of the faculty	Title of the paper	Institution	Period
1.	Dr.C. Lakshmana Rao	Social Responsibilities of Learned Professional Societies – “Social Systems	SSI Symposia Chennai	11.06.2011
2.	Dr. Rinku Mukherjee	“Unsteady Aerodynamics of multiple airfoils in Configuration”	29th AIAA Applied Aero-dynamics Conf Hawaii, USA	27.06.2011-30.06.2011
3.	Dr. A.P. Baburaj	1. On the length of near-wall plumes in turbulent convection 2. 'Merging of Sheet Plumes in Turbulent Convection 3. The advection regime in turbulent convection across a horizontal permeable membrane	International Centre for Theoretical Physics, Trieste, Italy Intl conf. on Turbulent Mixing and Beyond	21.08.2011 – 28.08.2011
4.	Dr. Sayan Gupta	XVII National Seminar on Aerospace structures	XVII NASAS at IIT Kanpur	22.09.2011-24.09.2011
5.	Dr. C. Laskshmana Rao	“Unit Cell Approach as a Multi Scale Modeling Technique for Predicting the Behaviour of Fiber Reinforced High Strength Concrete under Compression”	ASME 2011 International Mechanical Engineering, Congress & Exposition, Denver, Colorado	11.11.2011 – 17.11.2011
6.	Dr. A. P. Baburaj	1. Quantifying near-wall coherent structures in turbulent convection', Bulletin of the American Physical Society Volume 56, Number 18, 2. Motion and shape of partially non wetting drops on inclined surfaces	64th Annual Meeting of the APS Division of Fluid Dynamics	20.11.2011-22.11.2011 Baltimore, Maryland.
7.	Dr. Abhijit Chaudhuri	Session coacher	11th Asian International Conference on Fluid Machinery and 3rd Emerging Challenges on Fluid Power Technology Exhibition	21.11.2011-23.11.2011 IIT Madras
8.	Dr. Mahesh Panchagnula			
9.	Dr. Arul Prakash			
10.	Dr. Prasad Patnaik			
11.	Dr. S. Ramakrishnan	Segmentation of Liver in Computed Tomography Images using Distance Regularized Edge Based Level Set Method”	Intl. Conf. On Biomedical Engg Manipal, Karnataka	10.12.2011-12.12.2011 IIT Madras
12.	Dr. B.S.V. Prasad Patnaik	A Novel approach for the extraction of vortex structures by using reduced order methods	lutam Symposium on Bluff Body Flows (BLUBOF 2011) Indian Institute of Technology Kanpur	11.12.2011-17.12.2011
13.	Dr. K. Arul Prakash	Effect of Wing Cross-Section on thrust of a flapping wing”	lutam Symposium on Bluff Body Flows (BLUBOF 2011) Indian Institute of Technology Kanpur,	11.12.2011-17.12.2011
14.	Dr. K. Arul Prakash,	Conjugate heat transfer analysis in the target system of an Accelerator Driven sub-critical System”	21st National and 10th ISHMT-ASME Heat and Mass Transfer Conf. Indian IIT Madras	27.12.2011-30.12.2011
15.	Dr. K. Arul Prakash	A SUPG Finite Element Study of natural convection in an Porous enclosure	21st National and 10th ISHMT-ASME Heat and Mass Transfer Conf. Indian IIT Madras	27.12.2011-30.12.2011
16.	Dr. S. Vengadesan	“Numerical study of mixed convection over elliptic cylinder using Immersed Boundary Method	21st National and 10th ISHMT-ASME Heat and Mass Transfer Conf. Indian IIT Madras	27.12.2011-30.12.2011

17.	Dr. Abhijit Chaudhuri	"Polynomial chaos in bootstrap filtering for system identification"	Intl. Symp. on Engg under Uncertainty Safety Assessment ,Bengal Engg and Science University	04.01.2012-06.01.2012
18.	Dr. Sayan Gupta	6th Intl. Conf. on Creep-Fatigue & Creep Fatigue Interaction	IGCAR, Kalpakkam held at Chennai	23.01.2012-25.01.2012

Distinguished Visitors to the Department:

Sl.No.	Name of the visitor and Designation	Date of visit	Purpose of visit
1.	Prof. Ganesh Thiagarajan, UMKC, USA	27.06.2011	Role of mechanical strains in BONE remodeling and growth
2.	Prof. Ananth Ramaswamy, IISc, Bangalore	30.06.2011	Condition assessment, repair and retrofit of structures
3.	Prof. Sudhakar Neti, Lehigh University, USA	01.07.2011	Solar Energy and Encapsulated Phase Change Materials for Energy Storage
4.	Mr. Ram D.Sriram, Chief of Software & Systems, Division Natl.Inst. Of Standards & Tech	15.07.2011	Information Technology for the Health Care Enterprise
5.		28.07.2011	Subject-specific modelling of blood flow through arteries
6.	Prof Prabir Daripa, Dept. of Mathematics, Texas A&M	11.08.2011	Some theoretical and numerical results on enhanced oil recovery by ASP flooding in Porous media
7.	Dr. Raghavendra Sai, Assistant Professor	16.08.2011	Noble Metal Nanoparticles for LSPR and SERS based Biosensor Applications
8.	Dr. Raghunathan Rengaswamy, Department of Chemical Engineering, IIT Madras	30.08.2011	Design of a model-based feedback controller for active sorting and synchronization of droplets in a microfluidic loop
9.	Chandrasekhar Annavarapu, Research scholar, Duke Univ.	14.11.2011	Imposition of constraints in transient problems within XFEM
10.	Dr.Anand Asundi Director, Centre for Optical and Laser Engg, Nanyang Technological Univ, Singapore	09.12.2011	Optics and Lasers in Precision Metrology
11.	Prof. Sukumar University of California, Davis	21.12.2011	Maximum-entropy approximations in computational mechanics
12.	Dr. Alladi Mohan, MD, Prof & Head Dept. of Medicine SVIMS, Tirupati	10.01.2012	Lung infection : Mathematical modeling and clinical significance with particular reference to Tuberculosis
13.	Dr. Ganapathy Krishnamurthi Research Fellow in the Mayo Clinic Computed Tomography Clinical Innovation Center	31.01.2012	Renal Physiology of Small Animals using Dynamic Contrast Enhanced Computed Tomography & Development of Cryo-Imaging as a validation tool for in-vivo imaging
14.	Varadhan SKM PhD (Kinesiology), The Pennsylvania State University	14.02.2012	Discrete-Cyclic Dichotomy and Motor Redundancy: An examination using multi-finger force production tasks
15.	Dr. Manoj Pandey Since 2009 he has been a post doctoral Research Associate at the SonicMEMS lab of Electrical and Computer Engineering in Cornell University	20.02.2012	Fluid Structure Interaction based Analysis of a Peizo-Electric MEMS Motor and Insect Flight Muscle Modeling.
16.	Abhijit Sinha Roy, PhD-scientist Cleveland Clinic Cole Eye Institute, OH, USA	15.03.2012	Novel Applications of Cornea Biomechanics in Clinical Diagnosis

4.2.5 Other Activities of the Department/Centre:

1.	Prof. M.Ramasubba Reddy	Board of Studies Meeting	08.04.2011-09.04.2011 JNTU, Anantapur
2.	Prof. M.S.Sivakumar	Examiner for Ph.D Viva Voce Examination	21.04.2011 IISc, Bangalore
3.	Prof. M.S.Sivakumar	ARDB Meeting	22.04.2011 & 23.04.2011. IIT Kanpur
4.	Prof. M.S.Sivakumar	ARDB Meeting	22.04.2011 & 23.04.2011. IIT Kanpur
5.	Prof. M.Ramasubba Reddy	Board of Studies meeting	04.06.2011 Lakkireddy Balireddy College of Engg, Guntur
6.	Prof. M.Ramasubba Reddy	To conduct viva voce examination	06.06.2011 NIT, Calicut
7.	Prof. M.Ramasubba Reddy	Faculty Recruitment	14.06.2011 Srikalahasti Inst of Technology, AP
8.	Prof. M.Ramasubba Reddy	Review of project	26.06.2011 IIT, Kharagpur
9.	Dr. S.Vengadesan	Examiner for a Ph.D viva voce exam.	04.07.2011 IT Bombay
10.	Dr. S.Ramakrishnan	Indian Examiner/ expert member for Ph.D oral	08.07.2011
11.	Dr. Sayan Gupta	Project meeting – NPMASS Project and demo	13.07.2011. IISc, Bangalore
12.	Dr. A. Arockiarajan	Chief Guest at the National Level Technical Symposium., S.Rangasamy College of Tech, Tiruchengode	24.08.2011
13.	Dr.M.S.Sivakumar	AR & DB Structures Panel Meeting	05.09.2011, DRDO, Delhi
14.	Dr.A.Arockiarajan	DST workshop and ISRO-IITM Final Presentation	17.09.2011-19.09.2011 Cochin, Trivandrum
15.	Dr. M. Manivannan	Project Discussion	11.10.2011 DRDO, Delhi
16.	Dr. S. Ramakrishna	Technical discussion on Fluke Biomedical products	12.10.2011 ISRO, Bangalore
17.	Dr. M. Ramasubba Reddy	To audit the questions papers and valued answer scripts	28.10.2011 PSG College of Tech,Coimbatore
18.	Dr. M. Ramasubba Reddy	Viva Voce	05.12.2011 JNTU Hyderabad
19.	Dr.A.Arockiarajan	Chairman, Viva Voce committee	09.12.2011 University of Kerala
20.	Dr.C.Lakshmana Rao	Viva Voce Examination	16.12.2011 IISc, Bangalore
21.	Dr.S.Ramakrishnan	Collaborative research	19.12.2011-20.12.2011 RF Silicon Tech (P) Ltd, Noida, UP
22.	Dr. M. Ramasubba Reddy	Viva voce exam	30.12.2011 Anna University, Chennai
23.	Dr. M. Ramasubba Reddy	Viva Voce exam	03.01.2012 B.S.Abdur Rahman Crescent Engg
24.	Dr.M.Ramasubba Reddy	Viva voce exam	23.01.2012 Visveswaraiah Tech. Univ,B'lore
25.	Dr. Mahesh V Panchagnula	Ph.D viva voce exam	25.01.2012 - IISc, Bangalore
26.	Dr.Pijush Ghosh	Research meeting	27.01.2012 - IIT, Kharagpur
27.	Dr.M.Ramasubba Reddy	Conducted acad. Audit of Biomed. Engg Examination process	27.01.2012 PSG College of Tech, Coimbatore
28.	Dr.M.Ramasubba Reddy	Executive Comm. meeting of Natl. Hub for Health care instrumentation development	30.01.2012 Anna University
29.	Dr.C. Lakshmana Rao	Ph.D viva voce examination	15.02.2012 IISc Bangalore
30.	Dr. M.S.Sivakumar	AR & DB Panel Meeting / Project Review	16.02.2012-17.02.2012 IIT Kanpur / Pune
31.	Dr.M.Ramasubba Reddy	BOS Meeting	10.03.2012-1103.2012 PSG College of Tech

4.3 DEPARTMENT OF BIOTECHNOLOGY

4.3.1 Introduction:

The department of Biotechnology at this institute came in to formal existence in July 2004 but has grown rapidly in the past eight years. The first batch of B.Tech students graduated in July 2006, and the first dual degree batch students graduated in July 2007.

The vision of the department is to make international impact through research, teaching, technology transfer and service to society. At present, we have 28 faculty members and the diversity of challenges that biotechnologies tackle is reflected in our research activities. The thrust areas of research are Bioprocess Engineering, Computational Biology, Chemical Biology and Medical Biotechnology related cancer and cardiovascular aspects. Faculty members of the department hold several patents and are also involved in active industrial consultancy. Several collaborative and technology transfer projects are currently running with numerous industries and the department also has collaborative research projects with hospitals. We have set up a Center of Excellence in “Bioprocess Engineering” to develop knowledge and expertise in this domain and a DST funded “National Facility to identify potential drug targets through cellular dynamics”. We have funding from DBT for program support on Cancer Biology. A Bioinformatics Center has also been set up with funding from DBT

We offer B.Tech., Dual degree, M.S., and Ph.D programmes in Biotechnology. In addition, we offer M.Tech (Clinical Engineering) and Ph.D (Major: Biomedical Devices and Technology) programmes, jointly with Sree Chitra Tirunal Institute of Medical Sciences and Technology, Trivandrum and Christian Medical College, Vellore. The aim of the department is to produce talented graduate and undergraduate students who are confident to provide solutions to the technological problems faced by Indian Biotechnology industries. The undergraduate program in Biotechnology has strong emphasis on modern biology and engineering and on several laboratory experiences. M.S and Ph.D programmes emphasize research excellence. The M.Tech (Clinical Engineering) programme is designed to train students to address the complete management of the technology aspects in a hospital as well as the medical technology need of the country.

4.3.2 Academic Programmes:

B.Tech, Dual Degree, M.S and Ph.D in Biotechnology, M. Tech in Clinical Engineering and Ph.D in Biomedical Devices and Technology.

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	38	40	31	20	2	131
Dual Degree	16	18	13	19	14	80
M.Tech.	12	8	10	0	-	30
M.S.	8	5	6	2	-	21
Ph.D.	38	19	25	29	38	149
Total	112	90	85	70	54	411

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl.No	Name of the Student/Scholar	Name of the Conference/ Seminar / Symposia / Workshop	Venue and Date
Abroad:			
1.	Nidhi Aggarwal	International Conference on Enzyme Science and Technology	Kusadasi, Turkey, 31.10.2011 – 4.11.2011
2.	P. Mahajabeen		
3.	Thangavel Saravanan	International conference BIOTRANS 2011	02.10.2011- 06.10.2011 Giardini Naxos (ME), Italy.
4.	Sowmyalakshmi Venkataraman	International Conference on Enzyme Science and Technology	Kusadasi, Turkey, 31.10.2011 – 4.11.2011
5.	Ranjini Balan	International Conference on Chemical Engineering and Industrial Biotechnology in conjunction with the 25 th Symposium of Malaysian Chemical Engineers (ICCEIB-SOMChE 2011)	2011, Malaysia

6.	Ranjini Balan	6 th Asian Pacific Phycological Forum (APPF 2011)	2011, Korea
7.	Kavya Menon	6 th Asian Pacific Phycological Forum (APPF 2011)	2011, Korea
8.	Prasad S.B.	Enzyme Engineering XXI	Vail, Colorado, USA 18.09.2011 -22.09.2011
9.	Prasad S.B.	14th International Biotechnology Symposium	Rimini, Italy 14.09.2011 -18.09.2011
10.	D. Kalaiyehzini	International Congress on Green Process Engineering-2011	Kuala Lumpur, Malaysia 06.12.2011 – 08.12.2011
11.	Mihir V. Shah	Asian Congress on Biotechnology	Shanghai, China 11.05.2011 – 15.05.2011
12.	Soumi Bairagi	Stem cells in Development and Diseases	Max-Delbruk Center (MDC), Berlin, Germany 11.09.2011 – 14.09.2011
13.	Abel Arul Nathan	International Congress on Coronary Artery Disease	Convention Center, Venice, Italy 23.10.2011-26.10.2011
14.	Hemant Giri	American Society for Cell Biology	Denver, Colorado, USA 03.12.2011 – 07.12.2011
15.	Sahu BS.	10 th World Congress of Human Proteomic Organisation (HUPO 2011)	Geneva, Switzerland 04.09.2011 – 07.09.2011
16.	Sonawane P.J.	18 th International Chromosome Conference	Manchester, U.K 29.08.2011 – 02.09.2011
17.	Sasi BK.	3 rd European Molecular Biology Organization (EMBO) meeting	Vienna, Austria 10.09.2011 – 13.09.2011
18.	Kapopara PR.	8th “Horizons in Molecular Biology” meeting	Göttingen, Germany 14.09.2011 – 17.09.2011
19.	Dillip Kumar Bishi	6 th annual congress of German Society for Stem cells Research	Dusseldorf, Germany November 2011
20.	Dillip Kumar Bishi	Nanoscience and Nanotechnology Initiatives	National University of Singapore Feb-Apr 2011
21.	SantoshMathapati	Nanoscience and Nanotechnology Initiatives	National University of Singapore Feb-Apr 2011
22.	PavithraShyamsunder	23rd Annual Fanconi Anemia Research Fund Scientific Symposium	Barcelona, Spain 20.10.2011-23.10.2011
23.	Sanjeeva Kumar	International Joint Conference on Neural Networks	San Jose, USA 30.07.2011-05.08.2011
India:			
1.	Sneha S	Conference in Chirality	Department of Chemistry, MS University Baroda, Baroda, 02.12.2011-03.12.2011
2.	Sowmyalakshmi Venkataraman	National Conference on Chirality	Vadodara, 02.12.2011-03.12.2011
3.	Sivakumari. T	Medicinal Chemistry Conference (MedChem 2011)	Chennai, 28.10.2011-29.10.2011
4.	Kavya Menon	International Conference on Innovations in oils, fats and allied productions towards sustainability and Lipids Expo.	2011, Hyderabad.
5.	Ms. R. Snehapriya	International conference on HIV Science	YRG care , Chennai, February 2012
6.	Satyaprakash Singh	International conference on HIV Science	YRG care , Chennai, February 2012
7.	Gupta V.	80 th Annual Meeting of the Society of Biological Chemists (India).	Central Institute of Medicinal and Aromatic Plants, Lucknow, India. 12.11.2011 – 15.11.2011

Names of students/scholars who won outside prizes and awards:

Sl.No.	Name of the Student/Scholar	Name of Prize	Prize awarded by
1.	Geetha Venkatachalam	Women Scientist Scheme	DST

4.3.3 Faculty and their activities:

Name and Qualifications

Major area of specialization (only 3 areas)

Professor:

Mukesh Doble [Head]	Biomaterials, Drug Design, Biochemical Engineering
K.B. Ramachandran	Bioprocess Engineering, Bioprocess Modeling and Simulation, Metabolic Engineering
Anju Chadha	Biocatalysis and Organic [Asymmetric] synthesis using enzymes, Green Chemistry, Biosensors
T.S. Chandra	Microbiology and Genetics
A. Jayakrishnan	Biomaterials Science and Technology
Guhan Jayaraman	Biochemical and Bioprocess Engineering
D. Karunagarani	Cancer Biology, Signal transduction, Apoptosis.
G. K. Suraishkumar	Reactive Species, Algal Biofuels, Microbial deactivation in drinking water
S. Mahalingam	Molecular Virology and Cell Biology
Rama Shanker Verma	Stem Cell Biology and Tissue regeneration, Cancer Therapeutics Development, Molecular Biology
V Srinivasa Chakravarthy	Computational Neuroscience

Associate Professor:

Amal Kanti Bera	Electrophysiology
Sanjib Senapati	Computational Biophysics, Computational Green Chemistry
Nitish R. Mahapatra	Cardiovascular Genetics, Molecular Medicine
Satyanarayana Gummadi	Bioprocess engineering
Michael Gromiha	Protein bioinformatics
A. Gopala Krishna	Signal transduction and Protein Biochemistry
K. Chandraraj	Biofuels, Bioremediation, Industrial Enzymes
Rayala Suresh Kumar	Cancer Biology
N Manoj	Proteins crystallography

Assistant Professor:

V Kesavan	Chemical biology
R Murugan	Theoretical Biology and Biophysics
R. Baskar	Developmental Genetics
Madhulika Dixit	Vascular Biology
Karthik Raman	Computational systems biology
Vignesh Muthuvijayan	Biomaterials and tissue engineering

Smita Srivastava Plant biotechnology and bioprocess engineering

Athi Narayanan Experimental/computational protein folding

Adjunct Faculty:

Dr. Shree Kumar Suryanarayan Bioprocess Engineering, Algal Biofuels

Dr. Venil Sumantran Cancer Biology

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1	Vignesh Muthuvijayan	XXII annual meeting of Society of Biomaterials and Artificial Organs India 2012, Chennai, India	2012
2	Vignesh Muthuvijayan and Mukesh Doble	AICTE sponsored STTP on Biomaterials and Tissue Engineering, IIT Madras, Chennai, India	February 2012
Seminar:			
1	Rama S Verma	Environmental Management system in Pharma and chemical sector	22.03.2011 – 24.03.2011
2	Rama S Verma	Information day on 7th Framework Programme of Food, Agriculture, Fisheries and Biotechnology	19.08.2011
Symposia:			
1	Smita Srivastava	Faculty Research Symposium held in the Department of Biotechnology, IIT Madras	06.01.2012
2	Rama S Verma	1st Faculty Research Symposium	06.01.2012
3	Rama S Verma	International symposium on Molecular Medicine	19.02.2012 – 22.02.2012
4	Karthik Raman	1st Faculty Research Symposium (Part of the organisation committee)	06.01.2012
5	Smita Srivastava	1st Faculty Research Symposium (Program coordinator)	06.01.2012
Workshop:			
1	Mukesh Doble and Sathya Narayana Gummadi	Summer Workshop on Bioreactors- Continuing Education programme	05.07.2011 – 09.07.2011
2	M. Michael Gromiha	IIT Madras - Tokyo Tech joint workshop on Bioinformatics and Large Scale Data Analysis	15.07.2011- 16.07.2011
3	Vignesh Muthuvijayan	IIT Madras – DCU Joint Workshop on Nano and Biomedical Applications 2011, Chennai, India	2011
Short term Course:			
1.	Smita Srivastava	Faculty Development Program for QIP Scholars (FDP-QIP-2011), sponsored by Centre for continuing education (CCE), IITM at IC & SR, IIT Madras	20.08.2011 – 21.08.2011

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1.	K.B. Ramachandran	2 nd Indo-German Workshop on “Advances in Recation and Separation Processes”	Bad Herrenalb, Germany	20.02.2012- 22.02.2012
2.	Sanjib Senapati	Proceedings of the Workshop on Recent Trends in Molecular Modeling and Simulation in Structural Biology	Calcutta, India	November 2011
3.	Sanjib Senapati	Proceedings of the Workshop on Recent Trends in Molecular Modeling and Simulation in Structural Biology	Delhi, India	March 2011
4.	Vignesh Muthuvijayan	Workshop on bioreactors	IIT Madras, Chennai, India	2011

5.	Vignesh Muthuvijayan	Faculty Development Program	IIT Madras, Chennai, India	2011
6.	Vignesh Muthuvijayan	IIT Madras – DCU Joint Workshop on Nano and Biomedical Applications 2011	Chennai, India	2011
Symposium:				
1.	D. Karunakaran	Attended the 31st Annual Convention of Indian Association for Cancer Research and International Symposium on 'Cancer Genomics and its impact in the clinics'	ACTREC, Navi Mumbai.	26.01.2012 – 29.01.2012
Conference:				
1.	K.B. Ramachandran	International Conference in "New Horizons in Biotechnology 2011"	Trivandrum, Kerala, India	21.11.2011 – 24.11.2011
2.	K.B. Ramachandran	International Congress on Green Process Engineering-2011	Kuala Lumpur, Malaysia	06.12.2011 – 08.12.2011
3.	Nitish R Mahapatra	International Conference on Angiogenesis: basics and applications	Anna University-KBC Research Centre, Chennai, India	01.03.2012 – 03.03.2012
4.	Nitish R Mahapatra	International Conference on Cardiovascular Research Convergence	All India Institute of Medical Sciences, New Delhi, India.	17.02.2012 – 18.02.2012
5.	Nitish R Mahapatra	57 th Annual Conference of Physiologists and Pharmacologists of India	All India Institute of Medical Sciences, New Delhi, India	16.12.2011
6.	Sanjib Senapati	HPC Applications. Proceedings of the 2nd Meeting on High Performance Computing and Applications	I.I.T. Kanpur, India.	March 2012
7.	Sanjib Senapati	Indo-Korea Meeting. Proceedings of the 2nd Indo-Korea Joint Meeting on Chemical Biology	Madras, India.	November 2011
8.	Sanjib Senapati	Proceedings of the Multiscale Simulations of Biological and Soft Materials	Kyoto, Japan	September 2011
9.	Sanjib Senapati	Proceedings of the 47th International Conference on Medicinal Chemistry	Lyon, France	July 2011
10.	Dr. Smita Srivastava	T4E 2011, IEEE International Conference on Technology for Education	IIT Madras, Chennai	14.07.2011 – 16.07.2011
11.	Vignesh Muthuvijayan	Horizons of Heart care 2012	IIT Madras, Chennai, India	2012
12.	V Srinivasa Chakravarthy	International Joint Conference on Neural Networks	San Jose, USA	30.07.2011 – 05.08.2011
13.	V Srinivasa Chakravarthy	Twentieth Annual Computational Neuroscience Meeting (OCNS2011)	Stockholm	July, 2011

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1.	Anju Chadha	'What can one do with Glycerol-the byproduct of biodiesel formation?'	IICT, Hyderabad	26.01.2012 – 28.01.2012
2.	Anju Chadha	Biocatalytic One-pot Deracemisation of Racemic sec Alcohols: Understanding the Versatility and Mechanism of Candida parapsilosis ATCC 7330	IISc, Dept. of Org. Chem., Bangalore	04.11.2011
3.	Anju Chadha	Candida parapsilosis ATCC 7330: A versatile biocatalyst for the preparation of chiral synthons	National Chirality Conference, MS University, Vadodara	03.12.2011 – 04.12.2011

4.	Anju Chadha	Developing methods for Triglyceride and Glycerol Biosensors; Indo-Japan Workshop on Biomolecular Electronics & Organic Nanotechnology for environment Preservation	Himeji, Japan	07.12.2011 – 10.12.2011
5.	Anju Chadha	Towards Green and Sustainable Chemistry: Biocatalytic Deracemisation Reactions for the Preparation of Chiral Synthons	National Seminar on Catalysis for Sustainable Development, Vadodara	27.01.2012-28.01.2012
6.	D. Karunakaran	Role of miRNAs in cancer at the international conference on recent trends in molecular medicine	Sree Buddha college of engineering, Pattoor, Kerala	23.02.2012-24.02.2012
7.	D. Karunakaran	A talk at the International Conference on Systemics, Cybernetics and Informatics, ICSCI-2012	MCR HRD Institute, Hyderabad	16.02.2012
8.	D. Karunakaran	A talk at the Bharath University, Selaiyur, Chennai	Bharath University, Selaiyur, Chennai	17.02.2012
9.	D. Karunakaran	A talk at IBMS, University of Madras	University of Madras	07.03.2012
10.	Karthik Raman	"Robustness and Evolvability of Biological Systems	International Conference on Mathematical and Theoretical Biology, held in Pune	23.01.2012 - 27.01.2012
11.	R. Baskar	Developmental Biology	MKU	26.03.2012
12.	G. K. Suraishkumar	Algal Biofuels	Anna Adarsh College, Chennai	August 2011
13.	M. Michael Gromiha	Binding specificity and recognition mechanism of protein-protein complexes: comparison with protein-DNA/RNA complexes	Workshop on Protein-Protein Interactions: Computational Approaches, National Center for Biological Sciences, Bangalore	19.09.2011
14.	M. Michael Gromiha	Development of Databases and Tools for understanding Protein structure and Function	Workshop on "Computational Intelligence Application in Bioinformatics" Dr. M.G.R. University, Chennai	27.09.2011
15.	M. Michael Gromiha	Functional annotation of membrane proteins	Conference on Information and Integrative Biology Bose Institute, Kolkatta,	14.12.2011
16.	M. Michael Gromiha	Bioinformatics approaches for understanding the recognition mechanism of protein complexes	Workshop on proteins to proteomics University of Pune	19.12.2011
17.	M. Michael Gromiha	Binding specificity and recognition mechanism of protein-protein complexes	Tokyo Institute of Technology, Japan	01.12.2011
18.	M. Michael Gromiha	Protein Folding rates: Insights and prediction	Chuo University, Japan	2nd Dec 2011
19.	M. Michael Gromiha	Structural Bioinformatics and drug discovery	Manipal University of Dubai	28th Dec 2011
20.	M. Michael Gromiha	Binding Specificity and Recognition Mechanism of Protein Complexes	International Conference on Bioinformatica Indica University of Kerala	13 Jan 2012
21.	M. Michael Gromiha	Protein Folding Rates: Insights and Prediction	International symposium on Recent Trends in Macromolecular structure and function University of Madras	24 Jan 2012

22.	M. Michael Gromiha	Understanding the recognition mechanism of protein complexes	International conference on Macromolecular structure and function, Central Agricultural Research Institute, Port Blair	28 Jan 2012
23.	M. Michael Gromiha	Structural and functional annotation of membrane proteins	Symposium on structure based computer aided drug design, Alagappa University, Karikudi	20 Feb 2012
24.	M. Michael Gromiha	Influence of sequence and structure for understanding and predicting protein folding rates	National seminar on Structural Bioinformatics. M.S. University, Tirunelveli	3 March 2012
25.	M. Michael Gromiha	Bioinformatics approaches for understanding the structure and function of membrane proteins.	University of Alberta, Canada	8 March 2012
26.	K.B. Ramachandran	Kinetics of microbial growth and product formation	Lady Doak College, Maduari	February 10, 2012
27.	K.B. Ramachandran	Cultivation in bioreactors	Lady Doak College, Maduari	February 10, 2012
28.	Dr. Madhulika Dixit	Glucose Metabolism and Vascular Progenitors: A link to stem cell kinetics	International Conference on Angiogenesis: Basics and Applications, Anna University-KBC Research Centre, Chennai, India	1-3rd March, 2012
29.	Nitish R Mahapatra	International Conference on Angiogenesis: basics and applications	Anna University-KBC Research Centre, Chennai, India	March 1-3, 2012
30.	Nitish R Mahapatra	International Conference on Cardiovascular Research Convergence	All India Institute of Medical Sciences, New Delhi, India.	February 17-18, 2012
31.	Nitish R Mahapatra	57 th Annual Conference of Physiologists and Pharmacologists of India	All India Institute of Medical Sciences, New Delhi, India	December 16, 2011
32.	Rayala Suresh Kumar	Regulation of KIBRA protein – Lecture delivered	University of Munester, Muenster, Germany	8 th March 2012
33.	Sanjib Senapati	HPC Applications. Proceedings of the 2nd Meeting on High Performance Computing and Applications	I.I.T. Kanpur, India.	March 2012
34.	Sanjib Senapati	Indo-Korea Meeting. Proceedings of the 2nd Indo-Korea Joint Meeting on Chemical Biology	Madras, India.	November 2011
35.	Sanjib Senapati	Proceedings of the Multiscale Simulations of Biological and Soft Materials	Kyoto, Japan	September 2011
36.	Sanjib Senapati	Proceedings of the 47th International Conference on Medicinal Chemistry	Lyon, France	July 2011
37.	Sanjib Senapati	Proceedings of the Workshop on Recent Trends in Molecular Modeling and Simulation in Structural Biology	Calcutta, India	November 2011
38.	Sanjib Senapati	Proceedings of the Workshop on Recent Trends in Molecular Modeling and Simulation in Structural Biology	Delhi, India	March 2011
39.	Dr. Smita Srivastava	Application of molecular techniques for diversity assessment and polyphasic characterization of PGPRs from different saline ecosystems	National DBT sponsored workshop for Women Scientist Microbiology Division of MSSRF, Chennai.	May 16-25, 2011
40.	Dr. Smita Srivastava	Bioprocessing of plant cells for commercial production of high-value secondary metabolites	Dept. of Basic Sciences, IIT Bhuwanesar	13-10-2011

41.	Dr. Smita Srivastava	Plant cell/organ culture reactors in the national workshop on Bioreactors	Department of Biotechnology, IITM	5-8 th July, 2011
42.	Prof Rama S Verma	Cardiogel: A potential biological scaffold for cardiac tissue regeneration	Annual meeting of Society of Biological Chemists (India) Lucknow, India	12-15 Nov. 2011
43.	Prof Rama S Verma	CME & Doctoral course on Regenerative and Transplantation Medicine in Ophthalmology	Bangalore	12-16 Nov 2011
44.	Prof Rama S Verma	computation Identification and experimental Characterization of binding domain of fusion protein	International Symposium -cum- Training workshop on "Recent Trends in Bioinformatics, System Biology & Biomolecular Interaction" held at Center of Bioinformatics Institute of Interdisciplinary Studies University of Allahabad, Allahabad. India	2012
45.	Prof Rama S Verma	Cardiogel: A Potential Biological Scaffold for Cardiac tissue regeneration	Recent trends in Basic Science: translation from bench to bedside held at Frontier Life Line Hospital and Dr K.M. Cherian Heart foundation, Chennai	21st Jan 2012
46.	Prof Rama S Verma	Development of Bioscaffold for live tissue engineering using MSCs (2012)	Nanomeet 2012 at National Seminar on Indigenous Nanomaterial's Development for Industrial Application held at Center for Nano Science and Technology, Anna University Chennai India	27-28 Feb 2012
47.	Vignesh Muthuvijayan	Trends in Tissue Engineering.	Loyola College, Chennai	
48.	Vignesh Muthuvijayan	Opportunities in Biotechnology and Entry into IIT.	Vivekananda College, Sholavandan	
49.	Vignesh Muthuvijayan	Utilizing natural thromboregulatory mechanisms for improving haemocompatibility of biomaterials.	IIT Madras – DCU Joint Workshop on Nano and Biomedical Applications 2011, Chennai, India	2011
50.	Vignesh Muthuvijayan	Functionalization of biomaterials to utilize synergistic mechanisms in platelet inhibition.	Dublin City University, Ireland	2011
51.	Vignesh Muthuvijayan	Technology-enabled learning.	Faculty Development Program 2011, Chennai, India	2011
52.	V Srinivasa Chakravarthy	Towards an integrated model of Basal Ganglia	International Conference on Decision Making, Allahabad	December, 2011
53.	V Srinivasa Chakravarthy	Towards an integrated model of Basal Ganglia	Indian Academy of Neuroscience Conference, New Delhi	November, 2011
54.	V Srinivasa Chakravarthy	Towards an integrated model of Basal Ganglia	Indian National Node for Neuroinformatics Workshop, NBRC, Manesar	November, 2011

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1.	Mukesh Doble	Shanghai, China	May 11-15, 2011	Present a paper in Asian congress of biotechnology	CPDF
2.	Mukesh Doble	Bad Herrenalb, Germany	February 20 – 22, 2012	Present a paper in 2 nd joint Indo-German workshop on Advances in Reaction and Separation Processes	CPDF

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
i. Honours:					
1.	Prof Rama S Verma	Elected Fellow to Association of Microbiologists of India (FAMI 2010)	Association of Microbiologists of India		2010
2.	Prof Rama S Verma	Elected Fellow to Society for Applied biotechnology	Society for Applied biotechnology		2011
ii. Awards:					
1.	Anju Chadha	International Women's Day award	University of Madras, India	Outstanding contributions in the field of Science	March, 2011
2.	Dr. Madhulika Dixit	Senior Innovative Young Biotechnologist Award	DBT, Ministry of Science and Technology, Government of India		2011
3.	Sanjib Senapati	NASI-Scopus Young Scientist Award in Biological Sciences	Elsevier		2011
4.	Prof Rama S Verma	Excellence in Medical biotechnology award	Society for Applied Biotechnology, India		2011

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1.	Mukesh Doble	Drug design Basic and applications	McGraw Hill	Mukesh Doble
2.	Anju Chadha	' Biocatalytic preparation of Chiral Amines'	Practical Methods for Biocatalysis and Biotransformations, Wiley, 2011	S. Stella and Anju Chadha
3.	D. Karunagaran	Regulation of MicroRNAs by Natural Compounds: Implications for Cancer Therapy, In "Natural compounds as inducers of cell death"	Springer Publishers (2011)	Karunagaran, D., Maitreyi Subramanian and Rao Srinivasa Rao Edited by Mark Diederich
4.	M. Michael Gromiha	Structural and Functional Discrimination of Membrane Proteins In "Ion channels and their inhibitors"	Springer-Verlag, Heidelberg, (2011), pp 1-32	M. Michael Gromiha, Yu-Yen Ou and Shu-An Chen (Ed. S.P. Gupta)
5.	M. Michael Gromiha	Advanced Intelligent Computing Theories and Applications	Springer-Verlag, Heidelberg, 2012	Eds. D-S. Huang, Y. Gan, P. Gupta and M.M. Gromiha
6.	Dr. Madhulika Dixit	Book Chapter on "Anti-diabetic Drugs" in Drug Design Basics and Applications	Tata McGraw Hill Education Private Limited. [ISBN (13): 978-0-07-068076-0].	Dixit, M.
7.	Nitish R Mahapatra	Pharmacogenomics of cardiovascular drugs. In: Drug Design-Basics and Applications	Tata-McGraw-Hill Publishers, New Delhi, India. 2011 pp. 280-310..	Sonawane PJ, Sahu BS, Mahapatra NR. (Doble M, Ed.).

8.	Prof Rama S Verma	Application of Microbial Toxins for Cancer Therapy, Microorganisms in Sustainable Agriculture and Biotechnology,	DOI 10.1007/978-94-007-2214-9_28, © Springer Science Business Media B.V. 2012	Rama Shanker Verma, SirishaPotala, Mrudula Mathew and Swati chaudhary. T. Satyanarayana et al. (eds.)
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Fellowships of Academies and Professional Societies:

SI. No.	Name of faculty	Year of admission
	Mukesh Doble, Fellow of Royal Society of chemistry, London	2010

Journal Editorial Boards:

SI. No	Name of faculty	Position (Editor/Member)	Journal Name
1	Mukesh Doble	Chemical Engineering, McGraw Hill, USA	
2	Mukesh Doble	Open Enzyme Journal	
3	Mukesh Doble	Open Petroleum Journal	

4.3.4 Design and Development Activities:

New facilities added or major equipment procured:

SI. No.	Name of Equipment	Value (Rs. in lakhs)
1.	Tensiometer	15.00

4.3.5 Research and Consultancy:

Sponsored Research Projects:

SI. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1.	Bio compatibility studies on nano particle coated polymer surface	16-04-2008 to 31-03-2012	BRNS, DAE, Mumbai	19.23	M Doble
2.	Study to evaluate the baseline anti TB and anti HIV properties of novel antibiotic transitmycin	01-01-2012 To 31-12-2012	ICMR	7.5	M Doble
3.	In vitro study on the bio-toxicity of nano-silver as anti-bacterial material	14-09-2010 To 13-09-2013	DBT	23.12	Doble
4.	Production of cyclic 1,2 B-glucans and its use as an anticancer drugs delivery system	20-11-2010 To 19-11-2013	DST	23.16	Doble
5.	Bioprocess development for production of linear and cyclic glucans	09-12-2010 To 08-12-2013	DBT	31.25	Doble and Gummadi
6.	Enhance biodegradation of polymer- influence of surface properties, molecular weight of the	21-03-2011 To 20-03-2014	DST	32.82	Doble
7.	Antifouling coating based on surface modification approach	6/3/12 to 5/3/15	BRNS	53.9	Doble
8.	Protease immobilised active packaging system for Cottage Cheese	22/2/12 to 21/2/15	DBT		Doble
9.	High value low volume products from Biocatalysis;	2011-2014	DBT, GoI	40	Anju Chadha

10.	Centre for NanoElectroMechanical Systems (NEMS) and Nanophotonics, Dept. of EE	2011-2016	DIT, Gol	Rs. 5000,	Anju Chadha
11.	A Transcriptome-wide analysis of microRNA targets across different cell types	Three years from February 2012	Department of Biotechnology, Government of India	65	D. Karunakaran
12.	Study, design and development of hit molecules for cancer targets (Phase-I). In collaboration with M/s LeadInvent Technologies Pvt. Ltd. New Delhi	One year from February 2011 (extended up to August 2012)	SBIRI, Department of Biotechnology, Government of India	30.84	D. Karunakaran
13.	Development of a bioprocess for the production of Polyhydroxy butyrate (PHB) from bio-diesel industry generated glycerol	30-12-2008 to 29-6-2012	DBT	40.04	K. B. Ramachandran (PI) T.S. Chandra (Co-PI)
14.	Production of hyaluronic acid by metabolically engineered L. Lactis	28-7-2009 to 27-7-2012	DST	17.14	K.B. Ramachandran (PI) Ms. Shashi Bala Prasad (Co-PI)
15.	Functional characterization and rejuvenation of diabetes associated dysfunctional circulating endothelial progenitor cells (EPCs) for therapeutic neovascularization-Phase II.	2011-2014	DBT, Government of India	95.97	Dr. Madhulika Dixit
16.	Development of rapid diagnostic assay for early detection of HIV,		DST, Government of India.	88	Dr. S. Mahalingam
17.	Molecular mechanisms of regulation of the cystathionine gamma-lyase gene	November 2011-October 2014	BRNS, DAE, Govt. of India	24.15	Nitish R Mahapatra
18.	A structure-function correlation study to unravel the mechanism of action of human catestatin	August 2010-July 2013	DBT, Govt. of India	50.00	Nitish R Mahapatra
19.	Cellular and molecular studies on interaction of the physiological anti-hypertensive peptide catestatin at the neuronal nicotinic acetylcholine receptor	October 2009-September 2012	DST, Govt. of India	38.85	Nitish R Mahapatra
20.	Identification and functional characterization of regulatory elements in the mouse Hspa1a gene	May 2009-October 2012	DRDO, Govt. of India	40.96	Nitish R Mahapatra
21.	Polymorphisms in the physiological anti-hypertensive peptide catestatin in an Indian population	November 2008-March 2012	DBT, Govt. of India	54.48	Nitish R Mahapatra
22.	Regulation of PELP1 prtien		DBT		Rayala Suresh Kumar
23.	Targeting PELP1 with miRNAs		DBT		Rayala Suresh Kumar
24.	DNA repair functions of KIBRA		DST		Rayala Suresh Kumar
25.	Function of MTA1 in Parkinsons disease		DBT		Rayala Suresh Kumar

26.	Nucleotide-dependent conformational changes in free tubulin dimer and microtubule dynamic instability	3 Years	Council of Scientific and Industrial Research (CSIR)	19.66	Sanjib Senapati
27.	Evaluation of antioxidant properties of lichens obtained from eastern ghats for biomedical properties		ICMR	10.2	Prof Rama S Verma

Industrial Consultancy projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1.	Anju Chadha	Microbial production of nutraceuticals	Unique Biotech, Hyderabad	
2.	Karthik Raman	CUDA Research Centre grant, with the award comprising a Tesla C2070 GPU	nVidia	1.25
3.	K.B. Ramachandran	Biotransformation/ bioprocessing technologies for the manufacture of Cephalosporin derivatives.	Orchid Chemicals and Pharmaceuticals Ltd	6.00
4.	K.B. Ramachandran	Process Development and scale-up	Richcore Life Sciences	4.80

RBIC projects:

Sl.No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1.	M Doble	Biodegradation of polypropylene	RIL, Mumbai	15.00
2.	Prof Rama S Verma	Evaluation of phyto pharmaceutical using phytochemicals	RBIC (Lailapharma)	5
3.	Prof Rama S Verma	Development of hepatsticsb and harmophilus influence type b vaccines	RBIC, HLL	20

Books:

Total No. of book chapters : 06

Total No. of Books : 01

Books: Mukesh Doble (ed.) Drug design Basic and applications, McGraw Hill, Education, ISBN: 9780070680760, (Aug, 2011)

Chapter in Books:

1. V. Prabhawathi, P. M. Sivakumar & **M. Doble**. 2010. Contributed a book chapter titled "Biological synthesis of nanoparticles" under the book titled, "Nanoscience and Advancing Computational Methods in Chemistry: Research Progress" to be published by IGI global and the editorial board consisting of Dr. Eduardo D. Castro & Dr. A. K. Haghi, University of Guilan, Iran. (Got accepted and under the final stage of publication). <http://www.igi-global.com/book/nanoscience-advancing-computational-methods-chemistry/61639>
2. L M Balivada, A Y Shaikh, S Hota, G K Aradhyam & M Doble, Chapter titled "The Science of Drug Discovery", in the book titled Drug design Basic and applications, Drug design Basic and applications, McGraw Hill publn, 2011, ISBN (13) 978-0-07-068076-0
3. P M Sivakumar and M Doble, "Enzyme inhibitors as anti-inflammatory drugs", in the book titled Drug design Basic and applications, Drug design Basic and applications, McGraw Hill publn, 2011, ISBN (13) 978-0-07-068076-0
4. Padma Priya and M Doble, "Cardiotonics", in the book titled Drug design Basic and applications, Drug design Basic and applications, McGraw Hill publn, 2011, ISBN (13) 978-0-07-068076-0

5. S. Stella and Anju Chadha, ' Biocatalytic preparation of Chiral Amines', in *Practical Methods for Biocatalysis and Biotransformations*, Wiley, 2011, [page numbers not given as yet]
6. Karunagaran, D., Maitreyi Subramanian and Rao Srinivasa Rao (2011) Regulation of MicroRNAs by Natural Compounds: Implications for Cancer Therapy, In "Natural compounds as inducers of cell death" Edited by Mark Diederich, Springer Publishers

Research Publications of the faculty members & research scholars:

a. Total No. of papers published in Refereed National Journals	-	01
b. Total No. of papers published in Refereed International Journals	-	82
c. Total No. of papers presented in National Conferences	-	Nil
d. Total No. of papers presented in International conferences	-	16

In Refereed National Journals:

1. M. Radhakrishnan, R. Balagurunathan, N. Selvakumar, **M. Doble**, V. Kumar. Bioprospecting of marine derived actinomycetes with special reference to antimycobacterial activity, *Indian Journal of Geo-Marine Sciences*, Volume: 40, Issue: 3, Pages: 407-410 Published: JUN 2011.

In Refereed International Journals:

1. R Murugan (2011) Theory on the dynamic memory in the transcription-factor-mediated transcription activation. *Phys. Rev. E*. 83, 041926–35.
2. R Murugan and G Kreiman (2011) On the minimization of fluctuations in the response-times of gene-regulatory networks. *Biophys. J.* 101, 1297-1306.
3. R Murugan (2011) Theory on thermodynamic coupling of site-specific DNA-protein interactions with fluctuations in DNA-binding domains. *J. Phys. A: Math. & Theor.* 44, 505002-12. [Insight].
4. S. Veeraapandian, S. N. Sawant, M. Doble. Antibacterial and Antioxidant Activity of Protein Capped Silver and Gold Nanoparticles Synthesized with *Escherichia coli*, *Journal of Biomedical Nanotechnology*, 2012, Volume: 8, Pages: 140-148, Published: February 2012. DOI: <http://dx.doi.org/10.1166/jbn.2012.1356>
5. D. Jeyakumar, G. Suresh, M. Doble. Synergistic interaction of treatment and blending on the stability of high-density polyethylene, *Journal of Applied Polymer Science*. Article first published online: 31 JAN 2012. DOI: 10.1002/app.35640
6. Manoharan M. Tamizh, D. Kesavan, P. M. Sivakumar, K. Mereiter, M. Deepa, K. Kirchner, M. Doble, R. Karvembu. Antibacterial Activities of 4-Substituted-2-[(E)-{(1S,2R)/(1R,2S)-1-Hydroxy-1-Phenylpropan-2-Ylimino}Methyl]Phenol, *Chemical Biology & Drug Design*, 2012, Volume: 79, Issue: 2, Pages: 177-185, Published: FEB 2012. DOI: 10.1111/j.1747-0285.2011.01263.x
7. P. M. Sivakumar, S. Cometa, M. Alderighi, V. Prabhawathi, M. Doble, F. Chiellini. Chalcone embedded polyurethanes as a biomaterial: Synthesis, characterization and antibacterial adhesion, *Carbohydrate Polymers*, 2012, Volume: 87, Issue: 1, 353 – 360, Published: JAN 4 2012. DOI: 10.1016/j.carbpol.2011.07.061
8. Anand R.S, Sulochana Somasundaram, Mukesh Doble, Paramasivan C.N. Docking studies on Novel Analogues of 8 Methoxy Fluoroquinolones against GyrA Mutants of *Mycobacterium tuberculosis*, *BMC Structural Biology*, 2011, 11:47 Published: 12 December 2011. DOI: 10.1186/1472-6807-11-47.
9. Ayarivan Puratchikody, Ramalakshmi Natarajan, Mohanapriya Jayapal and Mukesh Doble. Synthesis, In Vitro Antitubercular Activity and 3D-QSAR of Novel Quinoxaline Derivatives, *Chemical Biology & Drug Design*, 2011, Volume: 78, Issue: 6 Pages: 988-998, Published: DEC 2011. DOI: 10.1111/j.1747-0285.2011.01246.x
10. Ramya LN, Mukesh Doble, P. B. Rekha, and K. K. Pulicherla. In silico Engineering of L-Asparaginase to Have Reduced Glutaminase Side Activity for Effective Treatment of Acute Lymphoblastic Leukemia, *Journal of Pediatric Hematology Oncology*, Volume: 33, Issue: 8, Pages: 617-621, Published: DEC 2011. DOI: 10.1097/MPH.0b013e31822aa4ec
11. V. Prabhawathi, P. M. Sivakumar, Mukesh Doble. Immobilization of Subtilisin on Polycaprolactam for Antimicrobial Food Packaging Applications, *Journal of Agricultural and Food Chemistry*, Volume: 59, Issue: 20, Pages: 10869-10878, Published: OCT 26 2011. DOI: 10.1021/jf201124v

12. P.M. Sivakumar, N. Vignesh, M. Senthilkumaran, Mukesh Doble. Quantitative structure-cytotoxicity relationships (QSCR) for semi-synthetic Taxoteres against cancer cell lines, *Molecular Simulation*, Volume: 37, Issue: 13, Pages: 1122-1130, Published: 2011. DOI: 10.1080/08927022.2011.583647
13. Mukesh Doble, Geetha Venkatachalam. Understand the Fundamentals of Wastewater Treatment. *Chemical Engineering Progress*, Volume: 107, Issue: 10, Pages: 36-42 Published: OCT 2011
14. Nagamani Thirunavukkarasu, Trichur S. Suryanarayanan, Kozhikottu P. Girivasan, Ambayeram Venkatachalam, Venkatachalam Geetha, Jagadesan P. Ravishankar, Mukesh Doble. Fungal symbionts of marine sponges from Rameswaram, southern India: species composition and bioactive metabolites, *Fungal Diversity*, Published: Oct 2011. DOI: 10.1007/s13225-011-0137-6
15. P.K. Prabhakar, Mukesh Doble. Interaction of Cinnamic Acid Derivatives with Commercial Hypoglycemic Drugs on 2-Deoxyglucose Uptake in 3T3-L1 Adipocytes, *Journal Of Agricultural And Food Chemistry*, Volume: 59, Issue: 18, Pages: 9835-9844 Published: SEP 28 2011. DOI: 10.1021/jf2015717
16. J. Arutchelvi, C. Joseph, Mukesh Doble. Process optimization for the production of rhamnolipid and formation of biofilm by *Pseudomonas aeruginosa* CPCL on polypropylene, *Biochemical Engineering Journal*, Volume: 56, Issue: 1-2, Pages: 37-45, Published: SEP 15 2011. DOI: 10.1016/j.bej.2011.05.004
17. S. Hemaiswarya, R. Soudaminikkutty, M.L. Narasumani, Mukesh Doble. Phenylpropanoids inhibit protofilament formation of *Escherichia coli* cell division protein FtsZ, *Journal of Medical Microbiology*, Volume: 60, Issue: 9, Pages: 1317-1325, Published: SEP 2011. DOI: 10.1099/jmm.0.030536-0
18. A.P. Khandwekar, D.P. Patil, Y. Shouche, Mukesh Doble. Surface Engineering of Polycaprolactone by Biomacromolecules and their Blood Compatibility, *Journal of Biomaterials Applications*, Volume: 26, Issue: 2, Pages: 227-252, Published: AUG 2011 DOI: 10.1177/0885328210367442
19. P. K. Prabhakar, M. Doble. Mechanism of action of natural products used in the treatment of diabetes mellitus, *Chinese Journal of Integrative Medicine*, Volume: 17, Issue: 8, Pages: 563-574, Published: AUG 2011. DOI: 10.1007/s11655-011-0810-3
20. P. M. Sivakumar, N. Vignesh, G. R. Kumar, M. Doble. Computational approaches to enhance activity of taxanes as antimetabolic agent, *Medicinal Chemistry Research*, Published online: 20 August 2011. DOI: 10.1007/s00044-011-9779-x
21. P.K. Prabhakar, S. Raj, P. R. Anuradha, S.N. Sawant, M. Doble. Biocompatibility studies on polyaniline and polyaniline-silver nanoparticle coated polyurethane composite Colloids and Surfaces B-Biointerfaces, Volume: 86, Issue: 1, Pages: 146-153, Published: AUG 1 2011. DOI: 10.1016/j.colsurfb.2011.03.033
22. T. Artham, M. Doble. Bisphenol A and metabolites released by biodegradation of polycarbonate in seawater, *Environmental Chemistry Letters*, Volume: 10, Issue: 1, Pages: 29-34, Published: July 2011. DOI: 10.1007/s10311-011-0324-4
23. P. K. Prabhakar, S. Vijayaraghavan, J. Philip, M.Doble. Biocompatibility Studies of Functionalized CoFe_2O_4 Magnetic Nanoparticles. *Current Nanoscience*, Volume: 7, Issue: 3, Pages: 371-376, Published: JUN 2011. DOI: <http://dx.doi.org/10.2174/157341311795542435>
24. P. K. Prabhakar, M. Doble. Effect of natural products on commercial oral antidiabetic drugs in enhancing 2-deoxyglucose uptake by 3T3-L1 adipocytes, *Therapeutic Advances in Endocrinology and Metabolism*, Volume: 2, Issue: 3 Pages: 103-114, Published : June 2011. DOI: 10.1177/2042018811411356
25. A.P. Khandwekar, M. Doble. Physicochemical characterisation and biological evaluation of polyvinylpyrrolidone-iodine engineered polyurethane (Tecoflex (R)) *Journal of Materials Science-Materials in Medicine*, Volume: 22, Issue: 5, Pages: 1231-1246, Published: May 2011. DOI: 10.1007/s10856-011-4285-8
26. K. P. Vani, M. Doble. Sustainable Development in Agriculture, Food and Nutrition - A Patent Analysis, *Recent Patents on Food, Nutrition & Agriculture*, Volume: 3, Issue: 2, Pages: 133-141, Published: May 2011
27. M. Subashini, P. V. Devarajan, G. S. Sonavane, M. Doble. Molecular dynamics simulation of drug uptake by polymer, *Journal of Molecular Modeling*, Volume: 17, Issue: 5, Pages: 1141-1147, Published: MAY 2011. DOI: 10.1007/s00894-010-0811-8
28. A. Indra, M. Doble, S. Bhaduri, G. K. Lahiri. Kinetic and Scanning Transmission Electron Microscopy Investigations on a MCM-41 Supported Cluster Derived Enantioselective Ruthenium Nanocatalyst, *ACS Catalysis*, Volume: 1, Issue: 5, Pages: 511-518, Published: MAY 2011, DOI: 10.1021/cs200058q
29. P. M. Sivakumar, P. K. Prabhakar, M. Doble. Synthesis, antioxidant evaluation, and quantitative structure-activity relationship studies of chalcones, *Medicinal Chemistry Research*, Volume: 20, Issue: 4, Pages: 482-492, Published: MAY 2011. DOI: 10.1007/s00044-010-9342-1

30. Kavitha K, Vidya Priyadarsini R, Anitha P, Ramalingam K, Sakhivel R, Purushothaman G, Singh AK, Karunagaran D, Nagini S. (2012). Nimbolide, a neem limonoid abrogates canonical NF- κ B and Wnt signaling to induce caspase-dependent apoptosis in human hepatocarcinoma (HepG2) cells. *Eur J Pharmacol.* 681, 6-14.
31. Subramoniam A, Asha VV, Nair SA, Sasidharan SP, Sureshkumar PK, Rajendran KN, Karunagaran D, Ramalingam K. Chlorophyll Revisited: Anti-inflammatory Activities of Chlorophyll a and Inhibition of Expression of TNF- α Gene by the Same. *Inflammation* (In press) DOI: 10.1007/s10753-011-9399-0
32. Kirioukhova O, Johnston AJ, Kleen D, Kägi C, Baskar R, Moore JM, Bäumllein H, Gross-Hardt R, Grossniklaus U. (2011) Female gametophytic cell specification and seed development require the function of the putative Arabidopsis INCENP ortholog WYRD. *Development.* 138(16):3409-20.
33. Jaiswal P, Soldati T, Thewes S, Baskar R. (2012) Regulation of aggregate size and pattern by adenosine and caffeine in cellular slime molds. *BMC Dev Biol.* 12(1):5.
34. Pritish Sarkar and G. K. Suraishkumar pH and Temperature Stresses in Bioreactor Cultures: Intracellular Superoxide Levels *Industrial and Engineering Chemistry Research* 50, 13129 - 13136 (2011).
35. Mausumi Mukhopadhyaya, S. B. Noronha, and G. K. Suraishkumar A Review on Experimental Studies of Biosorption of Heavy Metals by *Aspergillus niger*. *The Canadian Journal of Chemical Engineering* 89, 889 - 900 (2011)
36. Chen SA, Ou YY, Lee TY, Gromiha MM. Prediction of transporter targets using efficient RBF networks with PSSM profiles and biochemical properties. *Bioinformatics.* 2011 Aug 1;27(15):2062-7.
37. M. M. Gromiha, R. Sowdhamini, K. Fukui, (2011) "Structure-Function Relationship in Olfactory Receptors", *Lecture Notes in Bioinformatics*, 6840, 618-623.
38. Gromiha MM, Huang LT. Machine Learning Algorithms for Predicting Protein Folding Rates and Stability of Mutant Proteins: Comparison with Statistical Methods. *Curr Protein Pept Sci.* 12, 190-502 (2011).
39. Kumar M, Gromiha MM, Raghava GP. SVM based prediction of RNA-binding proteins using binding residues and evolutionary information. *J Mol Recognit.* 2011 Mar-Apr;24(2):303-13
40. Gromiha MM, Saranya N, Selvaraj S, Jayaram B, Fukui K. Sequence and structural features of binding site residues in protein-protein complexes: comparison with protein-nucleic acid complexes. *Proteome Sci.* 2011;9, S13.
41. ccPDB: compilation and creation of data sets from Protein Data Bank. Singh H, Chauhan JS, Gromiha MM; Open Source Drug Discovery Consortium, Raghava GP. *Nucleic Acids Res.* 2012 Jan;40(Database issue):D486-9
42. Hema Vaidyanathan, Vijayalakshmi Kandasamy, Gopu Gopal Ramakrishnan, Ramachandran K.B., Guhan Jayaraman and Subramanian Ramalingam, Glycerol conversion to 1,3- Propanediol is enhanced by the expression of a heterologous alcohol dehydrogenase gene in *Lactobacillus reuteri*, *AMB Express* 2011, 1:37 (4 November 2011).
43. Raveendran Sidhu, Balakrishnan Ammu, Parameswaran Binod, Sreelatha K Deepthi, Ramachandran K.B., Carlos Ricardo Soccol and Ashok Pandey, Production and Characterisation of poly-3-hydroxybutyrate from crude glycerol by *Bacillus sphaericus* NII 0838 and improving its thermal properties by blending with other polymers; *Brazilian Archives of Biology and Technology*, 54, 783-794 (2011)
44. Gary Brodeur, Elizabeth Yau, Kimberly Badal, John Collier, Ramachandran K.B. and Subramanian Ramakrishnan, Chemical and Physicochemical Pretreatment of Lignocellulosic Biomass: A Review, *Enzyme Research*, Article ID 787532, 17 pages, doi:10.4061/2011/787532, Volume 2011.
45. Bairgai, S., Gopal, J., Nathan, A.A., Babu, Pavan Kumar, N., and Dixit, M. "Glucose induced increase in circulating progenitor cells is blunted in anovulatory subject." *Human Reproduction.* (2012), Mar; 27(3):844-53.
46. Neelima Boddapati, Anbarasu K, Suryaraja R, Ashish V. Tendulkar and Mahalingam.S. 2012. Sub-cellular distribution of Human Putative Nucleolar GTPase, GNL1 is regulated by a Novel Arginine-lysine-rich and GTP-binding domains in a Cell Cycle Dependent Manner. *Journal of Molecular Biology* 416: 346-366.
47. Pankaj Gupta, P. K. Singhal, P. Rajendra kumar, Y. Padwad, A. V. Tendulkar, V.S. Kalyanaraman, R. E. Schmidt, A. Srinivasan, and S. Mahalingam. 2011. Mechanism of host cell MAPK/ERK-2 Incorporation into Lentivirus Particles: Characterization of the Interaction between MAPK/ERK-2 and Proline-rich Domain Containing Capsid Region of Structural Protein Gag. *Journal of Molecular Biology* 410(4):681-97.

48. Chennupati V, Datta D, Malireddi RS, Boddapati N, Kayasani M, Sankaranarayanan R, Mishra M, Seth P, Mani C, and Mahalingam S. 2011. Signals and Pathways Regulating Nucleolar Retention of Novel Putative Nucleolar GTPase, NGP-1(GNL-2). *Biochemistry* 50(21):4521-36.
49. Mahata M, Zhang K, Gayen JR, Nandi S, Brar BK, Ghosh S, Mahapatra NR, Taupenot L, O'Connor DT, Mahata SK. 2011. Catecholamine biosynthesis and secretion: physiological and pharmacological effects of secretin. *Cell Tissue Res* 345:87-102.
50. Ranganathan R, Madanmohan S, Kesavan A, Baskar G, Krishnamoorthy YR, Santosham R, Ponraju D, Rayala SK, and Venkatraman G. Nanomedicine : towards development of patient- friendly drug delivery systems for oncological applications. *Int J. Nanomedicine*, 2012, 7,1043-60.
51. Rayala SK, Reddy SDN, Ohshiro K, Pakala SB, Kobori N, Dash P, Yun S, Qin J, O'Malley B and Kumar R. Multiple coregulatory control of tyrosine hydroxylase gene transcription. *Proceedings of National Academy of Sciences (PNAS)*, USA, 2011, 108, 4200-5.
52. S. Karthik and S. Senapati, "Dynamic Flaps in HIV-1 Protease Adopt Unique Ordering at Different Stages in the Catalytic Cycle", *Proteins* 79, 1830, (2011).
53. Smita Srivastava and Ashok Srivastava (2012) Strategies to Overcome Oxygen Transfer Limitations During Hairy Root Cultivation of *Azadiracta indica* for Enhanced Azadirachtin Production. *Applied Biochemistry and Biotechnology* (DOI: 10.1007/s12010-011-9531-5)
54. Rajashekar Reddy, Smita Srivastava, A. K. Srivastava (2012) Development of a mathematical model for growth and oxygen transfer in in vitro plant hairy root cultivations. *Applied Biochemistry and Biotechnology* (DOI: 10.1007/s12010-011-9515-5)
55. Srivastava Smita (2012) In vitro production of therapeutic cyclotides via plant cell bioprocessing. Editorial in *Res. J. Biotech.* 6(4) 3-5.
56. S. Srivastava and A. K. Srivastava (2012) Statistical medium optimization for enhanced azadirachtin production in hairy root culture of *Azadirachta indica*. *In vitro Cellular and Developmental Biology-Plant* (doi:10.1007/s11627-011-9395-y)
57. S. Srivastava and A. K. Srivastava (2012) In vitro azadirachtin production by hairy root cultivation of *Azadirachta indica* in nutrient mist bioreactor. *Applied Biochemistry and Biotechnology* (doi: 10.1007/s12010-011-9430-9)
58. Anjana, D., K. Anitha Nair, N. Somashekara, M. Venkata, R. Sripathy, Rajesh Yelucheri, H. Parmar, R. Upadhyay, S. Rama Verma and C.N. Ramchand (2012) Development of Curcumin Based Ophthalmic Formulation *American Journal of Infectious Diseases* 8 (1): 41-49 Impact Factor
59. Venkata, M., R. Sripathy, D. Anjana, N. Somashekara, A. Krishnaraju, S. Krishanu, M. Murali, S. Rama Verma and C.N. Ramchand (2012) In Silico, In Vitro and In Vivo Assessment of Safety and Anti-inflammatory Activity of Curcumin *American Journal of Infectious Diseases* 8 (1): 26-33
60. Moutushy Mitra, Mallikarjuna Kandalam, Anju Harilal, Rama Shanker Verma, Uma Maheswari, S. Swaminathan, Subramanian Krishnakumar (2012) EpCAM is a putative stem marker in retinoblastoma and an effective target for T-cell-mediated immunotherapy *Molecular Vision* Volume: 17.
61. Chandana Tekkate, Prasanna Vidyasekar, Nand Kishore Kapadia and Rama S Verma (2012) "Enhancement of adipogenic and osteogenic differentiation of human bone marrow derived mesenchymal stem cells with umbilical cord blood serum supplementation *Cell and Tissue Research* 347(2) 383-395.
62. Sithanbaram Devilkshmi, Palanivelu Shanthi, subramanian Krishnakumar Sahoo Sanjeeb and Verma Rama S (2011) "Monoclonal Antibody for Specific Targeting of Ep-CAM in Various Carcinomas" *Hybridoma* Volume 30, Number 6, 511-518
63. Sreejit P and Verma R. S. (2011) Scanning Electron Microscopy Preparation Protocol For Differentiated Stem Cells *Analytical Biochemistry* 15; 416 (2): 186-90.
64. Swati Choudhary, Mrudula Mathew and Rama S. Verma (2011) Therapeutic potential of anticancer immunotoxin, *Drug Discovery Today* (2011), 16 (11/12), 495-503.
65. Mitra Moutushy, Kandalam Mallikarjuna, Sundaram, C, Verma Rama, Maheswari Uma, Swaminathan S, Subramanian Krishnakumar (2011)"Reversal of stathmin mediated microtubule destabilization sensitizes retinoblastoma cells to low dose of anti microtubule agents: A novel synergistic therapeutic intervention *Invest. Ophthalmol. Vis. Jul* 23;52(8):5441-8.

66. Satish A, Muthuvijayan V. Functionalization of polyethylene terephthalate by attaching bioactive molecules to improve haemocompatibility. Proceedings of XXII Annual Meeting of the Society for Biomaterials and Artificial Organs (India). Accepted
67. Sanjeeva K. Kalva, Maithreye Rengaswamy, V.S. Chakravarthy, Neelima Gupte, On the neural substrates for exploratory dynamics in basal ganglia: A model, Neural Networks, February, 2012 (In press).
68. R.Krishnan, S. Ratnadurai, D. Subramanian, V.S. Chakravarthy, M. Rengaswamy, Modeling the role of Basal Ganglia in Saccade Generation: Is the Indirect Pathway the Explorer?, Neural Networks, Volume: 24, Issue: 8, Pages: 801-813, 2011.
69. Vishwanathan Mohan, Pietro Morasso, Jacopo Zenzeri, Giorgio Metta, V. Chakravarthy, Giulio Sandini, Teaching a humanoid Robot how to draw 'Shapes,' Autonomous Robots, pp. 1-33. Volume: 31, Issue: 1, Pages: 21-53, 21 April 2011.
70. S. Mohamed Yacin, M. Manivannan and V. Srinivasa Chakravarthy, Reconstruction of Gastric Slow wave from Finger Photoplethysmographic Signal using Radial Basis Function Neural Network, Medical Biological Engineering and Computing, Volume 49, Number 11, 1241-1247, 2011.
71. Poornima, V., Madhupriya, M., Kootar, S., Sujatha, G., Kumar, A. and Bera, A.K. 2012. P₂X₇Receptor-Pannexin 1 Hemichannel Association: Effect of Extracellular Calcium on Membrane Permeabilization. J Mol Neurosci 46 (3) 585-594
72. Chandrasekhar, A. and Bera A.K. 2012. Hemichannels: Permeants and their effect on development, physiology and death. Cell Biochem Funct. 30 (2):89-100
73. Sahu, B. Jagan, M., Giriraj, S., Singh, P., Sonawane, P., Sasi, B., Allu, P. Maji, S., Bera, A.K., Senapati, S. and Mahapatra, N.R. (2012) Molecular mechanism of interactions of the physiological anti-hypertensive peptide catestatin with the neuronal nicotinic acetylcholine receptor. J Cell Sci. (in press)
74. Pula Mahajabeen, Anju Chadha, One-pot synthesis of enantiomerically pure 1, 2-diols: Asymmetric reduction of aromatic α -oxoaldehydes catalyzed by *Candida parapsilosis* ATCC 7330, Tetrahedron Asymmetry, 22, 2156-60, 2011
75. Preetha, K. Rani, M.S.S. Veeramani, R.E. Fernandez, H. Vemulachedu, M. Sukan, E. Bhattacharya, A. Chadha, "Potentiometric estimation of blood analytes – triglycerides and urea: comparison with clinical data and estimation of urea in milk using an electrolyte-insulator-semiconductor-capacitor (EISCAP)," Sensors and Actuators B: Chemical (2011), doi:10.1016/j.snb.2011.10.008
76. Tarjan Kaliaperumal, Sathyanarayana N. Gummadi and Anju Chadha. *Candida parapsilosis* ATCC 7330 can also deracemise 1-arylethanol. Biocatalysis and Biotransformation, 2011, 29, 262-270.
77. Tarjan Kaliaperumal, Sathyanarayana N. Gummadi and Anju Chadha. Synthesis of both enantiomers of ethyl-4-chloro-3-hydroxybutanoate from a prochiral ketone using *Candida parapsilosis* ATCC 7330. Tetrahedron: Asymmetry, 2011, DOI:10.1016/j.tetasy.2011.08.009
78. Usharani Subuddhi, Prasanna K. Vuram, Ashok K. Mishra and Anju Chadha Photophysical investigation of microenvironment in glycerol based dansylated polyether dendrons; Journal of Photochemistry and Photobiology A: Chemistry January 2011, Volume 217, Issues 2-3, 25, Pages 411-416
79. Reddy SR, Stella Selvaraj, and Anju Chadha. A simplified Procedure for TEMPO catalyzed oxidation: Selective Oxidation of Alcohols, α -Hydroxy Esters and Amides using TEMPO and Calcium. Synthetic Communications (Accepted)
80. Gobbaka Ravi Kumar, R. Ravi, and Anju Chadha. Kinetic studies of base catalyzed transesterification reactions of non-edible oils to prepare biodiesel: The effect of co-solvent and temperature. Energy & Fuels, 2011, 25, 2826–2832
81. Renny Edwin Fernandez, Enakshi Bhattacharya and Anju Chadha, Dynamic response of polysilicon micro cantilevers to enzymatic hydrolysis of urea, International Journal of Advances in Engineering Sciences and Applied Mathematics: 2011, Volume 2, Page 17
82. T. Saravanan and Anju Chadha Chemoselective Reduction and Transesterification of α -Keto Propargylic Esters Mediated by NaBH₄ and CeCl₃.7H₂O; Syn. Commun., (2011), 41(16), 2350-2358.

In Proceedings of International conference:

1. V. Geetha, A. Venkatachalam, T. S. Suryanarayanan, M. Doble. "Isolation and Characterization of New Antioxidant and Antibacterial Compounds from Algicolous Marine Fungus *Curvularia tuberculata*" Oral presentation at International Conference on Bioscience, Biochemistry and Bioinformatics, IPCBEE, Volume: 5, 2011, IACSIT Press, Singapore.

2. Mukesh Doble , K Lakshmi , R Venkatesan, "Formation of primary biofilm on polymers and artificial substrates exposed to Coastal Sea Water" (Paper ID "F0950") oral presentation at the Asian congress of biotechnology, ACB-2011, May 11-15, 2011, Shanghai, China
3. 2nd Indo-German Workshop on Advances in Reaction and Separation Processes"on February 20 – 22, 2012 in Bad Herrenalb, Germany
4. Srinivasa Chakravarthy, Do Basal Ganglia amplify willed action by stochastic resonance? A model., International Joint Conference on Neural Networks, San Jose, USA, July 30-August 5, 2011.
5. Sanjeeva Kumar Kalva, Maith reye Rengaswamy, Neelima Gupte and Srinivasa Chakravarthy, Expanding the Go/NoGo depiction of the action of Basal Ganglia Pathways, International Joint Conference on Neural Networks, San Jose, USA, July 30-August 5, 2011.
6. Rohit, VS Chakravarthy, A convolutional neural network model of the neural responses inferotemporal cortex to complex visual objects, Twentieth Annual Computational Neuroscience Meeting (OCNS2011), Stockholm, July, 2011.
7. Annual meeting, AIChE, A. Chadha, R. Ravi, G. RaviKumar, "Kinetics of Biodiesel Production from Non-edible Vegetable Oils, Minneapolis, MN, USA, October 17-21 (2011)
8. Preetha R, Sneha S, Soni SK, Chadha A (2011) Candida parapsilosis ATCC 7330, a potential biocatalyst for primary and secondary alcohol oxidation. "Conference in Chirality" organized by the Department of Chemistry, MS University Baroda, Baroda, December 02-03, 2011
9. Nidhi Aggarwal and Anju Chadha (Abstract accepted) "Cloning, overexpression and biochemical characterization a novel alcohol dehydrogenase from Candida parapsilosis ATCC 7330" International Conference on Enzyme Science and Technology, Kusadasi, Turkey, 31st October– 4th November 2011
10. P. Mahajabeen and Anju Chadha (Poster Presentation) entitled "Regio- and enantioselective reduction of diketones: Candida parapsilosis ATCC 7330 as a versatile biocatalyst" International Conference on Enzyme Science and Technology, Kusadasi, Turkey, 31st October– 4th November 2011
11. Thangavel Saravanan and Anju Chadha (Poster Presentation) in International conference BIOTRANS 2011 entitled "Stereochemical preference in Candida parapsilosis ATCC 7330 mediated Deracemization: (E) vs. (Z)- Alkyl-2-hydroxy-4-arylbut-3-enoate", on Oct 2-6, 2011, Giardini Naxos (ME), Italy.
12. Sowmyalakshmi Venkataraman, Anju Chadha (Oral presentation) Candida parapsilosis ATCC 7330 and aliphatic substrates: Asymmetric reduction of alkyl 3-oxobutanoates, International Conference on Enzyme Science and Technology, Kusadasi, Turkey, 31st October– 4th November 2011
13. Sowmyalakshmi Venkataraman, Anju Chadha (Poster presentation) Candida parapsilosis ATCC 7330 mediated deracemisation of alkyl-3-hydroxybutanoates, National Conference on Chirality, Vadodara, 2nd & 3rd December 2011
14. Sivakumari. T and Anju Chadha (Poster presentation) Candida parapsilosis ATCC 7330 mediated oxidation of alcohols, Medicinal Chemistry Conference (MedChem 2011), Chennai, 28-29
15. Savita Udainiya, Suhail Ahmed Kabeer Rasheed, Christoph Meyer, Jörg Hendrick Leupold, Paolo Ceppi, Steven Dooley, Devarajan Karunakaran, Mauro Papotti, Heike Allgayer (2011) Smad 7 induces invasion, migration and in vivo metastasis in Non Small Cell Lung Cancer. Proc. Amer. Assoc. Can. Res.
16. A research paper entitled, "HPV16 E2 Potentiates NF- κ B Activation Induced by TNF- α Through STAT3" was presented by D. Karunakaran at the American Association for Cancer Research meeting on "New Horizons in Cancer Research: Biology to Prevention to Therapy" held during December 13-16, 2011, at the Leela Kempinski Gurgaon Hotel in Gurgaon, Delhi.

Major infrastructure development made in the Department

FIST in the Subject Area of Life Sciences / Level II, DST - Setting up of Experimental Facility for Studies on Protein Structure-Function Relationship 2011-2012.

4.4 DEPARTMENT OF CHEMICAL ENGINEERING

4.4.1 Introduction:

The Department of Chemical Engineering was established in 1959. The department has 28 faculty members who carry out research in state of the art areas. The focus of the research is geared towards: energy, materials and environment. Faculty work towards analyzing these systems by understanding their behavior at the molecular level as well as using a systems approach.

4.4.2 Academic Programmes:

New Courses introduced:

Sl. No.	Course No.	Title
1.	CH 5011	Colloids and Surfaces

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	69	75	61	52	3	260
Dual Degree	18	20	14	14	19	85
M.Tech.	34	33	2	0	0	69
M.S.	23	9	7	6	1	46
Ph.D.	23	19	11	9	4	66
Total	167	156	95	81	27	526

Endowment prize instituted:

- Prof. R. Nagarajan has instituted prizes for the best girl students in all disciplines of IIT Madras.
- Prof. M. Ramanujam endowment prize was instituted for (i) best performance in course on Mechanical Operations and (ii) best M.Tech. / D.D. thesis in the area of Particle Technology.
- Smt. D.L. Saraswathi Memorial Prize was instituted for the best M.Tech. / D.D. thesis in the area of Environmental Engineering / Reaction Engineering.
- Prof. R. Nagarajan has instituted an award for the student with best academic record in 1st and 2nd semesters of M.Tech program in Physics Department – Solid State Technology.

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
Abroad					
1	M. Kranthi Kumar	CH09D001	Piero Lunghi conference and exhibition	13 – 15.12.2011 Rome, Italy	IIT Madras
2	M. Nabil	CH09D004	17 th Nordic Process Control Workshop	25 – 27.1.2012 DTU, Lyngby, Denmark	The Research council of Norway
3	Dipin S. Pillai	CH10S010	2 nd Indo German Workshop on Advanced Reaction and Separation Processes	19 – 22.2.2012 Bad Herrenalb, Germany	IIT Madras
India					
1	M. Sudhakar	CH08D013	Advances in control and optimization of dynamical systems (ACODS)	16 – 18.2.2012 IISc Bangalore	IIT Madras
2	M. Kranthi Kumar	CH09D001	National Seminar on Advanced Materials: Processing and Applications (NSAMPA -2012)	29 –30.3.2012 IISc Bangalore	IIT Madras

3	G. Keerthiga	CH09D007	Chemference 2011	23 – 24.9.2011 IISc Bangalore	Nil
			15 th National Workshop on Role of materials in catalysis	11 – 13.12.2011	Nil
			ACEPS – 2012	5 – 8.1.2012	Nil
			CIGE – 2012	9 – 11.2.2012 Annamalai University	Nil
3	K.S. Rajmohan	CH10D003	National Conference on Chemical Engineering Processes In Environmental Applications (CEPEA)	29 – 30.3.2012 AC Tech, Anna University	IIT Madras
			Chemference 2011	23 – 24.9.2011 IISc Bangalore	Nil
4	K. Jagadeeshwar	CH11D004	SERC school and sixth national symposium on "Rheology of complex fluids"	3 – 7.1.2012 IIT Guwahati	IIT Madras
			HEALTH CARE INDIA 2012	20 – 23.2.2012 Delhi	IIT Madras
5	R. Piramuthu Raja Ashok	CH11D007	SERC school and sixth national symposium on "Rheology of complex fluids"	3 – 7.1.2012 IIT Guwahati	IIT Madras
6	Vaishakh Nair	CH11D012	RENERGY 2012 International Conference and Exhibition	12 – 13.3.2012 Chennai	IIT Madras
7	Dugyala Venkateshwar Rao	CH11D015	SERC school and sixth national symposium on "Rheology of complex fluids"	3 – 7.1.2012 IIT Guwahati	IIT Madras
8	Shekhar Kulkarni	CH11S019	RENERGY 2012 International Conference and Exhibition	12 --13.3.2012	IIT Madras
9	Lalit Musmade	CH11S021	RENERGY 2012 International Conference and Exhibition	12 – 13.3.2012 Chennai	IIT Madras

Names of students/scholars who won outside prizes and awards:

Sl.No	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1	B. Ambedkar	CH07D003	Springer Thesis Prize	Springer Publication
2	M. Kranthi Kumar	CH09D001	2 nd Best Paper Award (Oral)	IISc Bangalore
3	G. Keerthiga	CH09D007	2 nd Prize for Best Poster Presentation award	IISc Bangalore
4	K.S. Rajmohan	CH10D003	Best Paper (oral presentation) Prize	Anna University

4.4.3 Faculty and their activities:

Faculty:

Name and Qualifications	Major area of specialization
Professor:	
Dr. S. Pushpavanam	[Head] Modeling and simulation, non linear dynamics, flow visualization
Dr. Abhijit Deshpande	Rheology of complex fluids, polymers and polymeric composites Processing flow visualization

Dr. A. R. Balakrishnan	Transport Processes, Energy Conservation
Dr. M. Chidambaram	Process Control
Dr. A. Kannan	Mathematical Modeling, Simulation and Optimization of Chemical processes
Dr. K. Krishnaiah	Chemical reactor analysis and design fluidization
Dr. R. Nagarajan	Particle Science & Technology , Ultrasonic Processing Statistical Quality Control
Dr. T. Panda	Bioprocess Optimization, bioprocess technology and enzyme design
Dr. Raghunathan Rengasamy	Process Systems Engineering; Fuel Cells; Computational Discrete Microfluidics
Dr. V. S. Ramachandra Rao	Advanced Control strategies, Neuro Fuzzy Control
Dr. R. Ravi	Applied statistical mechanics, foundations of thermodynamics and mechanics, process dynamics and control
Dr. P.S.T. Sai	Chemical reactor analysis and design
Dr. Shankar Narasimhan	Process design, data mining, fault diagnosis
Dr. Sreenivas Jayanti	Fuel cells, Combustion, Energy systems
Dr. T.Swaminathan	Environmental Management, Biotechnology, Membrane technology, Environmental risk assessment
Dr. Tanmay Basak	Microware application, mathematical modeling and simulation
Associate Professor:	
Dr. Arun K. Tangirala	System identification and parameter estimation
Dr. Preeti Aghalayam	Chemical Reaction Engineering,
Dr. S. Ramanathan	Electrochemistry, Semiconductor Processing, Chemical Reaction Engineering
Dr. Susy Varughese	Physics & mechanics of polymeric materials, polymeric nano composites
Dr. Upendra Natarajan	Polymer Science & Engineering, Molecular simulation, statistical thermodynamics of complex fluids, nanostructured hybrid composite materials.
Assistant Professor:	
Dr. M.G. Basavaraja	Directed assembly of colloids, Microstructure and rheology of colloids, surfactants, polymer and their mixtures, Interfacial rheology, Ionic liquids, Particulate gels
Dr. Ethayaraja Mani	Molecular simulations, self-assembly, mathematical modeling
Dr. Niket S. Kaisare	Microreactor Technology, Multiscale modeling , Process control, Fuel Processing, Fuel cells.
Dr. Raghuram Chetty	Electrocatalysis, Fuel cells, Wastewater treatment
Dr. R. Ramnarayanan	Integrated Chemical Systems, Photoelectrochemistry, Solidstate synthesis.
Dr. R. Ravikrishna	Contaminated Sediment remediation, contaminant fate and Transport, Air Pollution process and control.
Dr. T. Renganathan	Multiphase reactors, Computational Fluid Dynamics
Dr. Sridharakumar Narasimhan	Process System Engineering, optimization, Process Control, Fault diagnosis.
Scientific Officers / Engineers:	
Dr. K. Krishnamurthy	

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Workshop:			
1	Dr. Arun K. Tangirala	NPTL Workshop on System Identification - Part I	10 – 13.8.2011
		NPTL Workshop on System Identification - Part II	4 – 6.11.2011
2	Dr. M. Chidambaram	Recent Trends in Process Control	3.3.2012
3	Dr. S. Pushpavanam	Sustainability in Water and Energy	27.12.2011
		2 nd Indo German Workshop at Germany	20 – 22.2.2012
4	Dr. Tanmay Basak	Writing Skills for Journal Publications	13.3.2012

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Symposia:				
1	Dr. Ethayaraja Mani	COMOFLU 2012	IIT Guwahati	6 – 9.1.2012
Conference:				
1	Dr. S. Pushpavanam	Mackie 2012	University of Heidelberg, Germany	18 – 20.5.2011
2	Dr. T. Panda	National Conference on Green Chemistry	Presidency College, Chennai	10.3.2012

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1	Dr. A. Kannan	Statistical Analysis and Design of Experiments	Vel High Tech Engg. College, Avadi	18.2.2012
		Reactive Distillation	GMRIT, Srikakulam, AP	4.4.2012
		Concentration of Industrial Effluents Using Evaporators	GMRIT, Srikakulam, AP	4.4.2012
2	Dr. R. Nagarajan	Nanoparticle dispersion behavior in colloidal suspensions and composites	VIT University	18.2.2011
		Ultraclean manufacturing facilities: Design & Operation Considerations	IIT Madras (NCRAC 2011)	7 – 9.7.2011
		Basics and design of clean rooms	ASHRAE Chennai Chapter	14.10.2011
		Chemical Engineering in the 21 st Century	Arunai Engg. College, Thiruvannamalai	18.2.2012
		To judge student entries in “Solutions for Rural Tech Problems”	Guindy Engg. College	2.3.2012
3	Dr. T. Panda	BIOPROCESS OPTIMIZATION: One of the Faces of MULTIDISCIPLINARY BIOCHEMICAL ENGINEERING. Symposium on BIOCHEMICAL ENGINEERING: Innovations in Biotech Products	GITAM University, Waltair	3.2.2012
4	Dr. S. Pushpavanam	Role of Modeling in Chemical Engineering	ICAMB – 2012 Conference in VIT Vellore	12.1.2012
		Advances in Separation Processes	Gayathri Vidyaparishad, College of Engg.	14.3.2012

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1	Dr. A. Kannan	Minneapolis, USA	16 – 21.10.2011	AiChE Annual Meeting	CPDA
2	Dr. K. Krishnaiah	Shanghai China	30.10.2011 – 2.11.2011	International Conference on Chemical Engg.	CPDA

3	Dr. R. Nagarajan	Chicao, IL, USA	2.5.2011	Annual Technical Meeting of the Institute of Environmental Sciences & Technology,	
		New Haven, CT, USA	12 – 13.5.2011	Spring Meeting – Graduate School Alumni Association of Yale University	
		Yale	16 – 17.5.2011	Yale Graduate School Alumni Association Executive Committee Meeting	
		New York	28 – 29.6.2011	PAN-IVY/IIT/C9 (China) / BEL (Brazil) Engineering Summit	
		Columbia University, New York, NY	30 – 31.7.2011	China- Ivy League – Brazil – IITs (CIBI) Academic Alliance Workshop	
		New York, NY	2 – 4.10.2011	PanIIT Alumni Meeting	
		France	14-18.11.2011	International Conference	
4	Dr. S. Pushpavanam	Germany	18 – 20.5.2011	Plenary talk Mackie 2012	
		Belgium	13.6.2011 – 15.7.2011	Visiting Scientist at Department of Mathematical Analysis of Ghent University	
5	Dr. Tanmay Basak	Minneapolis, USA	16 – 21.10.2011	AiChE Annual Meeting	CPDA
6	Dr. R. Ramnarayanan	USA	23.4.2011 – 4.5.2011	Conference and Research	EUFP7 and CPDA-IITM
		Singapore	26.6.2011– 2.7.2011	Conference and Research	EUFP7
		USA	6.11.2011 – 7.5.2012	Sabbatical leave	EUFP7
7	Dr. R. Ravi	Shanghai China	30.10.2011 – 2.11.2011	International Conference on Chemical Engg.	CPDA
8	Dr. T. Renganathan	Shanghai China	30.10.2011 – 2.11.2011	International Conference on Chemical Engg.	CPDA
9	Dr. Shankar Narasimhan	Greece	29.5.2011 – 1.6.2011	European Symposium on Computer Aided Process Engineering 2011	
10	Dr. Sridharakumar Narasimhan	TU Delft, Netherlands	23.5.2011	Seminar on plant friendly input design at Dept of Systems and Control	
		RWTH, Aachen, Germany	26.5.2011	Seminar on plant friendly input design at Dept of Process Systems Engineering	

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
Awards:					
1	Dr. Tanmay Basak	Herdillia Award	Indian Institute of Chemical Engineers	For excellence in basic research in Chemical Engineering	September 2011

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1	Dr. T. Panda	Mixing and Agitation Design: "Handbook of Food Process Design" (Book chapter 30)	Blackwell Publishing Ltd.	Siddhartha Singha and Tapobrata Panda

2	Dr. S. Pushpavanam	Introduction to Chemical Engineering	PHI Learning Private Ltd.	S. Pushpavanam
3	Dr. Tanmay Basak	Microwave Heating of Oil-Water Emulsions: Theoretical and Simulation Studies Using Galerkin FEM	LAP Lambert Academic Publishing, 2011	Sujoy Kumar Samanta, Tanmay Basak
Monographs:				
1	Dr. R. Nagarajan	Megasonic Cleaning	Elsevier	S. Awad

Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name
1.	Dr. A.R. Balakrishnan	Editor	International Journal of Heat and Mass Transfer
		Editor	International Communications in Heat and Mass Transfer
2.	Dr. Shankar Narasimhan	Editorial Board Member	ICE, Advances in Chemical Engineering
		Editor	International Journal on "Advances in Engineering Sciences and Applied Mathematics (IIT M Journal)
3.	Dr. Tanmay Basak	Associate Editor	International Journal of Heat and Mass Transfer & International Communications in Heat and Mass Transfer

4.4.4 Design and Development Activities:

New facilities added or major equipment procured:

Sl.No	Name of Equipment	Value (Rs. in lakhs)
1	MINITAB Statistical Analysis Software	1,18,720
2	High Performance Liquid Chromatography	2,90,0000 Jap. Yen (Rs. 16 Lakhs)
3	AAS	25 lakhs

4.4.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	Transient Modeling, Design And Control Of An Integrated Fuel Processing –fuel Cell System	01.08.2007 to 31.05.2011	IIT Madras	05.00	Dr. Niket S. Kaisare
2	Electrogenerated Chemiluminescence In Integrated Chemical Systems Using Modified Electrodes	06.06.2008 to 05.06.2011	CSIR	07.92	Dr. R. Ramnarayanan
3	Polymer-based Evanescent Wave Chemical Sensors.....	21.10.2008 to 20.10.2011	DST	33.53	Dr. R. Ramnarayanan Dr. Balaji Srinivasan (EE)
4	Renovation Of The Undergraduate Laboratory	08.08.2008 to 07.08.2011	Chevron	99.59	Head, Chem. Engg.
5	Convex Optimization	08.09.2008 to 07.09.2011	IIT Madras	05.00	Dr. Sridharakumar Narasimhan
6	Titanium Compounds Of Interest Electrochemical Titanium Production	09.02.2009 to 80.02.2012	DRDO	14.97	Dr. R. Ramnarayanan
7	Integrating Nanomaterials in Formulations	07/2009-06/2012	European Union Framework Program 7	24.40	Dr. R. Ramnarayanan.

8	Hierarchical Modelling And Transient Analysis Of Thermally Integrated Catalytic Microreactors	29.9.2008 to 28.09.2011	DST	17.00	Dr. Niket S. Kaisare Dr. Abhijit P. Deshpande
9	Ruthenium Based Electrocatalysts Supported On Carbon Nanotubes For Oxygen Reductin Reaction	17.02.2009 to 16.02.2012	IIT Madras	05.00	Dr. Raghuram Chetty
10	Development Of Non-platinum Cathode Catalysts For Direct Methanol Fuel Cells.	30.04.2009 to 29.04.2012	DST	20.36	Dr. Raghuram Chetty
11	Carbon Aerogels And Xerogels As Alternative Catalyst Support For Polymer Electrolyte....	06.07.2011 to 05.07.2013	NRSPR	08.80	Dr. Raghuram Chetty
12	Synthesis Characterization And Testing Of Integrated Photocatalytic Adsorbents (ipcas) For Water...	21.11.2011 to 20.11.2013	DST	06.46	Dr. Raghuram Chetty
13	Strengthening Of Research/post Graduate Teaching Facilities.....	30.04.2009 to 29.04.2014	DST FIST	275.0	Head, Chem. Engg.
14	Characterizing Metal Loss Defects From De-noised Radial Influx Leakage Signals	07.07.2009 to 06.07.2011	Board of Research in Nuclear Sciences	19.50	Dr. Arun K. Tangirala
15	Megasonic Cleaning	01.08.2009 to 31.07.2011	Crest Ultrasonics Corporation, USA	06.63	Dr. R. Nagarajan
16	Atomistic molecular dynamics simulation of the interaction between anionic polyelectrolytes and surfactants	09.10.2009 to 08.10.2012	DST	12.24	Dr. Upendra Natarajan
17	Rheology Of Ionic Polymers Near Gelation.	12.11.2009 to 11.11.2012	DST	37.44	Dr. Abhijit P. Deshpande
18	Center for Social Innovation & Entrepreneurship (CSIE)	1.4.2010 to 31.3.2011	The Lemelson Foundation & Batch of '84 alumni	27.44	Dr. R. Nagarajan
19	Inkjet Printing Of Conducting Polymers For Optoelectronic Devices - Processability.....	12.04.2010 to 11.04.2012	DST	19.20	Dr. Susy Varughese
20	Office of Alumni Affairs (OAA)	01.05.2010 to 31.03.2015	IIT Madras	61.69	Dr. R. Nagarajan
21	Understanding Mixing And Reaction Processes In Micro-reactors	04.03.2011 to 03.03.2013	CSIR	11.34	Dr. S. Pushpavanam
22	Eco Friendly Disposal Methods For Sanitary Napkins	16.03.2011 to 15.09.2011	RUTAG	01.00	Dr. Susy Varughese
23	Creation Of Learning Objects In Polymer Science And Engineering	25.05.2011 to 31.03.2012	MHRD	03.00	Dr. Abhijit P. Deshpande
24	The Changing risks posed by petroleum hydrocarbons in groundwater environments	Sept. 2011 to Aug.2014	Indo – Australian DST (India) – DIISR (Autralia)	40.00	Dr. Ravi Krishna Dr. Indumathi Nambi Dr. Suresh Kumar

25	Studies On Pyrolysis Of Prosopis Juliflora	20.10.2011 to 19.10.2012	RUTAG	01.00	Dr. T. Renganathan
26	Directed Self-assembly of Anisotropic Colloids at Fluid Interfaces	2011–2014	DST	55.00	Dr. M.G. Basavaraja Dr. Abhijit P. Deshpande
27	Shear Thickening in Suspensions of Model Colloidal Ellipsoids	2011–2014	IIT Madras	10.00	Dr. M.G. Basavaraja
28	Fabrication of macroporous ceramic materials using bijel templates	2011–2013	Nissan Research	08.36	Dr. M.G. Basavaraja Dr. Ravishankar Kottata
29	Characterization and modification of ceria particles for STI CMP	2011–2014	DST-NRF (Korea)	31.00	Dr. S. Ramanathan, Dr. Tanmay Basak, Dr. Jin Goo Park (Korean PI)
30	Controlled Drop Spreading And Squeeze Flow Analysis For Improved Permeability Description In...	06.02.2012 to 05.02.2015	DRDO	15.96	Dr. Abhijit P. Deshpande
31	Development Of Value Added Recycled Product Based On Polymeric Composites Used In Aerospace....	06.02.2012 to 05.02.2015	DARO	34.76	Dr. Susy Varughese
32	Feasibility Study of Natural Evaporator as Alternative to mechanical Evaporator		Directorate of Environment	09.60	Dr. Ligy Philip Dr. B.S. Murty Dr. A. Kannan Dr. Srinivasa Reddy
33	Modelling accelerated ageing and degradation in solid oxide fuel cells	01.03.2012	Indo-South Africa, DST project	63.00	Dr. T. Panda Dr. Sarit K. Das Dr. Ranjit Bauri Dr. Sreenivas Jayanti

Industrial Consultancy projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1	Dr. A. Kannan	Manufacture of Hydrogen Peroxide	Asian Peroxides Ltd.	00.19
		Drying of Phosphate Slurry	Acme Metal Private Ltd.	00.15
2	Dr. S. Pushpavanam	Modeling Coal Gasification	BPCL	50.81
3	Dr. S. Ramanathan	Dynamic Light Scattering (dls) Testing Facility	Orchit Pharma	00.50
		Aas And Sem Analysis		00.85
		Measurement Of Anodic Protection Current Of Zinc Samples In Sea Water	SARG	00.67
4	Dr. T. Renganathan	Spray Drying Of Potassium Fluoride	TANF	00.55
		Dynamic Modeling Of A Fluidised Bed Gasifier	BHEL	17.02
5	Dr. P.S.T. Sai	Modeling Of Scrubber System For Alkali Removal from Flue Gas In Igcc	BHEL	02.76
		Study Of Mercury Emission And Control Options For Coal Fired Power Plants	BHEL	02.50
6	Dr. Susy Varughese	Preparation And Characterization Carbon Dioxide Separation	Bloom Energy Ltd., USA	08.70

RBIC projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1	Dr. A. Kannan Dr. S. Pushpavanam	Tea Extraction Studies From a Vending Machine	Tata Tea Limited	18.80
2	Dr. R. Nagarajan	Modelling of Counter-Current Spray Drier	Hindustan Unilever Limited	06.60
		Anti-Fouling Strategies for Coal-Fired Power Plants	BHEL Trichy	20.76
		Design Of Suspension Of Zinc Oxide For Fortification Of Fertilizers	CORN	
3	Dr. Preeti Aghalayam Dr. Niket S. Kaisare	Predictive models for PGM-based Catalytic Convertors	General Motors	13.22
4	Dr. T. Renganathan Dr. S. Pushpavanam	Development of Simulators and Optimizer for Plasma Enhanced Integrated Gasification Combined Cycle Plant	Korea Institute of Science and Technology Korea	39.30
5	Dr. T. Renganathan Dr. Arun K. Tangirala Dr. S. Pushpavanam	Dynamic Modelling Of Fluidized Bed Gasifier	BHEL, Hyderabad	15.60
6	Dr. Sreenivas Jayanti	Study of Wet Lime-based Fuel Gas Desulphurization: Assessment of Existing Models for Performance and Design Prediction	BHEL	02.06
		Flow Optimization Of Power Plant Ducting	BHEL	18.75
7	Dr. Sreenivas Jayanti Dr. R. Ravi Krishna	Flue Gas desulphurization using Sea water	BHEL	25.00
8	Dr. B. Viswanathan Dr. R. Ramnarayanan	Solar radiation induced photo-electrochemical method for hydrogen generation	Tata Chemicals	05.79

Research Publications of the faculty members & research scholars:

- a) Total No. of papers published in Refereed National Journals - 01
- b) Total No. of papers published in Refereed International Journals - 83
- c) Total No. of papers presented in National Conferences - 11
- d) Total No. of papers presented in International conferences - 12

a) In Refereed National Journals:

Sl.No.	Name of the faculty	Title of the paper	Name of the Journal
1.	R. Ravi Krishna	A Review of Current Atmospheric Aerosol Research in India	Current Science, 102 (3), 440-451, 2012.

b) In Refereed International Journals:

Sl.No.	Name of the faculty	Title of the paper	Name of the Journal
1.	Dr. Abhit P. Deshpande	Cross linked poly (vinyl alcohol)/suffocated poly(ether ether ketone) blend membranes for fuel cell applications-Surface energy characteristics and proton conductivity	JOURNAL OF POWER SOURCES Vol. 196; Issue: 3 Special Issue: SI pp 946-955 Published: FEB 1 2011
2.	Dr. A.R. Balakrishnan	Effect of diameter on two-phase pressure drop in narrow tubes	EXPERIMENTAL THERMAL AND FLUID SCIENCE Vol. 35; Issue: 3; pp 531-541 Published: APR 2011
3.	Dr. M. Chidambaram	Closed-Loop Identification of Multivariable Systems by Optimization Method	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 51; Issue: 3; pp 1324-1336 Published: JAN 25 2012

4.	Dr. A. Kannan	Quantification of surface area and intrinsic mass transfer coefficient for ultrasound-assisted dissolution process of a sparingly soluble solid dispersed in aqueous solutions	ULTRASONICS SONOCHEMISTRY, Vol. 19; Issue: 3 pp: 509-521 Published: MAY 2012
5.		Intensification of the Dissolution of a Sparingly Soluble Solid from a Spinning Disk in the Presence of Power Ultrasound	INDUSTRIAL&ENGINEERING CHEMISTRY RESEARCH Vol. 50; Issue: 23 pp: 13083-13091 Published: DEC 7, 2011
6.		Effects of Particle Diameter and Position on Hydrodynamics around a Confined Sphere	INDUSTRIAL&ENGINEERING CHEMISTRY RESEARCH Vol. 50; Issue: 23; pp 13137-13160 Published: DEC 7, 2011
7.		Quantifying Enhancement in Heat Transfer Due to Natural Convection During Canned Food Thermal Sterilization in a Still Retort	FOOD AND BIOPROCESS TECHNOLOGY Vol. 4; Issue: 3 ; pp 429-450 Published: APR 2011
8.	Dr. K. Krishnaiah	Hydrodynamics and flow regimes in turbulent bed contactor with non-Newtonian liquids	CANADIAN JOURNAL OF CHEMICAL ENGINEERING Vol. 90; Issue: 1; pp 87-92 Published: FEB 2012
9.	Dr. R . Nagarajan	Investigation of High-Frequency, High-Intensity Ultrasonics for Size Reduction and Washing of Coal in Aqueous Medium	INDUSTRIAL& ENGINEERING CHEMISTRY RESEARCH Vol. 50 ; Issue: 23
10.		Effect of ultrasound on bubble breakup within the mixing chamber of an effervescent atomizer	CHEMICAL ENGINEERING AND PROCESSING Vol. 50; Issue: 3; pp 305-315 Published: MAR 2011
11.	Dr. T. Panda	Biosynthesis of Gold Nanoparticles	JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY Vol. 11; Issue: 12 pp10279-10294 Published: DEC 2011
12.	Dr. Tanmay Basak	Analysis of Entropy Generation Minimization during Natural Convection in Trapezoidal Enclosures of Various Angles with Linearly Heated Side Wall(s)	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 51; Issue: 10 pp: 4069-4089 Published: MAR 14 2012.
13.		Heatline Analysis for Natural Convection within Porous Rhombic Cavities with Isothermal/Nonisothermal Hot Bottom Wall	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 51; Issue: 4 pp 2113-2132 Published: FEB 1 2012
14.		Heat flow visualization for natural convection in rhombic enclosures due to isothermal and non-isothermal heating at the bottom wall	INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER Vol. 55; Issue: 4; pp 1325-1342 Published: JAN 31 2012
15.		Visualization of Heat Transport During Natural Convection in a Tilted Square Cavity: Effect of Isothermal and Nonisothermal Heating	NUMERICAL HEAT TRANSFER PART A-APPLICATIONS Vol. 61; Issue: 6 pp 417- Published: 2012
16.		Entropy generation vs energy flow due to natural convection in a trapezoidal cavity with isothermal and non-isothermal hot bottom wall	ENERGY Vol. 37; Issue: 1 pp 514-532 Published: JAN 2012
17.		Kinetic Mechanisms of Cholesterol Synthesis: A Review	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50; Issue: 23 pp 12847-12864 Published: DEC 7 2011
18.		Analysis of Entropy Generation due to Natural Convection in Rhombic Enclosures	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50; Issue: 23 ; pp 13169-13189 Published: DEC 7 2011

19.		A comprehensive theoretical analysis for the effect of microwave heating on the progress of a first order endothermic reaction	CHEMICAL ENGINEERING SCIENCE Vol. 66; Issue: 23 pp 5832-5851 Published: DEC 1 2011
20.		Role of ceramic composites and microwave pulsing on efficient microwave processing of pork meat samples	FOOD RESEARCH INTERNATIONAL Vol. 44 ; Issue: 9; pp 2679-2697 Published: NOV 2011
21.		The law of life: The bridge between Physics and Biology Comment on "The constructal law and the evolution of design in nature"	PHYSICS OF LIFE REVIEWS Vol. 8 ; Issue: 3 pp 249-252 Published: OCT 2011
22.		Heat line based thermal management for natural convection within right-angled porous triangular enclosures with various thermal conditions of walls	ENERGY Vol. 36; Issue: 8 pp 4879-4896 Published: AUG 2011
23.		Entropy generation due to natural convection in discretely heated porous square cavities	ENERGY Vol. 36; Issue: 8 pp 5065-5080 Published: AUG 2011
24.	Dr. Tanmay Basak	A comprehensive heatline based approach for natural convection flows in trapezoidal enclosures: Effect of various walls heating	INTERNATIONAL JOURNAL OF THERMAL SCIENCES Vol. 50; Issue: 8 pp 1385-1404 Published: AUG 2011
25.		A Complete Heatline Analysis on Visualization of Heat Flow and Thermal Mixing during Mixed Convection in a Square Cavity with Various Wall Heating	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50; Issue: 12 pp 7608-7630 Published: JUN 15 2011
26.		Role of entropy generation on thermal management during natural convection in porous square cavities with distributed heat sources	CHEMICAL ENGINEERING SCIENCE Vol. 66 Issue: 10; pp 2124-2140 Published: MAY 15 2011
27.		Analysis of entropy generation for distributed heating in processing of materials by thermal convection	INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER Vol. 54 Issue: 11-12; pp 2578-2594 Published: MAY 2011
28.		Finite element based heatline approach to study mixed convection in a porous square cavity with various wall thermal boundary conditions	INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER Vol. 54 Issue: 9-10 pp 1706-1727 Published: APR 2011
29.		Experimental and theoretical investigation on microwave melting of metals	JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Vol. 211; Issue: 3 pp 482-487 Published: MAR 1 2011
30.		Effects of Thermal Boundary Conditions on Entropy Generation During natural convection	NUMERICAL HEAT TRANSFER PART A- APPLICATIONS Vol. 59; Issue: 5; pp 372-402 Published: 2011
31.		Theoretical analysis on the role of annular metallic shapes for microwave processing of food dielectric cylinders with various irradiations	INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER Vol. 54; Issue: 1-3; pp 242-259 Published: JAN 15 2011
32.		Non-Darcy Buoyancy Flow in a Square Cavity filled with porous medium for various temperature difference aspect ratios	JOURNAL OF POROUS MEDIA Vol. 14; Issue: 7; pp 649-657 Published: 2011
33.	Dr. S. Ramanathan	Numerical investigations of solution resistance effects on nonlinear electrochemical impedance spectra	JOURNAL OF SOLID STATE ELECTROCHEMISTRY Vol. 16; Issue: 3 pp 1019-1032 Published: MAR 2012

34.		Microwave Material Processing-A Review	AICHE JOURNAL Vol. 58; Issue: 2 pp 330-363 Published: FEB 2012
35.		Chemical Mechanical Planarization of Ruthenium with Oxone as Oxidizer	ELECTROCHEMICAL AND SOLID STATE LETTERS Vol. 15 Issue: 3 pp H55-H58 Published: 2012
36.		Effect of potential drifts and ac amplitude on the electrochemical impedance spectra	ELECTROCHIMICA ACTA Vol. 56; Issue: 5; pp 2606-2615 Published: FEB 1 2011
37.	Dr. S. Ramanathan	Characterization of TMAH Based Cleaning Solution for Post Cu-CMP Application	Micro Electronic Engineering (accepted)
38.		Numerical investigations of solution resistance effects on nonlinear electrochemical impedance spectra	Electrochem. 16(3)(2012) 1019-1932
39.		Experimental and theoretical investigations on microwave assisted material processing – a review	AIChE, 58(2) (2012)330-363
40.		Chemical mechanical planarization of ruthenium with Oxone as oxidizer	Electrochem. Solid-State Lett. 15(3) (2012) H55-H58
41.	Dr. R. Ravi	The Gibbs-Duhem Equation, the Ideal Gas Mixture, and a Generalized Interpretation of Dalton's Law	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol.50 Issue: 23 pp 13076-13082 Published: DEC 7 2011
42.		Kinetic Studies of Base-Catalyzed Transesterification Reactions of Non-edible Oils To Prepare Biodiesel: The Effect of Co-solvent and Temperature	ENERGY & FUELS Vol. 25; Issue: 7 Special Issue: SI. pp 2826-2832 Published: JUL 2011
43.	Dr. R. Ravikrishna	Atmospheric pollution in a semi-urban, coastal region in India following festival seasons	ATMOSPHERIC ENVIRONMENT Vol. 47 pp 295-306 Published: FEB 2012.
44.		Synthesis, characterization and mechanical behaviour of an in situ consolidated nanocrystalline FeCrNi alloy	JOURNAL OF MATERIALS SCIENCE Vol. 47; Issue: 3 pp 1562-1566 Published: FEB 2012
45.	Dr. Raghunathan Rengasamy	Plant Friendly Input Design: Convex Relaxation and Quality	IEEE TRANSACTIONS ON AUTOMATIC CONTROL Vol. 56 Issue: 6; pp1467-1472 Published: JUN 2011
46.		Kalman-based strategies for Fault Detection and Identification (FDI): Extensions and critical evaluation for a buffer tank system	COMPUTERS & CHEMICAL ENGINEERING Volume: 35 Issue: 5 Pages: 806-816 Published: MAY 11 2011
47.	Dr. T. Renganathan	"Generalized Analysis of Gasifier Performance using Equilibrium Modeling"	Ind. Eng. Chem. Res., 51, 1601-1611 (2012).
48.	Dr. P.S.T. Sai	Influence of Feed Entry on the Segregation of a Binary Mixture of Solids in a Continuous Fast Fluidized Bed	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50; Issue: 23; pp 13076-13082 Published: DEC 7 2011
49.		Stable carbon isotopic compositions of total carbon, dicarboxylic acids and glyoxylic acid in the tropical Indian aerosols: Implications for sources and photochemical processing of organic aerosols	JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES Vol. 116 Article Number: D18307 Published: SEP 29 2011
50.		Macroscopic properties of liquid-solid circulating fluidized bed with viscous liquid medium	CHEMICAL ENGINEERING AND PROCESSING Vol. 50; Issue: 1 pp 42-52 Published: JAN 2011

51.	Dr. Sreenivas Jayanti	On the occurrence of two-stage combustion in alkali metals	COMBUSTION AND FLAME Vol. 158; Issue: 5; pp 1000-1007 Published: MAY 2011
52.		CFD study on the NO(X) formation during oxy-coal combustion in a typical 210MW Indian boiler	ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY Vol. 241 Meeting Abstract: 38-FUEL Published: MAR 27 2011
53.		Feasibility of using ultrasound-assisted process for sulfur and ash removal from coal	CHEMICAL ENGINEERING AND PROCESSING Vol. 50; Issue: 3 pp 236-246 Published: MAR 2011
54.		Numerical study of on-board fuel reforming in a catalytic plate reactor for solid-oxide fuel cells	CHEMICAL ENGINEERING SCIENCE Vol. 66; Issue: 3; pp 490-498 Published: FEB 1 2011
55.	Dr. Sridharakumar Narasimhan	Leak detection in gas pipeline networks using an efficient state estimator. Part-I: Theory and simulations	COMPUTERS & CHEMICAL ENGINEERING Vol. 35; Issue: 4 pp - 651-661 Published: APR 2011
56.	Dr. T. Swaminathan	Synthesis of Fe ⁽³⁺⁾ doped TiO ⁽²⁾ photocatalysts for the visible assisted degradation of an azo dye	COLLOIDS AND SURFACES A-PHYSICO-CHEMICAL AND ENGINEERING ASPECTS Vol. 375 Issue: 1-3 pp 231-236 Published: FEB 5 2011
57.		Synthesis of Fe(3+) doped TiO(2) photocatalysts for the visible assisted degradation of an azo dye	COLLOIDS AND SURFACES A-PHYSICO-CHEMICAL AND ENGINEERING ASPECTS Vol. 375; Issue: 1-3 pp 231-236 Published: FEB 5 2011
58.		Characteristics, seasonality and sources of carbonaceous and ionic components in the tropical aerosols from Indian region	ATMOSPHERIC CHEMISTRY AND PHYSICS Vol. 11; Issue: 15; pp 8215-8230 Published: 2011
59.		Removal of Gas-phase Benzene in an Immobilized Photocatalytic Reactor	MACEDONIAN JOURNAL OF CHEMISTRY AND CHEMICAL ENGINEERING Vol. 30; Issue: 2; pp 221-228 Published: 2011
60.	Dr. S. Pushpavanam	Generalized Analysis of Gasifier Performance using Equilibrium Modeling	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 51; Issue: 4; pp1601-1611 Published: FEB 1 2012
61.		Professor M. S. Ananth: Leading Researcher, Gifted Teacher, and Visionary Leader of Higher Education in India	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50; Issue: 23; pp12845-12846 Published: DEC 7 2011
62.		Multicomponent Dosing in Membrane Reactors Including Recycling-Concept and Demonstration for the Oxidative Dehydrogenation of Propane	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50 Issue: 23; pp 12895-12903 Published: DEC 7 2011
63.		Experimental and Computational Investigation of Two Phase Gas-liquid Flows: Point Source Injection at the Center	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50 Issue: 23 pp 13220-13229 Published: DEC 7 2011

64.	Dr. S. Pushpavanam	Experimental analysis of spatio-temporal behavior of anodic dead-end mode operated polymer electrolyte fuel cell	JOURNAL OF POWER SOURCES Vol. 196 Issue: 23; pp 9931-9938 Published: DEC 1 2011
65.		Optimizing performance of liquid-liquid extraction in stratified flow in micro-channels	JOURNAL OF MICROMECHANICS AND MICROENGINEERING Vol. 21; Issue: 11 Article Number: 115030 Published: NOV 2011
66.		Analysis of liquid circulation and mixing in a partitioned electrolytic tank	INTERNATIONAL JOURNAL OF MULTIPHASE FLOW, Vol. 37; Issue: 9; pp 1191-1200 Published: NOV 2011
67.		An analysis of drifts and nonlinearities in electrochemical impedance spectra	ELECTROCHIMICA ACTA Vol. 56; Issue: 22 pp 7467-7475 Published: SEP 1 2011
68.		Analysis of unsteady gas-liquid flows in a rectangular tank: Comparison of Euler-Eulerian and Euler-Lagrangian simulations	INTERNATIONAL JOURNAL OF MULTIPHASE FLOW Vol. 37; Issue: 3 pp 268-277 Published: APR 2011
69.		Immiscible Fluid Displacement in porous media: experiments and simulations	JOURNAL OF POROUS MEDIA Vol. 14 Issue: 5; pp 423-435 Published: 2011
70.	Dr. Niket S. Kaisare	Numerical Analysis of Fractal Catalyst Structuring in Microreactors	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50 Issue: 23 pp12925-12932 Published: DEC 7 2011
71.		Propane combustion in non-adiabatic microreactors: 2. Flow configuration in posted microreactors	CHEMICAL ENGINEERING SCIENCE Vol. 66; Issue: 17 pp 3732-3741 Published: SEP 1 2011
72.		Propane combustion in non-adiabatic microreactors: 1. Comparison of channel and posted catalytic inserts	CHEMICAL ENGINEERING SCIENCE Vol. 66 Issue: 6 pp 1123-1131 Published: MAR 15 2011
73.		Approximate dynamic programming-based control of distributed parameter systems	ASIA-PACIFIC JOURNAL OF CHEMICAL ENGINEERING Vol. 6; Issue: 3 Special Issue: SI pp 452-459 Published: MAY-JUN 2011
74.		Incorporating delayed and infrequent measurements in Extended Kalman Filter based nonlinear state estimation	JOURNAL OF PROCESS CONTROL Vol. 21; Issue: 1; pp 119-129 Published: JAN 2011
75.	Dr. Upendra Nadarajan	Origin of the Difference in Structural Behavior of Poly(acrylic acid) and Poly(methacrylic acid) in Aqueous Solution Discerned by Explicit-Solvent Explicit-Ion MD Simulations	INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH Vol. 50; Issue: 21; pp 11785-11796 Published: NOV 2 2011
76.		Effect of Chemical Substituents on the Structure of Glassy Diphenyl Polycarbonates	JOURNAL OF PHYSICAL CHEMISTRY B Vol. 115; Issue: 7 pp 1579-1589 Published: FEB 24 2011

77.	Dr. Upendra Nadarajan	Effect of Composition on Chain Dimensions of Styrene-Methylmethacrylate Random Copolymers under Theta Condition	JOURNAL OF MACROMOLECULAR SCIENCE PART B-PHYSICS Vol. 50; Issue: 5; pp 996-1005 Published: 2011
78.		Molecular thermodynamics of polymer chains confined between surfaces containing end-tethered flexible molecules	J. Macromol. Sci. B: Physics, in press, DOI: 10.1080/00222348.2011.564107
79.		Molecular simulations of the conformational properties of atactic poly(2-ethylbutyl methacrylate)	J. Appl. Polym. Sci., in press
80.		Thermodynamic Free Energy Behavior of Diblock Copolymer Chains Confined Between Planar Surfaces Having End-Tethered Flexible Polymer Molecules	J. Macromol. Sci.B: Phys., accepted
81.		Effect of organic modification on properties of PPO/PS miscible blend-Clay nanocomposites	J. Thermoplast.Comp.Mater., accepted
82.		Prediction of structure and energy of trans-1,4-polybutadiene glassy surfaces by atomistic simulations of free-standing ultrathin films	J. Macromol. Sci.B: Phys., accepted,
83.		Generalized theoretical study of the effect of molecular bond of model)2γ(optical tensor components on the mean-squared optical anisotropy bead-spring linear homopolymer chains	J. Macromol. Sci.B: Phys., accepted 31/3/12.

c) In Proceedings of National Conferences:

SI.No.	Name of the faculty	Title of the paper	Institution	Period
1	Dr. R. Nagarajan	Sono-Synthesis and Study of Polystyrene/Alumina Nanocomposites	Thrissur	23 – 25.2.2011
2	Dr. Upendra Nadarajan	Structural properties of poly(ethacrylic acid) in dilute aqueous solution investigated by molecular dynamics simulations	Kottayam	23 – 25.3.2012
3		Polymer blends; Composites; Interpenetrating Networks; Polymer Gels; Polyelectrolytes; Biopolymer-synthetic systems	Kottayam	23 – 25.3.2012
4		Nanomaterial-polymer structures; Multi-characterisation Techniques	Kottayam	23 – 25.3.2012
5	Dr. Raghuram Chetty	Electrochemical Reduction of Nitrate at Iron Phthalocyanine Cathode	Anna Univ., Chennai	29 – 30.3.2012
6		Development of Pd nanostructures as Cathode Catalysts for Fuel Cells	NSAMPA -2012 Coimbatore	29 – 30.3.2012
7		Synthesis of Pd Nanostructures by Potentiostatic Deposition for Oxygen Reduction Reaction" in'ChEmference	IISc Bangalore	22 – 23.9.2011

8		Electrochemical Reduction of Carbon Dioxide at Copper Electrodes, ChEmference	IISc Bangalore	22 – 23.9.2011
9		Development of porous titania electrodes for fuel cell applications" ChEmference	IISc Bangalore	22 – 23.9.2011
10		Electrochemical Reduction of Nitrate	IISc Bangalore	22 – 23.9.2011
11		Electrodeposition of Palladium on an Electrochemically Activated carbon Support For Oxygen Reduction Reaction	IISc Bangalore	19 – 20.8.2011

d) In Proceedings of International Conferences:

Sl.No.	Name of the faculty	Title of the paper	Institution	Period
1	Dr. A. Kannan	Factors Influencing Particle Breakage Characteristics in the Presence of Ultrasound	AICHE	16 – 21.10.2011
2	Dr. R. Nagaranan	Ultrasonic intensification of the chemical degradation of Methyl Violet: An experimental study	France	14 – 16.11.2011
3	Dr. R. Ramanarayanan	Costing out light sources and product collection during evaluation of materials for renewable fuels	MRS Spring 2011	25 –29.4.2011
4	Dr. Upendra Natarajan	Synthesis of Polystyrene-clay nanocomposites by in situ RAFT	ICNC 2011 Kottayam	7 – 9.1.2011
5		Sono-Synthesis and Study of Polystyrene/ Alumina Nanocompo-sites International conference on materials for the future	Government Engg. College Thrissur, Kerala	23 – 25.2.2011
6	Dr. S. Ramanathan	Evaluation of topological analysis of point cloud data using Rips, Witness and Lazy Witness complexes – A comparative study	Chennai	9 – 10.3.2012
7	Dr. Raghuram Chetty	Electrochemical reduction of Carbon dioxide at modified Copper electrodes	Annamalai University, Chidambaram,	9 – 11.2.2011
8		Synthesis and Characterization of Ruthenium-Based Cathode Catalysts Supported on Carbon Nanotubes for Fuel Cells	ACEPS – 2012 Chennai	5 – 8.1.2012
9		Electrochemical Deposition of Palladium Nanostructures on Carbon Coated Substrates for Oxygen Reduction Reaction	ACEPS – 2012 Chennai	5 – 8.1.2012
10		Comparison of Electrochemical Reduction of Carbon Dioxide at Copper and Zinc Electrodes"poster presentation at international conference on electrochemical power sources	ACEPS – 2012 Chennai	5 – 8.1.2012
11		Palladium Nano-structures with Dendritic Morphology for Oxygen Reduction Reaction	Rome, Italy	14 – 16.12.2011
12		Electrodeposited Palladium Nanoflowers for Oxygen Reduction Reaction	Boston, Massachusetts, USA	9 – 14.10.2011

Distinguished Visitors to the Department:

Sl.No.	Name of the visitor and Designation	Date of visit	Purpose of visit
1	Mr. Ruth Cardinaels Katholieke Universiteit Leuven, Belgium	6.6.2011	Seminar Talk
2	Mr. Naveen Krishna Reddy Katholieke Universiteit Leuven, Belgium	6.6.2011	Seminar Talk

3	Dr. Young Sang Cho Principal Researcher Korea Institute of Science and Technology, Korea	4.11.2011 & 29.3. 2012	Project Discussion
4	Prof Dr – Ing.Eckehard Specht, Otto-von-Guericke-University, Magdeburg	12.7.2011	Seminar Talk
5	Prof. Dr. – Kris Parimi Chevron Corporation, Richmond, USA	5.8.2011	Seminar Talk
6	Dr. Debjyoti Banerjee Texas A&M University	9.8.2011	Seminar Talk
7	Dr. Upal Ghosh University of Maryland, USA	10.8.2011	Seminar Talk
8	Dr. Gaurab Samanta University of Minnesota, USA	14.11.2011	Seminar Talk
9	Dr. David Hall Particle Measuring Systems, U.K.	8.12.2011	Seminar Talk
10	Dr. Ashok Krishna Chevron, USA	10.12.2011	For discussions related to Chair Professorship, research collaboration
11	Dr. Rajdip Bandyopadhyaya IIT Bombay	13.12.2011	Seminar Talk
12	Dr. Siva Vanapalli Texas Tech Univ. USA	9.1.2012	Seminar Talk
13	Dr. S.A. Bharadwaj Director (Tech) Nuclear Power Corp. of India	11.1.2012	Seminar Talk
14	Dr. Ram Seetharam University of Houston, USA	13.1.2012	Seminar Talk
15	Dr. K.S. Ravindhran Det Norske Veritas, USA	27.1.2012	Seminar Talk
16	Dr. Venkata Ramana Gundabala	31.1.2012	Seminar Talk
17	Dr. Jin-Goo Park, Micro Biochip Center, Hanyang University, Ansan, Korea	26-29.2.2012	Discussion on DST –NRF project
18	Dr. Prachi Thareja of Technology Indian Institute Gandhinagar	5.3.2012	Seminar Talk
19	Dr. Eric L Bibeau Associate Professor Univ.of Manitoba, Canada	9.3.2012	Seminar Talk
20	Dr. Suresh Bhatia Professor School of Chemical Engg, The Univ. of Queensland, Australia	12.3.2012	Seminar Talk

4.4.6 Other Activities of the Department/Centre:

Results obtained in research work (from M.S. & Ph.D thesis) of the scholar/faculty

1	B. Ambedkar, Nagarajan & Jayanti – In this study, ultrasonic washing of coals is investigated as a scalable method for de-ashing and de-sulfurization of Indian coals. Aqueous and reagent-based methods are compared, and a mechanistic model of sono-leaching of contaminants from coal is developed.
2	B. Ashraf Ali & Pushpavanam - The hydrodynamics of a partitioned bubble column reactor was analysed experimentally and theoretically. Applications in the electrolytic degradation of uric acid and in optimally carrying our series-parallel reactions have been proposed.
3	T.K. Jagannathan & Nagarajan - This work aims at characterizing flow induced by ultrasound and investigating the application of flow induced by ultrasound for destratification and atomization processes. High-frequency ultrasound was found to be effective in both applications.
4	Kalluri Ram Satish & Tanmay Basak – Studies on thermal processing during natural convection within cavities via heatline and entropy generation minimization approach.

5	P. Kanakasabai, Abhijit Deshpande & Susy Varughese – Development of novel polymer blends based on crosslinked poly vinyl alcohol and sulfonated poly ether ether ketone for proton conducting membranes
6	D. Krishna Sandilya & Kannan – Ultrasound at 20 kHz under isothermal conditions intensified mass transfer rates in dispersed systems significantly by enhancing the intrinsic mass transfer coefficient and interfacial area of mass transfer without altering the saturation concentration.
7	R. Manivannan & Ramanathan – Synthesized ceria abrasives by different methods and evaluated their performance, with and without additives for shallow trench isolation chemical mechanical planarization.
8	S. Noyel Victoria & Ramanathan – Proposed new oxidizing agent for ruthenium, CMP and characterize its performance under various conditions also electro chemically characterized copper and tantalum chemical mechanical planarization with various complexing agents.
9	Srinivasarao Modekurti, Shankar Narasimhan & Raghunathan Rangasamy – Modeling and optimization studies of a polymer electrolyte membrane fuel cell cathode with conventional single catalyst layer and proposed multiple catalyst layers.
10	Venkata Suresh Patnaikuni, Sreenivas Jayanti and Aphijit Deshpande – The effect of cross-flow in a fuel cell flow field has been studied through computational fluid dynamics simulations. A new flow field, which makes effective use of the cross-flow, has been proposed and is shown to improve the performance of the cell.
11	Bontapalle Sujitkumar & Upendra Natarajan – A molecular model for free energy of confined polymers and block copolymers interacting with tethered / end-grafted macromolecules, based on self-consistent field theory and scaling approach.
12	Mahesh Arigonda, Abhijit Deshpande & Susy Varughese – The effect of blending poly ether sulfone on the properties of sulfonated poly ether ether ketone for fuel cell applications
13	Ravi Kumar Gobbaka, Ravi & Anju Chadha – The kinetics of biodiesel production from non edible local oils- Jatropha and Mahua were studied highlighting the effects of co-solvent and temperature on the transesterification reaction.

6.1 International collaboration achievements by the Department

Several high end equipments have been purchased to improve the analytical instrumentation ability in the department. These include a High Resolution Scanning Electron Microscope (HR_SEM), Gas-Chromatograph (GC) and a Gas Chromatograph with Mass Spectroscopy (GC-MS). This has improved the accessibility of these instruments to research scholars enabling them to carry out state of the art research.

Bibliographic information

QR code for Microwave Heating of Oil-Water Emulsions

Title Microwave Heating of Oil-Water Emulsions: Theoretical and Simulation Studies Using Galerkin FEM

Authors Sujoy Kumar Samanta, Tanmay Basak

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Length 328 pages

4.5 DEPARTMENT OF CHEMISTRY

4.5.1 Introduction:

The Department of Chemistry was a part of the Department of Chemical Engineering during the period 1959-1961 and was established as an independent Department in the year 1961 with Prof. V. Srinivasan as the Head-in-Charge. Prof. M.V.C. Sastri assumed charge as the first Head of the Department in November 1961. He was instrumental in building the Department as well as the Applied Chemistry Building (completed in 1973). Prof. Sastri was also responsible for the special instruments laboratory (established in 1970; later known as RSIC and presently known as SAIF), and the MSRC (established in 1974 with Prof. Sastri as the Head and Prof. V. Srinivasan as the Associate Head).

The Department offers MSc and PhD programs in chemistry. As on date 765 students have graduated with MSc degree and 566 students with PhD degree. It is also involved in teaching various aspects of Chemistry at the preparatory level (for weaker section students) and B.Tech. (core as well as minor stream courses in Chemistry). Presently, the Department is very well equipped with modern instrumentation facilities and is actively engaged in performing quality teaching and research in frontier areas.

4.5.2 Academic Programmes:

The Department has revised MSc Curriculum and Syllabus and implemented from July 2011 for the fresh batch of M.Sc. students.

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
M.Sc.	48	46	-	-	-	94
Ph.D.	74	44	25	20	40	203
Total	122	90	25	20	40	297

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
Abroad:					
1	Arunabha Thakur	CY07D015	International Conference IME Boron XIV	Canada 12.09.2011-16.09.2011	Institute
2	Mathiselvam	CY05D019	16 th European Carbohydrate Symposium "Synthesis of N-(β -D-Glycosyl) Guanidinoacetamides and Guanidine Linked N-Glycosyl Amino Acids"	ITALY 02.07.2011-07.07.2011	Institute
3	M. Devi	CY08D027	International conference on Materials for advanced Technologies - 2011	Singapore 26.06.2011-01.07.2011	Institute
4	I. Karthikeyan	CY09D042	Canadian Common Wealth Scholarship Programme	Canada 01.09.2011-28.02.2012	Institute

India:					
1	John Prakash	CY09D015	Conference on Photochemistry and Photoluminescence	9-10 th March 2012, IIT Guwahati	Institute
			Trombay Symposium on Radiation and Photochemistry	3-7 th Jan 2012, BARC	CSIR contigency
			International Conference on Vistas of Chemistry	11-13 th Oct 2011, Kalpakkam	Institute
			International Conference on Vistas in chemistry, 2011	IGCAR Kalpakkam 11.10.2011 - 13.10.2011	Institute
			Conference on Photochemistry & Luminescence CPL 2012	IIT Guwahati 09.03.2012 - 10.03.2012	Institute
			Workshop, SAIF	IIT Bombay 26.03.2012 - 30.03.2012	Institute
2	Keshav Kumar	CY09D039	International Conference on Vistas of Chemistry	11-13 th Oct 2011, Kalpakkam	Institute
			Conference on Photochemistry and Photoluminescence	9-10 th march 2012, IIT Guwahati	Institute
			International Conference on Perspectives in Chemometrics ICOPIC 2011	SRM University Kattankulathur 09.04.2011 - 11.04.2011	Institute
			International Conference on Vistas in chemistry, 2011	IGCAR Kalpakkam 11.10.2011 - 13.10.2011	Institute
			Conference on Photochemistry & Luminescence CPL 2012	IIT Guwahati 09.03.2012 - 10.03.2012	Institute
3	Jitendriya Swain	CY10D035	National Fluorescence workshop FCS-2011	14-18 th Nov 2011, JNU, Delhi	Institute
4	Soma Saha	CY09D021	Understanding Molecular Simulations	17-28 August 2009, JNCASR, Bangalore	JNCASR
			SERC School-cum- Symposium on Rheology of Complex Fluids	4-9 Jan 2010 IITM	UGC
5	Prasanta Kundu	CY09D032	SERC School-cum-Symposium on Rheology of Complex Fluids	4-9 Jan 2010, IITM, Chennai	UGC
6	P. Muthu Pandi	CY07D006	Junior National Organic Symposium Trust (JNOST)	28.01.2011	Institute
			Recent Trends in Organic Synthesis 2011	Trichy 24.02.2011 – 26.02.2011	Institute
			7 th JNOST conference	IISER, Mohali 15.12.2011 - 18.12.2011	Institute
7	N. John Victor	CY08D008	Junior National Organic Symposium Trust (JNOST)	28.01.2011	Institute
8	J V K Prasad	CY07D029	Junior National Organic Symposium Trust (JNOST)	28.01.2011	Institute
9	K. Harikrishna	CY08D014	Junior National Organic Symposium Trust (JNOST)	28.01.2011	Institute
10	R. Saravanakumar	CY06D010	Junior National Organic Symposium Trust (JNOST)	28.01.2011	Institute
11	Ujwal Kumar Sarangi	CY07D002	13 th CRSI National Symposium in Chemistry 5 th CRSI-RSC Symposium in Chemistry	Bhubaneswar 04.02.2011 – 06.02.2011	Institute

12	Jagadeesh Chandra Prasad. D	CY07D038	Chennai Chemistry Conference 2011	IIT, Madras 11.02.2011-13.02.2011	Institute
13	Manas Ranjan Das	CY09D027	Chennai Chemistry Conference 2011	IIT, Madras 11.02.2011-13.02.2011	Institute
14	K. R. Krishnadas	CY11D016	National Review Meeting on Nanoscience & Nanotechnology, NSNT 2011	IIT Delhi 23.02.2011-01.03.2011	Institute
15	Amrita Srivastava	CY06D016	Recent Trends in Organic Synthesis 2011	Trichy 24.02.2011-26.02.2011	Institute
			16 th European Carbohydrate Symposium "Synthesis of N-(β -D-Glycosyl) Guanidinoacetamides and Guanidine Linked N-Glycosyl Amino Acids"	ITALY 02.07.2011-07.07.2011	Institute
16	Christy George	CY06D018	NMRS 2011	Gndu, Amritsar 01.03.2011-04.03.2011	Institute
17	Mili C N	CY10D039	3 rd Asian Conference on Co-ordination Chemistry	New Delhi 15.10.2011-23.10.2011	Institute
18	Divya S	CY10D019	3 rd Asian Conference on Co-ordination Chemistry	New Delhi 15.10.2011-23.10.2011	Institute
19	Deepan Chakravathy R	CY07D017	3 rd Asian Conference on Co-ordination Chemistry	New Delhi 15.10.2011-23.10.2011	Institute
20	Pavan Kumar Mandali	CY10D044	3 rd Asian Conference on Co-ordination Chemistry	New Delhi 15.10.2011-23.10.2011	Institute
21	Sreeni Vasulu Bandi	CY10D017	3 rd Asian Conference on Co-ordination Chemistry	New Delhi 15.10.2011-23.10.2011	Institute
22	Debakanta Tripathy	CY08D028	3 rd Asian Conference on Co-ordination Chemistry	New Delhi 15.10.2011-23.10.2011	Institute
23	Dipak Kumar Roy	CY11D056	3 rd Asian Conference on Co-ordination Chemistry	New Delhi 15.10.2011-23.10.2011	Institute
24	Amit Banerjee	CY09D040	Diamond Jubilee symposium on Recent Trends in Chemistry	IIT Kharagpur 19.10.2011-25.10.2011	Institute
25	Aksah Kumar Gupta	CY11D001	6 th National Conference on Thermodynamics of Chemical & Biological Systems (NCTCBS -2011)	Rohtak (Haryana) 01.11.2011-06.11.2011	Institute
26	Laxminarayan Sahoo	CY07D013	CARBO XXVI	Kolkata 23.11.2011-25.11.2011	Institute
27	Anadi Singhamahapatra	CY08D009	CARBO XXVI	Kolkata 23.11.2011-25.11.2011	Institute
			IBS 2012	Chennai 19.01.2012-21.01.2012	Institute
28	P Y Jinu	CY09D028	Conference ISCAS - 2011	Delhi 24.11.2011-26.11.2011	Institute
29	Shrikant Anandrao Mohitkar	CY08D016	Conference ISCAS - 2011	Delhi 24.11.2011-26.11.2011	Institute
30	Manas Rajan Das	CY09D027	BARC Training Programme	Mumbai 12.11.2011-20.11.2011	Institute
31	Jitendriya Swain	CY10D035	FCS - 2011	Delhi 14.11.2011 -18.1.2011	Institute
32	Ammu Mathew	CY10D021	2 nd International Conference on Advanced Nanomaterials and Nanotechnology (ICANN 2011)	IIT Guwahati 08.12.2011-10.12.2011	Institute

33	Vasmi Krishna Nunna	CY07D018	Symposium on Modern Trends on Inorganic Chemistry – XIV (MTIC-XIV)	Hyderabad 09.12.2011-14.12.2011	Institute
34	Manikkavalli	CY09D024	Symposium on Modern Trends on Inorganic Chemistry – XIV (MTIC-XIV)	Hyderabad 09.12.2011-14.12.2011	Institute
35	Nitin B Padalwar	CY10D012	Symposium on Modern Trends on Inorganic Chemistry – XIV (MTIC-XIV)	Hyderabad 09.12.2011-14.12.2011	Institute
36	Daya V P	CY10D028	Symposium on Modern Trends on Inorganic Chemistry – XIV (MTIC-XIV)	Hyderabad 09.12.2011-14.12.2011	Institute
37	Vekata Ramanaiah K.	CY11D015	Symposium on Modern Trends on Inorganic Chemistry – XIV (MTIC-XIV)	Hyderabad 09.12.2011-14.12.2011	Institute
38	Pavan Kumar Mandali	CY10D044	Symposium on Modern Trends on Inorganic Chemistry – XIV (MTIC-XIV)	Hyderabad 09.12.2011-14.12.2011	Institute
39	Jagadeesh Chandra Prasad	CY07D038	7 th JNOST conference	IISER, Mohali 15.12.2011-18.12.2011	Institute
			14 th National Symposium in Chemistry (CRSI) 6 th CRSI – RSC Symposium in Chemistry	NIIST, Trivandrum 02.01.2012 - 03.02.2012	Institute
40	V. Kasipandi	CY07D026	7 th JNOST conference	IISER, Mohali 15.12.2011-18.12.2011	Institute
41	V. Prasath	CY09D050	7 th JNOST conference	IISER, Mohali 15.12.2011-18.12.2011	Institute
42	Sumanta Kumar Meher	CY05D040	ICNANO - 2011	New Delhi 16.12.2011-23.12.2011	Institute
			6 th Asian Conference on Electrochemical Power Sources at Hotel Green Park	Chennai 05.01.2012-08.01.2012	Institute
43	Chanchal Agarwal	CY08D048	Trombay Symposium on Radiation and Photochemistry (TSRP-2012) at BARC	Mumbai 04.01.2012-07.01.2012	Institute
44	Devi	CY08D027	6 th Asian Conference on Electrochemical Power Sources at Hotel Green Park	Chennai 05.01.2012-08.01.2012	Institute
45	Rabin Rajan J M	CY11D075	Gaussian Workshop at CLRI	Chennai 02.01.2012 -6.01.2012	Institute
46	Vikram Singh	CY11D091	Gaussian Workshop at CLRI	Chennai 02.01.2012 -6.01.2012	Institute
47	IVY Sarkar	CY11D061	Gaussian Workshop at CLRI	Chennai 02.01.2012 -6.01.2012	Institute
48	Rajesh Khanna G	CY11D076	Gaussian Workshop at CLRI	Chennai 02.01.2012 -6.01.2012	Institute
49	Srinivasulu Gonu	CY10D015	Gaussian Workshop at CLRI	Chennai 02.01.2012 -6.01.2012	Institute
50	K. Geetharani	CY07D027	14 th National Symposium in Chemistry (CRSI) 6 th CRSI – RSC Symposium in Chemistry	NIIST, Trivandrum 02.01.2012 -3.02.2012	Institute
51	Nirod Kumar Sarangi	CY08D035	14 th National Symposium in Chemistry (CRSI) 6 th CRSI – RSC Symposium in Chemistry	NIIST, Trivandrum 02.01.2012 -3.02.2012	Institute
52	Sandeepan Maity	CY09D038	Acharya P C Ray National Conference for Young Scientist	Presidency College Kolkata 17.02.2012-18.02.2012	Institute
53	G. Sudhakar	CY09D001	2 nd National Symposium on Shock Waves NSSW – 2012	Thanjavur 27.02.2012 - 28.02.201	Institute

54	Prasanta Kundu	CY09D032	RRI Statistical Physics School 2012	RRI, Bangalore 26.03.2012-07.04.2012	Institute
55	E. Ramachandran	CY08D012	Workshop, SAIF	IIT Bombay 26.03.2012-30.03.2012	Institute
56	K. Ponnusamy	CY08D044	Workshop, SAIF	IIT Bombay 26.03.2012-30.03.2012	Institute
57	Sreeni Vasulu Bandi	CY10D017	Canadian Commonwealth Scholarship Program 2011 - 2012 (CBIE)	Canada 24.03.2012-23.09.2012	Institute

Names of students/scholars who won outside prizes and awards:

Sl. No	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1	John Prakash	CY09D015	Best poster	ISRAPS
2	Pratap Kumar Chotaray	CY11D026	Best poster	NCTCBS
3	Ms. Jarjapu Mahita	CY09C017	Best M.Sc Dissertation (2010 - 2011)	Prof. Ramamurthy Awards
4	Mr. Atanu Acharya	CY09C004	Best M.Sc Dissertation (2010 – 2011)	Prof. Ramamurthy Awards
5	M. Gomathi Sankar	CY04D009	Best Ph.D Thesis in Chemistry (2009 - 2010)	Prof. Ramamurthy Awards
6	Subhankar Kumar Bose	CY07D012	Fellowship Award	Prestigious Alexander von Humboldt Fellowship
7	B. Kuppan	CY06D022	Best poster	Hindustan Platinum Award
8	Udayabhaskararao Thumu	CY06D028	Best poster	Malhotra –Weikfield Foundation Fellowship
9	Atanu Ghosh	CY11D048	Best poster	Malhotra –Weikfield Foundation Fellowship

4.5.3 Faculty and their activities:

Faculty:

Name and Qualifications	Major area of specialization (only 3 areas)
Professor: N. Chandrakumar , Ph.D. (IITK)	Magnetic Resonance Imaging & Spectroscopy
S. Sankararaman (HEAD) Ph.D. (Victoria, Canada)	Synthetic and Mechanistic Organic Chemistry
R. Dhamodharan Ph.D. (U Mass, USA)	Chemistry of Macromolecules
D. Loganathan, Ph.D.	Synthetic & Structural Carbohydrate Chemistry, Bio-organic & Medicinal Chemistry and Structural Glycobiology
A. K. Mishra , Ph.D. (IITK)	Fluorescence Spectroscopy
T. Pradeep, Ph.D, (IISc, B'lore) Joint with SAIF	Nanomaterials, Spectroscopy, Ion Chemistry
M. V. Sangaranarayanan, Ph.D (IISc, B'lore)	Electrochemistry
M. N. Sudheendra Rao, Ph.D. (IISc,B'lore)	Main Group Inorganic Chemistry
U. V. Varadaraju, Ph.D. (IISc,B'lore) Joint with MSRC	Solid State Chemistry, Materials Science
P. Selvam, Ph.D. (IITM)	Catalysis, Solid State Chemistry
Archita Patnaik, Ph.D. (BHU)	Physical Chemistry Colloid and Interface Science Nanoscience & Nanotechnology

S. Baskaran, Ph.D. (IITK)	Organic Synthesis & Asymmetric Synthesis
Indrapal Singh Aidhen., Ph.D. (Univ of Pune)	Synthetic Organic Chemistry
K. Mangala Sunder, Ph.D. (McGill, Canada)	Theoretical Spectroscopy
K. Vidyasagar, Ph.D. (IISc,B'lore)	Solid State Chemistry
P. Bhyrappa, Ph.D. (IISc.B'lore)	Bioinorganic and Supramolecular Chemistry, Materials Chemistry
G. Ranga Rao, Ph.D... (IISc.B'lore)	Heterogeneous Catalysis and Surface Science
Sanjay Kumar, Ph.D. (IIT K)	Theoretical Chemistry, Quantum Chemistry
Associate Professor:	
N. Narasimha Murthy, Ph.D. (IISc.B'lore)	Bioinorganic chemistry, Inorganic Chemistry, Spectroscopy
Dillip Kumar Chand, Ph.D. (IIT K)	Supramolecular Chemistry, Inorganic Chemistry
G. Sekar, Ph.D. (IIT K)	Enantioselective Organic Synthesis
Assistant Professor:	
Santosh J. Gharpure, Ph.D. (IISc B'lore)	Organic Synthesis, New Synthetic Methods
Debashis Chakraborty, Ph.D. (Göttingen, Germany)	Synthetic Organometallic Chemistry
Sundaragopal Ghosh, Ph.D. (IIT B)	Organometallic and Metalloborane Chemistry
B. Rajakumar, Ph.D. (IISc.B'lore)	Atmospheric Chemistry, Gas Phase Kinetics and high resolution Cavity Ring Down Spevtroscopy, computational Chemistry
K.M. Muraleedharan, Ph.D. (RRL Trivandrum)	Medicinal Chemistry, Bio-organic Chemistry
Edamana Prasad, Ph.D. (RRL Trivandrum)	Divalent Lanthanide and Dendrimer Chemistry
Amrendra Vijay, Ph.D. (IISc.B'lore)	Theoretical Physical Chemistry
Arti Dua, Ph.D. (IISc.B'lore)	Statistical Mechanics , Polymer Theory, Stochastic Processes
Nandita Madhavan, Ph.D (University of Illinois at Urbana-Champaign, USA)	Oligopeptide synthesis, polymer chemistry, organic materials
Ramesh Gardas, Ph.D (South Gujarat University)	Solution Thermodynamics, Ionic Liquids
R. Kothandaraman, Ph.D (IISc. B'lore)	Materials Electrochemistry
Pazhamalai Anbarasan Ph.D (IISc. B'lore)	Organic synthesis

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1	K. M. Muraleedharan Nandita Madhavan	MEDCHEM - 2011	28.10.2011 - 29.10.2011
2	T. Pradeep	Chennai Chemistry Confernce 2011	11.02.2011 - 13.02.2011
3	Sundargopal Ghosh	Chemistry In-House Symposium 2011	24.08.2011
4	S. Sankararaman	Indigo Research Conference	12.02.2012 - 16.02.2012
Symposia:			
Symposium for Chemistry teachers conducted by Vana Vani MHSS, IIT Madras celebrates chemistry with dept. Of chemistry, IIT madras on: 21.12.2011			

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1	K. Mangala Sunder	NPTEL Workshop for Teachers	IIT Kharagpur	18.01.2011 – 19.01.2011
		NPTEL Workshop	IIT New Delhi	01.07.2011 - 02.07.2011
		NPTEL - Teacher Training Workshop	IIT Guwahati	03.11.2011 - 04.11.2011
		NAIP Workshop at IGNOU	New Delhi	06.11.2011 - 07.11.2011
		NPTEL Workshop	IIT Kharagpur	15.11.2011 - 16.11.2011
2	M.V. Sangaranarayanan	National Workshop on Recent Trends in Electrochemistry”- CERI	Karaikudi	28.04.2011
3	D. Loganathan	Workshop on Green Chemistry NHB Garhwal University	Srinagar	22.03.2011 – 23.03.2011
4	T. Pradeep	National Workshop on Drinking water quality	Delhi	16.11.2011
		ICPC NanoNet Wrokshop on Nano for Water, Energy & Environment	Goa	02.04.2012 - 04.04.2012
5	Edamana Prasad	Indo-Korea Joint Workshop	Chennai	03.11.2011
6	K.M. Muraleedharan	Gaussian Workshop at CLRI	Chennai	02.12.2012 - 06.01.2012
		Workshop in OSDD	Trivandrum	01.03.2012 - 02.03.2012
7	Ramesh Gardas	Gaussian Workshop at CLRI	Chennai	02.12.2012 - 06.01.2012
8	R. Kothandaraman	Gaussian Workshop at CLRI	Chennai	02.12.2012 - 06.01.2012
9	G. Sekar	Two-Day Lecture Workshop on Modern Trends in Chemistry	Irinjalakuda	07.03.2012
10.	Sanjosh j Gharpure	Workshop in OSDD	Trivandrum	01.03.2012 - 02.03.2012
Seminar:				
1	T. Pradeep	National Level Seminar on Solar Energy Conversion with Nanoparticles (NSSECNP'11)	Madurai	14.10.2011
		120 th Year Seminar	Indore	13.01.2012 - 14.01.2012
2	A.K. Mishra	National Seminar on Chemistry – Our Life, Our Future	Puducherry	30.11.2011
		National Seminar on Frontiers in Recent Chemical Research	Brahmapur	26.11.2011 - 27.11.2011
3	S. Baskaran	National Seminar on RRTCS - 2011	Tirupati	23.12.2011
4	Santosh J Gharpure	National Seminar on “Recent Trends in Chemical & Biological Science	Indore	13.01.2012 - 15.01.2012
		Seminar on Current Trend	Ponducherry	16.03.2012
Symposia:				
1	Archita Patnaik	Symposium on International Year of Chemistry (IYC20211)	Trichy	29.08.2011
2	Indrapal Singh Aidhen	One Day Symposium dedicated to Prof. Wadia of 75 th birthday	Pune	23.03.2012 - 26.03.2012
3	K. Mangala Sunder	Symposium on SAARC Human Resource Development Center (SHRDC)	New Delhi	28.09.2011 - 29.09.2011
4	A.K. Mishra	National Seminar	Kerala	16.03.2012

5	T. Pradeep	Diamond Jubilee Symposium DJSRTC - 2011	IIT Kharagpur	21.10.2011
		One Day Symposium on Nanoscience And Technology	Manipal	09.03.2012
6	G. Ranga Rao	Symposium on Spectroscopy in Catalysis, IICT	Hyderabad	28.09.2011 - 29.09.2011
		14 th CRSI & 6 th RSC Symposium in Chemistry	NIIST, Trivandrum	02.02.2012 - 05.02.2012
7	Sanjay Kumar	National Symposium on RTCST- 2012	IIT, Patna	03.03.2012 - 04.03.2012
8	G. Sekar	Indo-European- Singapore Symposium, NISER	Bhubaneswar	11.11.2011 - 13.11.2011
		14 th CRSI & 6 th RSC Symposium in Chemistry	NIIST, Trivandrum	02.02.2012 - 05.02.2012
9	Debashis Chakraborty	National Symposium on RTCST- 2012	IIT, Patna	03.03.2012 - 04.03.2012
10	K.M. Muraleedharan	International Symposium on Antimalarials Current Approaches & New Directions, CDRI	Lucknow	15.11.2011 - 17.11.2011
11	Nandita Madhavan	Third Indian Peptide Symposium 2011	Pune	23.02.2011 - 28.02.2011
12	B. Rajakumar	National Symposium on Shock Waves NSSW 2011	Bangalore	15.03.2011- 16.03.2011
		National Symposium on CTCC - 2012	Shillong	15.03.2012 - 18.03.2012
13	Santosh J Gharpure	3 rd Indo-German Symposium	IIT Bombay	27.09.2011 - 29.09.2011
14	Sundargopal Ghosh	Symposium on Modern Trends in Inorganic Chemistry	Hyderabad	10.12.2011 - 13.12.2011
Conference:				
1	Archita Patnaik	National Conference of Chemistry Education & Research Frontier's at IGNOU	New Delhi	12.10.2011 - 14.10.2011
2	S. Baskaran	National Conference on RTOS - 2011	Trichy	24.02.2011 – 26.02.2011
3	N. Chandrakumar	NMR Workshop	Organized by STIC	Cusat, Cochin 14.01.2011
4	A.K. Mishra	National Conference on "Indo-German Workshop on Bank Filtration for Sustainable Drinking Water Supply"	Dehradun	29.04.2011 – 30.04.2011
		Annual Conference of Orissa Chemical Society & National Conference on "Molecule" at Sambalpur University	Orissa	24.12.2011 - 26.12.2011
5	T. Pradeep	Nanoscience & Nanotechnology (ICNN 2011)		11.01.2011 - 12.01.2011
		International Conference on Supramolecules and Nanomaterials- Research & Applications	Ahmedabad	06.02.2012
		International Conference on Water Quality	Kolkata	18.02.2012 - 20.02.2012
		International Conference NANOBIO 2012	Kochi	23.02.2012
		National Conference on AOPChem - 2012	University of Calicut	22.03.2012 - 23.03.2012
6	Sanjay Kumar	National Conference on SDMC 2011	Uttarakhand	18.02.2011 - 20.02.2011
7	S. Sankararaman	ICVC - 2011 Conference	Kalpakkam	11.10.2011
		Conference on Photochemistry & Luminescence	IIT Guwahati , Assam	09.03.2012 - 10.03.2012

8	P. Selvam	National Conference (NCETC – 2012)	Triunichirappalli	11.01.2012
9	K. Mangala Sunder	3 rd Conference on Excellence in Research and Education	INDORE, IIM Delhi	12.05.2011 - 14.05.2011
10	G. Ranga Rao	National Conference on Science Technology & Applications of Rare Earths (STAR 2011)	Kerala	19.08.2011 – 20.08.2011
11	Dillip Kumar Chand	3 rd Asian Conference on Coordination Chemistry	New Delhi	17.10.2011 - 20.10.2011
12	N.N. Murthy	3 rd Asian Conference on Coordination Chemistry	New Delhi	17.10.2011 - 20.10.2011
		National Conference on MTIC, 14	Hyderabad	12.12.1011 - 13.12.2011
		National Conference on Recent Advance in Inorganic Chemistry	Triuchirappalli	22.03.2012 - 24.03.2012
13	K.M. Muraleedharan	National Conference of Chemistry Education & Research Frontier's at IGNOU	New Delhi	12.10.2011 - 14.10.2011
14	Debashis Chakraborty	National Conference on Polymer & Composites in Medicine, Engineering & Defense – 2012	Chennai	24.02.2012
15	Santosh J Gharpure	7 th Indo French Conference in Organic Synthesis (IFCOS)	Pune	06.12.2011 - 10.12.2011
16	Sundargopal Ghosh	3 rd Asian Conference on Coordination Chemistry	New Delhi	17.10.2011 - 20.10.2011
		Conference on Celebration of Chemistry	IIT Kanpur	02.12.2011 - 05.11.2011
17	Ramesh Gardas	National Conference Chemical Constellation Cheminar (NCCC 2011)	Punjab	20.08.2011 - 21.08.2011
		6 th National Conference on Thermodynamics of Chemical & Biological Systems (NCTCBS - 2011)	Rohtak, Haryana	02.11.2011 - 04.11.2011

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1	M.V. Sangaranarayanan	Electrochemical reduction of carbon-chlorine bonds	CECRI Karaikudi	4.11.2011
		Modelling of Electrochemical Systems	IIT Bombay	27.05.2011
2	G. Ranga Rao	The Management of Environmental Pollution	Guntur	22.03.2011
3	G. Sekar	Cu-Binam Complex as an Efficient Catalyst for Organic Synthesis	University of Madras	27.01.2011
4	Santosh J Gharpure	New Strategies for the Synthesis of Oxa- and Aza-Cycles	University of Madras	27.01.2011
5	Ramesh Gardas	The Management of Environmental Pollution	Guntur	22.03.2011

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1	Archita Patnaik	China	23.10.2011 - 26.10.2011	BIT's 1 st Annual World Congress of Nano - S & T at Dalian	Institute

2	A. K. Mishra	USA	21 st -26 th Jan 2012	Conference on SPIE photonics west	Institute
		San Francisco, USA	22.01.2012 - 27.01.2012	SPIE BIOs Symposium	Institute
3	G. Ranga Rao	Netherlands	08.05.2011- 11.05.2011	1 st International Symposium	Institute
4	T. Pradeep	Canada	01.06.2011 - 10.06.2011	Visit to University of Alberta	Institute
		USA	13.06.2011 - 19.06.2011	Inspect & undergo Mass Spectrometer Training at Extrel CMS	Institute
		China	26.08.2011 - 31.08.2011	Annual Gold Festival at Yantai University	Institute
		Taiwan	19.09.2011 - 23.09.2011	IUMRS Meeting	Institute
		Japan	21.11.2011 - 27.11.2011	Lecture at Tokyo University of Science President Award Scheme	Institute
5	M.V. Sangaranarayanan	Finland	7 th May 2011 to 12 th May 2011	Conference	Institute
		Japan	11 th September 2011 to 16 th September 2011	Conference	Institute
		Germany	22.06.2011 - 24.06.2011	5 th Gerischer Symposium	Institute
		Japan	11.09.2011 - 16.09.2011	62 nd Annual Meeting of the International Society of Electrochemistry	Institute
		Australia	15.04.2012 - 18.04.2012	10 th Spring Meeting of The International Society of electrochemistry	Institute
6	P. Selvam	Australia	24.07.2011 - 29.07.2011	Visit to University of Western Sydney	Institute
		USA	27.03.2011 – 31.03.2011	241 st ACS National Meeting	Institute
		USA	05.06.2011 - 10.06.2011	22 nd North american Catalysis Conference at Detroit	Institute
		Geneva	13.06.2011 - 17.06.2011	Visit to National Centre of Competence in Research University of Geneva	Institute
		Rostock, Germany	19.06.2011 - 22.06.2011	Attend 2 nd Indo-German Catalysis Conference	Institute
		Germany	24.06.2011 - 28.06.2011	Visit to Catalysis Research Center, Munich	Institute
		Australia	19.09.2011 - 28.09.2011	Indo Australian Joint Project, Brisbane	Institute
		China	28.10.2011 - 02.11.2011	World Congress on Engineering and Technology (CET 2011)	Institute
		Koln, Germany	05.12.2011 - 08.12.2011	Engineering Science Review Panel	Institute
7	U.V. Varadaraju	France	25.07.2011 - 07.08.2011	Visit to CRISMAT Laboratory, Caen	Institute
8	Edamana Prasad	U.S.A	26.06.2011 - 01.07.2011	International Dendrimer Symposium (IDS-7)	Institute
			03.07.2011 - 07.07.2011	Visit to Lehigh University	Institute
		U.S.A	26.06.2011 – 01.07.2011	International Conference (IDS -7)	Institute

9	Sundargopal Ghosh	France	27.06.2011 – 17.07.2011	IFCPAR-CEFIPRA	Institute
		Canada	12.09.2011 - 16.09.2011	International conference IME Boron XIV	Institute
10	Ramesh Gardas	South Africa	23.06.2011 – 30.06.2011	India-Brazil-South Africa (IBSA) Workshop	Institute

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
Awards:					
1.	T. Pradeep	has won Prof. S S Deshpande National Award in Chemistry for 2011 National Seminar on Recent Trends in Chemical & Biological Sciences at Holkar College, Indore		Cash Award of Rs. 21000 & a Citation	
2.	Ramesh Gardas	has been selected as LEADING GUEST EDITOR for special issue on "IONIC LIQUID" in "Journal of Thermodynamic" Hindwai Publication			

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
1.	M.V. Sangaranarayanan	Textbook of Physical Chemistry	Universities Press India	V.Mahadevan

Fellowships of Academies and Professional Societies:

1.	Fellow of National Academy of Sciences, India	2004
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Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name
1.	M.V. Sangaranarayanan	Member	Journal of Chemical Sciences

4.5.4 Design and Development Activities:

Brief and specific details of Process/Instruments/Equipment/ Software designed and developed: A fiber optics spectrophotometer that is capable of measuring both absorbance and fluorescence spectra have been designed

Patents:

Patents filed:

Sl.No.	Name of faculty	Topic of patent
1	T Pradeep	Application of nanoscale zinc oxide in peanut crop
		Removal of pesticides from water using graphenic materials
		One container gravity fed storage water purifier
2	Debashis Chakraborty	Metal free catalysts for the ring-opening polymerization of cyclic esters and lactide

4.5.5 Research and Consultancy:

Sponsored Research Projects:

Sl.No	Title	Period	Funding Agency	Amount (Rs.in lakhs)	Co-ordinators
1	Excited state proton transfer and decay dynamics of certain ESPT molecular probes in lipid bilayer membranes	2008-2011	DST	37.90	A K Mishra
2	Design and physicochemical studies of thermoreversible gels: towards controlled release of substrates	2009-2012	DBT	38.888	A K Mishra and K Chandraraj(Biotechnology)
3	Analysis of electron transfer processes at the interface between immiscible electrolyte solutions	9-7-2008 to 31-3-2012	DST	32.75	M.V. Sangaranarayanan
4	Analysis of Underpotential Deposition of metals for electrocatalytic Applications	3-3-2011 to 2-3-2014	CSIR	12.98	M.V. Sangaranarayanan
5	Designing New Polymer Supports to Improve Liquid Phase Peptide Synthesis	2009-2011	IIT Madras (New Faculty Scheme)	5.00	Dr. Nandita Madhavan
6	Development of Novel Soluble Polymer Supports to Improve Liquid Phase Peptide Synthesis: Towards the Facile Synthesis of Cyclic Peptide Nanotubes	2009-2012	CSIR	21.26	Dr. Nandita Madhavan
7	Engineering Internally Functionalized Pores Derived from Cyclic Peptides	2010-2013	DST	36.88	Dr. Nandita Madhavan
8	Non-precious metal catalyst for oxygen reduction reaction in Polymer Electrolyte Membrane Fuel Cells (PEMFC) with improved durability and activity	2011 - 2014	Indian Space Research Organisation	22.164	Dr. Kothandaraman Ramanujam
	Non-precious metal catalysts with increased active catalytic-site density for electrochemical oxygen reduction reaction	2011 - 2013	Nissan Research Support Program	8.80	
9	Functional noble metal nanoparticles	2011 - 2014	CSIR	25.92	Dr. Dillip Kumar Chand
10	Encapsulation of divalent lanthanides in dendrimers and lanthanide based nano-structures in dendritic aggregates to generate novel optically active nano-systems	2011 - 2014	DST	37.00	Dr. Edamana Prasad
11	Water purification using nanotechnology	2012 - 2017	DST	1081.00	Prof. T. Pradeep
	Metal nanoclusters for fluorescence, catalysis, and heavy metal scavenging	2012 - 2015	DST	42.8104	Prof. T. Pradeep
12	Thermodynamic studies of model electrolyte and non-electrolyte solutes in "protic ionic liquids" and their mixtures with the parent Bronsted acids and bases	2012 - 2015	CSIR	20.42	Dr. Ramesh Gardas
13	Top Chemistry Departments in the International Year of Chemistry (2011)	2012 - 2014	DST	204.60	HOD
	Design and synthesis of metallaborane clusters for catalytic cyclotrimerization of alkynes	2012 - 2015	Board of Research in Nuclear Sciences	22.4395	

14	Chemistry and applications of group 4-5 metallaboranes		DST	54.15	Dr. Sundargopal Ghosh
15	Generation of solar hydrogen		DST	50.284	Prof. P. Selvam
16	Exploding type metal precursors for synthesis of non-precious metal catalyst with improved oxygen reduction activity	2011 - 2013	New Faculty Scheme	10.70	Dr. Kothandaraman Ramanujam
17	Asymmetric trifluoromethylation using transition metal-catalyst	2012 - 2015	New Faculty Scheme	15.00	Dr. Anbarasan Pazhamalai

Research Publications of the faculty members & research scholars:

a.	Total No. of papers published in Refereed National Journals	-	1
b.	Total No. of papers published in Refereed International Journals	-	169
c.	Total No. of papers presented in National Conferences	-	Nil
d.	Total No. of papers presented in International conferences	-	1

Details:

a) In Refereed National Journals:

1. M Vinoth Kumar, G Nandhini and M V Sangaranarayanan Partition function of two-dimensional nearest neighbour Ising models in a non-zero magnetic field *J Chem Sciences* 124(2012)105-113.

b) In Refereed International Journals:

1. Kumar, K. S.; Patnaik, A. Tunable One-, Two-, and Three-Dimensional Self-Assemblies from an Acceptor-Donor Fullerene-N,N-Dimethylaminoazobenzene Dyad: Interfacial Geometry and Temporal Evolution. *Langmuir* 2011, 27, 11017-11025.
2. Kumar, K. S.; Patnaik, A. Solvent-Polarity-Tunable Dimeric Association of a Fullerene (C60)-N,N-Dimethylaminoazobenzene Dyad: Modulated Electronic Coupling of the Azo Chromophore with a Substituted 3D Fullerene. *Chem.--Eur. J.* 2011, 17, 5327-5343, S5327/1-S5327/4.
3. Sarangi, N. K.; Patnaik, A. Unraveling Tryptophan Modulated 2D DPPC Lattices: An Approach toward Stimuli Responsiveness of the Pulmonary Surfactant. *J. Phys. Chem. B* 2011, 115, 13551-13562.
4. Ramakanth, I.; Patnaik, A. Novel Two-Component Gels of Cetylpyridinium Chloride and the Bola-amphiphile 6-Amino Caproic Acid: Phase Evolution and Mechanism of Gel Formation. *J. Phys. Chem. B* 2012, 116, 2722-2729.
5. Patnaik, A. Non-Covalent Approaches to Facile Synthesis of Dimension-Specific H and J-Aggregates. *J Aggregates* 2012, 2.
6. Bhattacharjee, A.; Kundu, P.; Dua, A. Self-consistent theory of structures and transitions in weak polyampholytes. *Macromol. Theory Simul.* 2011, 20, 75-84.
7. Dua, A.; Adhikari, R. Non-Markovian fluctuations in Markovian models of protein dynamics. *J. Stat. Mech. Theory Exp.* 2011, P04017/1-P04017/8.
8. Saha, S.; Ghose, S.; Adhikari, R.; Dua, A. Non-renewal statistics in the catalytic activity of enzyme molecules at mesoscopic concentrations. *arXiv.org, e-Print Arch., Condens. Matter* 2011, 1-5, arXiv:1110.6044v1 [cond-mat stat-mech].
9. Saha, S.; Ghose, S.; Adhikari, R.; Dua, A. Nonrenewal statistics in the catalytic activity of enzyme molecules at mesoscopic concentrations. *Phys Rev Lett* 2011, 107, 218301.
10. Aravind, A.; Kumar, P. S.; Sankar, M. G.; Baskaran, S. Diversity-Oriented Synthesis of Useful Chiral Building Blocks from L-Mannitol. *Eur. J. Org. Chem.* 2011, 2011, 6980-6988, S6980/1-S6980/30.
11. Banerjee, A.; Kumar Ponminor, S.; Baskaran, S. A Lewis acid initiated intramolecular cyclization of benzylidene acetal with an azide functional group: novel synthesis of oxazolines and oxazines. *Chem Commun (Camb)* 2011, 47, 12218-20.

12. Gore, S.; Baskaran, S.; Koenig, B. Efficient synthesis of 3,4-dihydropyrimidin-2-ones in low melting tartaric acid-urea mixtures. *Green Chem.* 2011, 13, 1009-1013.
13. Murali, A.; Puppala, M.; Varghese, B.; Baskaran, S. A Lewis Acid Mediated Schmidt Reaction of Benzylic Azide: Synthesis of Sterically Crowded Aromatic Tertiary Amines. *Eur. J. Org. Chem.* 2011, 2011, 5297-5302, S5297/1-S5297/87.
14. Murali, A.; Sen, S. K.; Baskaran, S. A one-pot β -chloro-N'-tosylamidation of olefins with chloramine-T. *Synthesis* 2011, 1771-1776.
15. Bhyrappa, P.; Karunanithi, K. Synthesis and crystal structures of five-coordinated β -pyrrole tetra(phenyl/cyano) substituted zinc(II)-tetraphenylporphyrins. *Inorg. Chim. Acta* 2011, 372, 417-424.
16. Bhyrappa, P.; Velkannan, V. β -Tetrabromo-meso-tetrakis(4'-substituted phenyl)porphyrins:: synthesis and electrochemical redox properties. *J. Porphyrins Phthalocyanines* 2011, 15, 883-889.
17. Banerjee, A.; Chandrakumar, N. Real-Time in Vitro Drug Dissolution Studies of Tablets Using Volume-Localized NMR (MRS). *Appl. Magn. Reson.* 2011, 40, 251-259.
18. George, C.; Chandrakumar, N. ^1H Indirect Detected ^{13}C Low-Abundance Single-Transition Correlation Spectroscopy (HICLASS)- ^{13}C Homonuclear Correlation at Natural Abundance. *Org. Lett.* 2011, 13, 5448-5451.
19. A. Banerjee and N. Chandrakumar. Volume Localized Shift Selective ^{13}C Spectroscopy Using Pulsed Rotating Frame Transfer Sequences With Windows (PRAWN). *Magnetic Resonance in Medicine* 2011, 66, 1209-1217.
20. Mohanapriya, S.; Sahu, A. K.; Bhat, S. D.; Pitchumani, S.; Sridhar, P.; George, C.; Chandrakumar, N.; Shukla, A. K. Bio-Composite Membrane Electrolytes for Direct Methanol Fuel Cells. *J. Electrochem. Soc.* 2011, 158, B1319-B1328.
21. Chakraborty, D.; Malik, P.; Goda, V. K. A new methodology for the oxidation of sulfides with Fe(III) catalysts. *Appl. Organomet. Chem.* 2012, 26, 21-26.
22. Das, R.; Chakraborty, D. AgOTf-catalyzed transesterification of β -keto esters. *Appl. Organomet. Chem.* 2012, 26, 140-144.
23. Das, R.; Chakraborty, D. Silver triflate catalyzed acetylation of alcohols, thiols, phenols, and amines. *Synthesis* 2011, 1621-1625.
24. Das, R.; Chakraborty, D. Cu(II) bromide catalyzed oxidation of aldehydes and alcohols. *Appl. Organomet. Chem.* 2011, 25, 437-442.
25. Das, R.; Chakraborty, D. Silver nitrate catalyzed oxidation of sulfides. *Synthesis* 2011, 277-280.
26. Gowda, R. R.; Chakraborty, D. Ceric ammonium nitrate catalyzed oxidation of aldehydes and alcohols. *Chin. J. Chem.* 2011, 29, 2379-2384.
27. Gowda, R. R.; Chakraborty, D. La₂O₃-catalyzed oxidation of alcohols. *Int. J. Org. Chem.* 2011, 1, 41-46.
28. Gowda, R. R.; Chakraborty, D. Copper acetate catalyzed bulk ring opening polymerization of lactides. *J. Mol. Catal. A Chem.* 2011, 349, 86-93.
29. Gowda, R. R.; Chakraborty, D. Fe(III)-Catalyzed Synthesis of Primary Amides from Aldehydes. *Eur. J. Org. Chem.* 2011, 2226-2229, S2226/1-S2226/96.
30. Gowda, R. R.; Chakraborty, D.; Ramkumar, V. Controlled hydrolysis of [Ti(O-2,4,6-Br₃C₆H₂)₂(O-iPr)₂]: Synthesis, structural characterization and studies on bulk polymerization of cyclic esters and lactide. *Inorg. Chem. Commun.* 2011, 14, 1777-1782.
31. Gowda, R. R.; Chakraborty, D.; Ramkumar, V. Phosphoroamidate compounds of 1,1'-Bi-2-naphthol: Synthesis, structural characterization and solvent-free ring-opening polymerization of ϵ -caprolactone and L-lactide. *Inorg. Chim. Acta* 2011, 372, 88-93.
32. Gowda, R. R.; Chakraborty, D.; Ramkumar, V. Aryloxy and benzyloxy compounds of zirconium: Synthesis, structural characterization and studies on solvent-free ring-opening polymerization of δ -valerolactone and δ -valerolactone. *J. Organomet. Chem.* 2012, 696, 572-580.
33. Kumar Saha, T.; Rajashekhar, B.; Chakraborty, D. Alkoxides of group 4 metals containing the bis(imino)phenoxide ligand: synthesis, structural characterization and polymerization studies. *RSC Adv.* 2012, 2, 307-318.
34. Saha Tanmoy, K.; Ramkumar, V.; Chakraborty, D. Salen complexes of zirconium and hafnium: synthesis, structural characterization, controlled hydrolysis, and solvent-free ring-opening polymerization of cyclic esters and lactides. *Inorg. Chem.* 2011, 50, 2720-2.

35. Haridharan, N.; Dhamodharan, R. Controlled polymerization of carbazole-based vinyl and methacrylate monomers at ambient temperature: A comparative study through ATRP, SET, and SET-RAFT polymerizations. *J. Polym. Sci., Part A Polym. Chem.* 2011, 49, 1021-1032.
36. Kannan, M.; Dhamodharan, R. Kinetic studies on star polymerization of styrene, MA and MMA using new three and four arm chain transfer agents (CTAs): The role of R-group structure present in the CTA on RAFT polymerization. *J. Macromol. Sci., Part A Pure Appl. Chem.* 2011, 48, 722-736.
37. Munirasu, S.; Karunakaran Raghuraman, G.; Ruhe, J.; Dhamodharan, R. Synthesis and morphological study of thick benzyl methacrylate-styrene diblock copolymer brushes. *Langmuir* 2011, 27, 13284-92.
38. Rajendrakumar, K.; Dhamodharan, R. Spontaneous Cu(I)Br-PMDETA-mediated polymerization of isobornyl methacrylate in heterogeneous aqueous medium at ambient temperature. *J. Polym. Sci., Part A Polym. Chem.* 2011, 49, 2165-2172.
39. Sundaram, H. S.; Raghavachari, D. Controlled radical polymerization of tert-butyl acrylate at ambient temperature: Effect of initiator structure and synthesis of amphiphilic block copolymers. *J. Polym. Sci., Part A Polym. Chem.* 2012, 50, 996-1007.
40. Chakravarthy, R. D.; Chand, D. K. Synthesis, structure and applications of [cis-dioxomolybdenum(VI)-(ONO)] type complexes. *J. Chem. Sci. (Bangalore, India)* 2011, 123, 187-199.
41. Chakravarthy, R. D.; Suresh, K.; Ramkumar, V.; Chand, D. K. New chiral molybdenum complex catalyzed sulfide oxidation with hydrogen peroxide. *Inorg. Chim. Acta* 2011, 376, 57-63.
42. Debata, N. B.; Ramkumar, V.; Chand, D. K. A model study of alternative approach toward a class of palladium(II) based self-assembly. *Inorg. Chim. Acta* 2011, 372, 71-78.
43. Lekha, P. K.; Prasad, E. Tunable Emission of Static Excimer in a Pyrene-Modified Polyamidoamine Dendrimer Aggregate through Positive Solvatochromism. *Chem.--Eur. J.* 2011, 17, 8609-8617, S8609/1-S8609/10.
44. Rajamalli, P.; Prasad, E. Luminescent micro and nanogel formation from AB₃ type poly(aryl ether) dendron derivatives without conventional multi-interactive gelation motifs. *New J. Chem.* 2011, 35, 1541-1548.
45. Rajamalli, P.; Prasad, E. Low Molecular Weight Fluorescent Organogel for Fluoride Ion Detection. *Org. Lett.* 2011, 13, 3714-3717.
46. Annamalai, S.; Aidhen, I. S. Novel synthetic strategy for biphenyl-spaced sugars towards heparinoid mimetics. *Trends Carbohydr. Res.* 2011, 3, 33-43.
47. Balasubramaniam, S.; Aidhen, I. S. Weinreb amide based building blocks for the synthesis of α - and β -organylseleno aryl ketones. *Synlett* 2011, 1533-1536.
48. Balasubramaniam, S.; Kommedi, H.; Aidhen, I. S. Weinreb amide based building blocks for convenient access to 1,1-diarylethenes and isocombretastatin analogues. *Tetrahedron Lett.* 2011, 52, 2683-2686.
49. Senthilmurugan, A.; Aidhen Indrapal, S. Convenient strategies for the synthesis of 1,4-phenylene spaced sugars. *Carbohydr Res* 2012, 347, 55-63.
50. Akbar Ali, S.; Bisht, P. B.; Senthilmurugan, A.; Aidhen, I. S. A new fluorescent probe with stimulated emission and multiphoton absorption properties. *Chem. Phys.* 2011, 382, 68-73.
51. Mathiselvam, M.; Varghese, B.; Loganathan, D. Synthesis and X-ray crystallographic investigation of N-(3-deoxy-3-acetamido- β -D-glycopyranosyl)alkanamides as analogs of N-glycoprotein linkage region. *Glycoconj J* 2011, 28, 573-80.
52. Srivastava, A.; Varghese, B.; Loganathan, D. X-Ray Crystallographic Investigation of Fully Acetylated N-(2-Deoxy-2-Acetamido- β -D-Glucopyranosyl)Alkanamides as N-Glycoprotein Linkage Region Analogs. *J. Carbohydr. Chem.* 2012, 31, 31-47.
53. Kumar, A. C.; Erothu, H.; Bohidar, H. B.; Mishra, A. K. Bile-Salt-Induced Aggregation of Poly(N-isopropylacrylamide) and Lowering of the Lower Critical Solution Temperature in Aqueous Solutions. *J. Phys. Chem. B* 2011, 115, 433-439.
54. Kumar, K.; Mishra, A. K. Quantification of Ethanol in Ethanol-Petrol and Biodiesel in Biodiesel-Diesel Blends Using Fluorescence Spectroscopy and Multivariate Methods. *J. Fluoresc.* 2012, 22, 339-347.
55. Kumar, K.; Mishra, A. K. Simultaneous quantification of dilute aqueous solutions of certain polycyclic aromatic hydrocarbons (PAHs) with significant fluorescent spectral overlap using total synchronous fluorescence spectroscopy (TSFS) and N-PLS, unfolded-PLS and MCR-ALS analysis. *Anal. Methods* 2011, 3, 2616-2624.
56. Mohapatra, M.; Mishra, A. K. Photophysical Behavior of Fisetin in Dimyristoylphosphatidylcholine Liposome Membrane. *J. Phys. Chem. B* 2011, 115, 9962-9970.

57. Mohapatra, M.; Mishra Ashok, K. Effect of submicellar concentrations of conjugated and unconjugated bile salts on the lipid bilayer membrane. *Langmuir* 2011, 27, 13461-7.
58. Prakash, J.; Mishra, A. K. White light excitation fluorescence (WLEF): Part II. Analysis of complex multifluorophoric systems. *Anal. Methods* 2011, 3, 368-373.
59. Prakash, J.; Mishra, A. K. White light excitation fluorescence (WLEF): Part I. Exploring the use in analytical fluorimetry. *Anal. Methods* 2011, 3, 362-367.
60. Selvam, S.; Mishra, A. K. Multiple prototropism of fisetin in sodium cholate and related bile salt media. *Photochem. Photobiol. Sci.* 2011, 10, 66-75.
61. Gopinath, P.; Nilaya, S.; Muraleedharan, K. M. Highly Chemoselective Esterification Reactions and Boc/THP/TBDMS Discriminating Deprotections under Samarium(III) Catalysis. *Org. Lett.* 2011, 13, 1932-1935.
62. Napoleon, J. V.; Manheri, M. K. Direct transformation of Baylis-Hillman acetates into N-substituted quinolones through an $S_N2' \rightarrow S_NAr \rightarrow (\Delta^{3,4}-\Delta^{2,3} \text{ shift}) \rightarrow$ oxidation sequence. *Synthesis* 2011, 3379-3388.
63. Ganesan, M.; Muraleedharan, K. M. Oxano bornane-based amphiphilic systems: design, synthesis and material properties. *RSC Adv.* 2012 (DOI:10.1039/C2RA01198K).
64. Siluvai, G. S.; Vargheese, B.; Murthy, N. N. H₂O₂ reactivity of a dinuclear copper(II) complex incorporating a constrained binucleating polyaminopyridyl ligand and a phosphodiester coligand. *Inorg. Chim. Acta* 2011, 375, 93-100.
65. Annamalai, L.; Thumu, U. B. R.; Thalappil, P. Supported quantum clusters of silver as enhanced catalysts for reduction. *Nanoscale Res. Lett.* 2011, 6, 123, 9 pp.
66. Bag, S.; McCoustra, M. R. S.; Pradeep, T. Formation of H₂⁺ by Ultra-Low-Energy Collisions of Protons with Water Ice Surfaces. *J. Phys. Chem. C* 2011, 115, 13813-13819.
67. Basak, T.; Pradeep, P. V. K.; Roy, S. A Complete Heatline Analysis on Visualization of Heat Flow and Thermal Mixing during Mixed Convection in a Square Cavity with Various Wall Heating. *Ind. Eng. Chem. Res.* 2011, 50, 7608-7630.
68. Bootharaju, M. S.; Pradeep, T. Understanding the Degradation Pathway of the Pesticide, Chlorpyrifos by Noble Metal Nanoparticles. *Langmuir* 2012, 28, 2671-2679.
69. Bootharaju, M. S.; Pradeep, T. Investigation into the Reactivity of Unsupported and Supported Ag₇ and Ag₈ Clusters with Toxic Metal Ions. *Langmuir* 2011, 27, 8134-8143.
70. Chaudhari, K.; Xavier Paulrajpillai, L.; Pradeep, T. Understanding the evolution of luminescent gold quantum clusters in protein templates. *ACS Nano* 2011, 5, 8816-27.
71. Choudhari, K.; Xavier Paulrajpillai, L.; Pradeep, T. Size evolution of luminescent lactoferrin protected gold clusters. *J Biomed Nanotechnol* 2011, 7, 70-1.
72. Dhanalakshmi, L.; Udayabhaskararao, T.; Pradeep, T. Conversion of double layer charge-stabilized Ag@citrate colloids to thiol passivated luminescent quantum clusters. *Chem. Commun. (Cambridge, U. K.)* 2012, 48, 859-861.
73. George, A.; Shibu, E. S.; Maliyekkal Shihabudheen, M.; Bootharaju, M. S.; Pradeep, T. Luminescent, freestanding composite films of Au(15) for specific metal ion sensing. *ACS Appl Mater Interfaces* 2012, 4, 639-44.
74. Habeeb Muhammed, M. A.; Pradeep, T. Au₂₅@SiO₂: Quantum Clusters of Gold Embedded in Silica. *Small* 2011, 7, 204-208.
75. Ifa, D. R.; Srimany, A.; Eberlin, L. S.; Naik, H. R.; Bhat, V.; Cooks, R. G.; Pradeep, T. Tissue imprint imaging by desorption electrospray ionization mass spectrometry. *Anal. Methods* 2011, 3, 1910-1912.
76. Krishnadas, K. R.; Sajanlal, P. R.; Pradeep, T. Pristine and Hybrid Nickel Nanowires: Template-, Magnetic Field-, and Surfactant-Free Wet Chemical Synthesis and Raman Studies. *J. Phys. Chem. C* 2011, 115, 4483-4490.
77. Leelavathi, A.; Bhaskara Rao Thumu, U.; Pradeep, T. Supported quantum clusters of silver as enhanced catalysts for reduction. *Nanoscale Res Lett* 2011, 6, 123.
78. Mathew, A.; Sajanlal, P. R.; Pradeep, T. A fifteen atom silver cluster confined in bovine serum albumin. *J. Mater. Chem.* 2011, 21, 11205-11212.
79. Panikkanvalappil, R. S.; Theruvakkattil, S. S.; Samal, A. K.; Thalappil, P. Anisotropic nanomaterials: structure, growth, assembly, and functions. *Nano Rev.* 2011, 2, No pp given.

80. Samal, A. K.; Pradeep, T. Hybrid A-B-A type nanowires through cation exchange. *Nanoscale* 2011, 3, 4840-4847.
81. Shibu Edakkattuparambil, S.; Cyriac, J.; Pradeep, T.; Chakrabarti, J. Gold nanoparticle superlattices as functional solids for concomitant conductivity and SERS tuning. *Nanoscale* 2011, 3, 1066-72.
82. Sreeprasad, T. S.; Maliyekkal, M. S.; Deepti, K.; Chaudhari, K.; Xavier, P. L.; Pradeep, T. Transparent, luminescent, antibacterial and patternable film forming composites of graphene oxide/reduced graphene oxide. *ACS Appl. Mater. Interfaces* 2011, 3, 2643-2654.
83. Sreeprasad, T. S.; Maliyekkal Shihabudheen, M.; Lisha, K. P.; Pradeep, T. Reduced graphene oxide-metal/metal oxide composites: facile synthesis and application in water purification. *J Hazard Mater* 2011, 186, 921-31.
84. Sreeprasad, T. S.; Pradeep, T. Tubular Nanostructures of Cr₂Te₄O₁₁ and Mn₂TeO₆ through Room-Temperature Chemical Transformations of Tellurium Nanowires. *J. Phys. Chem. C* 2011, 115, 16524-16536.
85. Sreeprasad, T. S.; Pradeep, T. Reversible Assembly and Disassembly of Gold Nanorods Induced by EDTA and Its Application in SERS Tuning. *Langmuir* 2011, 27, 3381-3390.
86. Srimany, A.; Ifa Demian, R.; Naik Hemanta, R.; Bhat, V.; Cooks, R. G.; Pradeep, T. Direct analysis of camptothecin from *Nothapodytes nimmoniana* by desorption electrospray ionization mass spectrometry (DESI-MS). *Analyst* 2011, 136, 3066-8.
87. Sumesh, E.; Bootharaju, M. S.; Anshup; Pradeep, T. A practical silver nanoparticle-based adsorbent for the removal of Hg₂⁺ from water. *J. Hazard. Mater.* 2011, 189, 450-457.
88. Udayabhaskararao, T.; Sun, Y.; Goswami, N.; Pal Samir, K.; Balasubramanian, K.; Pradeep, T. Ag(7) au(6) : a 13-atom alloy quantum cluster. *Angew Chem Int Ed Engl* 2012, 51, 2155-9.
89. Xavier Paulrajpillai, L.; Chaudhari, K.; Baksi, A.; Pradeep, T. Protein-protected luminescent noble metal quantum clusters: an emerging trend in atomic cluster nanoscience. *Nano Rev* 2012, 3.
90. Ali, M. A.; Rajakumar, B. Computational study on OH radical reaction with CHF₂CHFCHF₂(HFC-245ea) between 200 and 400 K. *Int. J. Chem. Kinet.* 2011, 43, 418-430.
91. Ali, M. A.; Rajakumar, B. Thermodynamic and kinetic studies of hydroxyl radical reaction with bromine oxide using density functional theory. *Comput. Theor. Chem.* 2011, 964, 283-290.
92. Ali, M. A.; Upendra, B.; Rajakumar, B. Kinetic parameters of abstraction reactions of OH radical with ethylene, fluoroethylene, cis- and trans-1,2-difluoroethylene and 1,1-difluoroethylene, in the temperature range of 200-400 K: Gaussian-3/B3LYP theory. *Chem. Phys. Lett.* 2011, 511, 440-446.
93. Kaliginedi, V.; Ali, M. A.; Rajakumar, B. Kinetic parameters for the reaction of hydroxyl radical with CH₃OCH₂F (HFE-161) in the temperature range of 200-400 K: Transition state theory and Ab initio calculations. *Int. J. Quantum Chem.* 2012, 112, 1066-1077.
94. Manas Ranjan Dash, B. R. Abstraction kinetics of H-atom by OH radical from pinonaldehyde (C₁₀H₁₆O₂): Ab Initio and Transition State Theory Calculations". *J. Phys. Chem. A* 2012.
95. Upendra, B.; Prasanna, D. S. L.; Rajakumar, B. Kinetic parameters for the reaction of OH radical initiated atmospheric oxidation of (E)-2-pentenal: ab initio and transition state theory calculations. *Curr. Sci.* 2012, 102, 460-469.
96. Adamova, G.; Gardas, R. L.; Rebelo, L. P. N.; Robertson, A. J.; Seddon, K. R. Alkyltrioctylphosphonium chloride ionic liquids: synthesis and physicochemical properties. *Dalton Trans.* 2011, 40, 12750-12764.
97. Tome, L. I. N.; Gardas, R. L.; Carvalho, P. J.; Pastoriza-Gallego, M. J.; Pineiro, M. M.; Coutinho, J. A. P. Measurements and Correlation of High-Pressure Densities of Phosphonium Based Ionic Liquids. *J. Chem. Eng. Data* 2011, 56, 2205-2217.
98. Ventura, S. P. M.; Gardas, R. L.; Goncalves, F.; Coutinho, J. A. P. Ecotoxicological risk profile of ionic liquids: octanol-water distribution coefficients and toxicological data. *J. Chem. Technol. Biotechnol.* 2011, 86, 957-963.
99. Justin, P.; Ranga Rao, G. Methanol oxidation on MoO₃ promoted Pt/C electrocatalyst. *Int. J. Hydrogen Energy* 2011, 36, 5875-5884.
100. Meher, S. K.; Justin, P.; Ranga Rao, G. Microwave-Mediated Synthesis for Improved Morphology and Pseudocapacitance Performance of Nickel Oxide. *ACS Appl. Mater. Interfaces* 2011, 3, 2063-2073.
101. Meher, S. K.; Justin, P.; Rao, G. R. Nanoscale morphology dependent pseudocapacitance of NiO: influence of intercalating anions during synthesis. *Nanoscale* 2011, 3, 683-692.

102. Meher, S. K.; Rao, G. R. Effect of Microwave on the Nanowire Morphology, Optical, Magnetic, and Pseudocapacitance Behavior of Co₃O₄. *J. Phys. Chem. C* 2011, 115, 25543-25556.
103. Meher, S. K.; Rao, G. R. Ultralayered Co₃O₄ for High-Performance Supercapacitor Applications. *J. Phys. Chem. C* 2011, 115, 15646-15654.
104. Kumar, T. J. D.; Kumar, S. Low-energy rotational inelastic collisions of H(+) + CO system. *J Chem Phys* 2012, 136, 044317.
105. Xavier, F. G. D.; Kumar, S. Quantum dynamics of H+ + CO collisions. *Phys. Rev. A At., Mol., Opt. Phys.* 2011, 83, 042709/1-042709/9.
106. Mohan, A.; Sankararaman, S. 1,2,3-Triazolophanes-Cyclophanes with an Array of Molecular Structures and Supramolecular Architectures. *Isr. J. Chem.* 2012, 52, 92-104.
107. Saravanakumar, R.; Ramkumar, V.; Sankararaman, S. Synthesis and structure of 1,4-diphenyl-3-methyl-1,2,3-triazol-5-ylidene palladium cComplexes and application in catalytic hydroarylation of alkynes. *Organometallics* 2011, 30, 1689-1694.
108. Gharpure Santosh, J.; Prasad, J. V. K. Stereoselective synthesis of C-substituted morpholine derivatives using reductive etherification reaction: total synthesis of chelonin C. *J Org Chem* 2011, 76, 10325-31.
109. Gharpure Santosh, J.; Sathiyarayanan, A. M. Stereoselective synthesis of oxazino[4,3-a]indoles employing the oxa-Pictet-Spengler reaction of indoles bearing N-tethered vinylogous carbonate. *Chem Commun (Camb)* 2011, 47, 3625-7.
110. Gharpure Santosh, J.; Vijayasree, U.; Reddy, S. R. B. Stereoselective synthesis and applications of nitrogen substituted donor-acceptor cyclopropanes (N-DACs) in the divergent synthesis of azacycles. *Org Biomol Chem* 2012, 10, 1735-8.
111. Gharpure, S. J.; Porwal, S. K. Alkyl radical cyclization to vinylogous carbonates for the stereoselective synthesis of unsymmetrical dioxo-cage compounds: effect of conformation on the rate of cyclization versus reduction. *Tetrahedron* 2011, 67, 1216-1230.
112. S. J. Gharpure, V. P. Stereoselective Synthesis of 2,3-Disubstituted Dihydrobenzofuran using Alkyne Prins Type Cyclization to Vinylogous Carbonates. *J. Chem. Sci.* 2011, 123, 943.
113. S. J. Gharpure, L. N. N., and M. K. Shukla,. Enantioselective Total Synthesis of (+)-Hagen's Gland Lactones. *Eur. J. Org. Chem.* 2011, 6632.
114. Dandapat, A.; Korupalli, C.; Prasad, D. J. C.; Singh, R.; Sekar, G. An efficient copper(I) iodide catalyzed synthesis of diaryl selenides through CAr-Se bond formation using solvent acetonitrile as ligand. *Synthesis* 2011, 2297-2302.
115. Korupalli, C.; Dandapat, A.; Prasad, D. J. C.; Sekar, G. Copper(I)-BINOL-catalyzed domino synthesis of 1,4-benzoxathiines through C(aryl)-O bond formation. *Org. Chem. Int.* 2011, 980765, 7 pp.
116. Muthupandi, P.; Sekar, G. Chiral Zn-catalyzed aerobic oxidative kinetic resolution of α -hydroxy ketones. *Tetrahedron Asymmetry* 2011, 22, 512-517.
117. Muthupandi, P.; Sekar, G. Zinc-catalyzed aerobic oxidation of benzoin and its extension to enantioselective oxidation. *Tetrahedron Lett.* 2011, 52, 692-695.
118. Prasad, D. J. C.; Sekar, G. Cu-Catalyzed one-pot synthesis of unsymmetrical diaryl thioethers by coupling of aryl halides using a thiol precursor. *Org. Lett.* 2011, 13, 1008-1011.
119. Rao, R. K.; Sekar, G. Synthesis of optically active 1,4-benzoxazine derivatives using palladium-catalyzed coupling kinetic resolution. *Tetrahedron Asymmetry* 2011, 22, 948-954.
120. Thakur, K. G.; Ganapathy, D.; Sekar, G. D-Glucosamine as a green ligand for copper catalyzed synthesis of primary aryl amines from aryl halides and ammonia. *Chem. Commun. (Cambridge, U. K.)* 2011, 47, 5076-5078.
121. Thakur, K. G.; Sekar, G. D-Glucose as green ligand for selective copper-catalyzed phenol synthesis from aryl halides with an easy catalyst removal. *Chem. Commun. (Cambridge, U. K.)* 2011, 47, 6692-6694.
122. Thakur, K. G.; Srinivas, K. S.; Chiranjeevi, K.; Sekar, G. d-Glucosamine as an efficient ligand for the copper-catalyzed selective synthesis of anilines from aryl halides and NaN₃. *Green Chem.* 2011, 13, 2326-2329.
123. Alagarasi, A.; Viswanathan, B.; Selvam, P. Photocatalytic activity of mesoporous titania. *Prepr. Symp. - Am. Chem. Soc., Div. Fuel Chem.* 2011, 56, 154.
124. Anuradha, S.; Viswanathan, B.; Selvam, P. Synthesis of O-isopropylidene derivatives from D-glucose using sulfated metal oxides. *Prepr. Symp. - Am. Chem. Soc., Div. Fuel Chem.* 2011, 56, 9.

125. Kuppan, B.; Viswanathan, B.; Selvam, P. Platinum-supported nitrogen-doped ordered mesoporous carbon (Pt/NCMK-33) as electrocatalyst for direct methanol fuel cell applications. *Prepr. Symp. - Am. Chem. Soc., Div. Fuel Chem.* 2012, 57, 751-752.
126. S. Mahendran, T. N., K. P. Raju, B. Viswanathan, P. Selvam. Dehydration of glycerol over high surface area γ -alumina supported heteropoly acid catalysts. *Chemeca* 2011.
127. Doddi, A.; Kingston, J. V.; Ramkumar, V.; Suzuki, M.; Hojo, M.; Rao, M. N. S. Synthesis and Characterization of Dianionic Hexacoordinate Silicon(IV) Complexes of Substituted Catechols, Flavones, and Fluorone: X-Ray Crystal Structures of $[(n-C_3H_7)_2NH_2]_2[(C_4C_6O_2)_3Si]-3CH_3CN$ and $[(n-C_3H_7)_2NH_2]_2[(Br_4C_6O_2)_3Si]-2(CH_3)_2SO$. *Phosphorus, Sulfur Silicon Relat. Elem.* 2012, 187, 343-356.
128. Sivaramakrishna, A.; Rao, M. N. S. Synthesis and characterization of some phosphazanium chloride salts, $[R_3PNH_2]^+Cl^-$ (R = phenyl, p-chlorophenyl and morpholino). *Synth. React. Inorg., Met.-Org., Nano-Met. Chem.* 2011, 41, 147-149.
129. Bose Shubhankar, K.; Geetharani, K.; Ghosh, S. C-H activation of arenes and heteroarenes by early transition metallaborane, $[(Cp^*Ta)_2B_5H_{11}]$ ($Cp^* = \eta^5-C_5Me_5$). *Chem Commun (Camb)* 2011, 47, 11996-8.
130. Bose Shubhankar, K.; Geetharani, K.; Sahoo, S.; Reddy, K. H. K.; Varghese, B.; Jemmis Eluvathingal, D.; Ghosh, S. Synthesis, characterization, and electronic structure of new type of heterometallic boride clusters. *Inorg Chem* 2011, 50, 9414-22.
131. Bose Shubhankar, K.; Geetharani, K.; Varghese, B.; Ghosh, S. Condensed tantalaborane clusters: synthesis and structures of $[(Cp^*Ta)_2B_5H_7\{Fe(CO)_3\}_2]$ and $[(Cp^*Ta)_2B_5H_9\{Fe(CO)_3\}_4]$. *Inorg Chem* 2011, 50, 2445-9.
132. Bose, S. K.; Ghosh, S. Novel 11-Vertex, 11-Skeletal Electron Pair Tantalaborane of Unusual Shape. *Organometallics* 2011, 30, 4788-4791.
133. Bose, S. K.; Mobin, S. M.; Ghosh, S. Metallaheteroborane clusters of group 5 transition metals derived from dichalcogenide ligands. *J. Organomet. Chem.* 2011, 696, 3121-3126.
134. Chakrahari, K. K. V.; Dhayal, R. S.; Ghosh, S. Synthesis and characterization of binuclear μ -oxo and μ -telluro molybdenum(V) complexes, $[Cp^*Mo(O)(\mu-Te)]_2$. *Polyhedron* 2011, 30, 1048-1054.
135. Chakrahari, K. K. V.; Mobin, S. M.; Ghosh, S. New molybdaborane clusters with a bridged phosphido ligand. *J. Cluster Sci.* 2011, 22, 149-157.
136. Dhayal, R. S.; Joseph, P. S.; Sahoo, S.; Ghosh, S. Synthesis and structural characterization of an open cage dithiatungstaborane $[(CpW)_2B_4H_4S_2]$ cluster. *Indian J. Chem., Sect. A Inorg., Bio-inorg., Phys., Theor. Anal. Chem.* 2011, 50A, 1363-1368.
137. Dhayal, R. S.; Ramkumar, V.; Ghosh, S. Synthesis, structure and characterization of dimolybdaheteroboranes. *Polyhedron* 2011, 30, 2062-2066.
138. Ganesamoorthi, R.; Thakur, A.; Ghosh, S. Aqueous organometallic chemistry: synthesis and characterization of γ , δ unsaturated alkynyl substituted Fischer carbene complexes of group 6 transition metals. *Curr. Sci.* 2011, 101, 1347-1350.
139. Geetharani, K.; Bose Shubhankar, K.; Sahoo, S.; Ghosh, S. A family of heterometallic cubane-type clusters with an exo- $Fe(CO)_3$ fragment anchored to the cubane. *Angew Chem Int Ed Engl* 2011, 50, 3908-11.
140. Geetharani, K.; Bose Shubhankar, K.; Sahoo, S.; Varghese, B.; Mobin Shaikh, M.; Ghosh, S. Cluster expansion reactions of group 6 and 8 metallaboranes using transition metal carbonyl compounds of groups 7-9. *Inorg Chem* 2011, 50, 5824-32.
141. Geetharani, K.; Bose, S. K.; Basak, D.; Suresh, V. M.; Ghosh, S. A new entry into ferraborane chemistry: Synthesis and characterization of heteroferraborane complexes. *Inorg. Chim. Acta* 2011, 372, 42-46.
142. Geetharani, K.; Bose, S. K.; Ghosh, S. Synthesis and Structure of $[Cp^*Ru(CO)_2(\mu-H)\{RuFe_3(CO)_9\}]$: An Unusual Mixed-Metal Tetrahedral Cluster with an Exopolyhedral Metal Fragment. *Organometallics* 2011, 30, 191-194.
143. Thakur, A.; Ghosh, S. An Efficient Ferrocene Derivative as a Chromogenic, Optical, and Electrochemical Receptor for Selective Recognition of Mercury(II) in an Aqueous Environment. *Organometallics* 2012, 31, 819-826.
144. Thakur, A.; Sahoo, S.; Ghosh, S. A Homometallic Tricapped Cubane Cluster: $[(Cp^*Mo)_4B_4H_4(\mu_4-BH)_3]$ ($Cp^* = \eta^5-C_5Me_5$). *Inorg. Chem. (Washington, DC, U. S.)* 2011, 50, 7940-7942.
145. Thakur, A.; Sardar, S.; Ghosh, S. A Highly Selective Redox, Chromogenic, and Fluorescent Chemosensor for Hg^{2+} in Aqueous Solution Based on Ferrocene-Glycine Bioconjugates. *Inorg. Chem. (Washington, DC, U. S.)* 2011, 50, 7066-7073.

146. Naidu, S. A.; Varadaraju, U. V.; Raveau, B. Scheelite Based Red Phosphors for White LEDs. *J. Electrochem. Soc.* 2012, 159, J1-J4.
147. Reddy, M. A.; Varadaraju, U. V. Lithium Insertion into Niobates with Columbite-Type Structure: Interplay between Structure-Composition and Crystallite Size. *J. Phys. Chem. C* 2011, 115, 25121-25124.
148. Naidu, S. A. B., Sophie; Varadaraju, U. V.; Raveau, B. Eu³⁺ and Tb³⁺ emission in molybdenophosphate Na₂Y(MoO₄)(PO₄). *J. Electrochem. Soc.* 2012, 159(4), j122-j126.
149. Asiri Naidu, S. B., S.; Varadaraju, U. V.; Raveau, B. Photoluminescence properties of rare earths (Eu³⁺, Tb³⁺, Dy³⁺ and Tm³⁺) activated NaInW₂O₈ wolframite host lattice. *J. Solid State Chem* 2012, 185, 187-190.
150. Asiri Naidu, S. B., Sophie; Varadaraju, U. V.; Raveau, Bernard. A crystal chemical approach to tuning of emission properties in rare earth doped ternary niobates. *Journal of Materials Chemistry* 2012, 22(3), 1088-1093.
151. Asiri Naidu, S. B., S.; Varadaraju, U. V.; Raveau, B. . Host-sensitized emission of LiInW₂O₈ wolframites: From red-Eu³⁺ to white-Dy³⁺ phosphors *J. Solid State Chem.* 2011, 184(9), 2566-2570.
152. Pralong, V. R., M. Anji; Caignaert, V.; Malo, S.; Lebedev, O. I.; Varadaraju, U. V.; Raveau, B. . A New Form of LiNbO₃ with a Lamellar Structure Showing Reversible Lithium Intercalation. *Chemistry of Materials* 2011, 23(7), 1915-1922.
153. Mohitkar, S. A.; Kalpana, G.; Vidyasagar, K. Syntheses, structure and rare earth metal photoluminescence of new and known isostructural A₂Mo₄Sb₂O₁₈ (A = Ce, Pr, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu) compounds. *J. Solid State Chem.* 2011, 184, 735-740.
154. Keshav kumar and Ashok K. Mishra, 2012, Quantification of Ethanol in Ethanol- Petrol and Biodiesel in Biodiesel-Diesel Blends Using Fluorescence Spectroscopy and multivariate methods, *J Fluoresc.*, 22, 339–347.
155. Keshav Kumar and Ashok K. Mishra, 2011, Simultaneous quantification of dilute aqueous solutions of certain polycyclic aromatic hydrocarbons (PAHs) with significant fluorescent spectral overlap using total synchronous fluorescence spectroscopy (TSFS) and N-PLS, unfolded-PLS and MCR-ALS analysis, *Anal. Methods*, 3, 2616-2624.
156. Monalisa Mohapatra and Ashok K. Mishra, 2011, Effect of submicellar concentrations of conjugated and unconjugated bile salts on the lipid bilayer membrane, *Langmuir*, 27,13461-13467
157. Monalisa Mohapatra and Ashok K. Mishra, 2011, Photophysical Behavior of Fisetin in Dimyristoylphosphatidylcholine Liposome Membrane, *J. Phys. Chem. B*, 115, 9962–9970.
158. John Prakash and Ashok Kumar Mishra. 2011, White light excitation fluorescence (WLEF) Part I. Exploring the use in analytical fluorimetry. *Anal. Methods*, 3, 362.
159. John Prakash and Ashok Kumar Mishra. 2011, White light excitation fluorescence (WLEF) Part II. Analysis of complex multifluorophoric systems. *Anal. Methods*, 3, 368.
160. Susithra Selvam and Ashok K. Mishra, 2011, Multiple prototropism of fisetin in sodium cholate and related bile salt media, *Photochem. Photobiol. Sci*, 10, 66-75.
161. Anitha C. Kumar, Harikrishna Erothu, Himadri B. Bohidar, and Ashok K. Mishra, 2011, Bile-Salt-Induced Aggregation of Poly(N-isopropylacrylamide) and Lowering of the Lower Critical Solution Temperature in Aqueous Solutions, *J. Phys. Chem. B*, 115, 433–439
162. U. Subuddhi, Prasanna K. Vuram, A. K. Mishra and Anju Chadha, 2011, Photophysical investigation of microenvironment in glycerol based dansylated polyether dendrons, *Journal of Photochemistry and Photobiology*, 217, 411-416.
163. Monalisa Mohapatra and Ashok K. Mishra, 2010, 1-Naphthol as a Sensitive Fluorescent Molecular Probe for Monitoring the Interaction of Submicellar Concentration of Bile Salt with a Bilayer Membrane of DPPC, a Lung Surfactant, *J. Phys. Chem. B* 114, 14934–14940.
164. Prasanna K. Vuram, U. Subuddhi, Subrahmanian Tarakkad Krishnaji, Anju Chadha and A. K. Mishra, 2010, Synthesis and Aggregation Properties of Dansylated Glycerol-Based Amphiphilic Polyether Dendrons, *Eur. J. Org. Chem.* 2010, 5030–5040.

165. Kishore Kumar, Maneesha E. Andrews, V. Jayashankar, A. K. Mishra and S. Suresh, 2010, Measurement of viscoelastic properties of polyacrylamide-based tissue-mimicking phantoms for ultrasound elastography applications, IEEE Transactions on Instrumentation and Measurement, 59(5), 1224-1232.
166. S. Vijayalakshmi, R. Shuvasree, T. S. Chandra and A. K. Mishra 2010, Lipid accumulation and membrane fluidity influence mycelial stability and riboflavin production the riboflavinogenic fungus *Eremothecium ashbyii*, Internet Journal of Microbiology 8(1).
167. R.Sivasubramanian and M V Sangaranarayanan Detection of lead ions in picomolar concentration range using underpotential deposition of silver nanoparticles on glassy carbon electrode Talanta 85(2011)2142-2147
168. V Divya and M V Sangaranarayanan A facile synthetic strategy for mesoporous crystalline copper- polyaniline nanocomposites European Polymer Journal 48(2012)560-568
169. A.Muthukrishnan, Vadim P.Boyarsky, M V Sangaranarayanan and Irina Boyarskaya Mechanism and Regioselectivity in polychlorobiphenyls- Kinetic Analysis of successive chlorines in dichlorobiphenyls J.Phys Chem C 116(2012)655-664

d) In Proceedings of International Conferences:

1. Prof. A. K. Mishra, Fluorescent molecular probes based on ESPT in lipid bilayer membrane, SPIE, 21st – 26th Jan 2012.

Distinguished Visitors to the Department:

Sl. No	Name of the visitor and Designation	Date of visit	Purpose of visit
1	Dr. PANNURU VENKATESU Assistant Professor, Department of Chemistry University of Delhi	04.01.2011	Guest Lecture
2	Prof. KLAUS YVON University of Geneva, Switzerland	21.01.2011	Guest Lecture
3	Dr. J. NITHYANANDHAN POST DOCTORAL ASSOCIATE UNIVERSITY OF MIAMI CORAL GABLES, FL 33146, USA	14.01.2011	Guest Lecture
4	Prof. E. KRISHNAKUMAR TIFR, Mumbai	17.01.2011	Guest Lecture
5	Prof. Ray C F Jones Prof. of Organic & Biological Chemistry Dept. of Chemistry, Loughborough University Loughborough, Leics. LE11 3TU	02.02.2011	Guest Lecture
6	Dr. KARUNAKARAN VENUGOPAL Dept. of Physics, Northeastern University Boston, MA 02115, U.S.A	04.02.2011	Guest Lecture
7	Dr. JITENDRA MATA Bragg Institute, Australian Nuclear Science & Technology Organisation Kirrawee DC NSW 2232. Australia	15.02.2011	Guest Lecture
8	Dr. THOMAS J COLACOT, Johnson Matthey, West Deptford, NJ	21.02.2011	Guest Lecture
9	Prof. PARESH C RAY Jackson State University, USA	28.02.2011	Guest Lecture
10	Dr. RAJIB K. GOSWAMI	03.03.2011	Guest Lecture
11	Prof. BAKTHAN SINGARAM Dept. Of Chemistry, University of California Santa Cruz, USA	03.03.2011	Guest Lecture
12	Dr. PRADYUT GHOSH Indian Association for Cultivation of Science, Kolkata	15.03.2011	Guest Lecture
13	Dr. K.G. GUPTA Dept. of Chemistry, IIT Roorkee	23.03.2011	Guest Lecture

Sl. No	Name of the visitor and Designation	Date of visit	Purpose of visit
14	Dr. RAJARSHI CHAKRABARTI Dept. of Inorganic & Physical Chemistry Indian Institute of Science, Bangalore - 560012	31.03.2011	Guest Lecture
15	Dr. Sanjib K Patra School of Chemistry, University of Bristol Cantock's Close, Bristol BS8 ITS, UK	15.04.2011	Guest Lecture
16	Prof. JAYANT UDGAONKAR (IITM Distinguished Alumnus 2011) National Center for Biological Science Tata Institute of Fundamental Research, Bangalore	20.04.2011	Guest Lecture
17	Prof. S. SUNDAR MANOHARAN Dept. of Chemistry Indian Institute of Technology, Kanpur	28.04.2011	Guest Lecture
18	Prof. Arun Chattopadhyay Dept. of Chemistry Indian Institute of Technology	29.04.2011	Guest Lecture
19	Dr. WIDO SCHMIDT TZW: DVGW – Technologiezentrum Wasser Wasserwerkstr.2, Dresden Germany	26.04.2011	Guest Lecture
20	Prof. P. Sundararajan Dept. of Chemistry Carleton University, Ottawa, Canada	29.04.2011	Guest Lecture
21	Prof. N. Jayaraman Dept. of Organic Chemistry, IISC Bangalore	19.04.2011	Guest Lecture
22	Dr. Ashok Sekhar Biophysics Program and Dept. of Chemistry University of Wisconsin Madison, U.S.A	16.05.2011	Guest Lecture
23	Dr. GANESH PANDEY, FNA Division of Organic Chemistry National Chemical Laboratory, Pune - 411008	18.05.2011	Guest Lecture
24	Dr. GOUTAM DE Scientist and Head Nano-Structured Materials Division, Kolkata – 700 032	18.05.2011	Guest Lecture
25	Dr. PARTHA SARATHI MUKHERJEE Inorganic & Physical Chemistry Dept. Indian Institute of Science, Bangalore – 560 012	23.06.2011	Guest Lecture
26	Prof. Tanmaya Pathak Dept. of Chemistry Indian Institute of Technology, Kharagpur 721 302	01.07.2011	Guest Lecture
27	Prof. KAVIRAYANI PRASAD Dept. of Organic Chemistry, IISc Bangalore	08.07.2011	Guest Lecture
28	Prof. Eugene Chen Department of Chemistry, Colorado State University, USA	11.08.2011 18.08.2011 04.08.2011	Guest Lecture
29	Prof. ANIL KUMAR Chemistry Dept. & Center for Excellence in Nanoelectronics, IIT Bombay	09.08.2011	Guest Lecture
30	Prof. Dr. J.W (Hans) Niemantsverdriet Prof. Physical Chemistry of surfaces Editor Journal of Catalysis Schuit Institute of Catalysis P.O Box 513, 5600 MB Eindhoven, The Netherlands	04.08.2011	Guest Lecture
31	Dr. ALEXANDER STADLER Anton Paar GmbH, Austria	02.09.2011	Guest Lecture
32	Prof. K.V. RAMANATHAN NMR Research Centre Indian Institute of Science Bangalore	03.10.2011	Guest Lecture
33	Dr. VINOD KUMAR TIWARI Assistant Professor Dept. of Chemistry, BHU	14.10.2011	Guest Lecture

Sl. No	Name of the visitor and Designation	Date of visit	Purpose of visit
34	Dr. Jayanta Haldar Faculty Fellow New Chemistry Unit Jawaharlal Nehru Centre for Advanced Scientific Research Jakkur, Bangalore	07.10.2011	Guest Lecture
35	Dr. SURESH VALIYAVEETIL Associate Professor, Dept. of Chemistry National University of Singapore 3 Science Drive 3, Singapore - 117543	25.10.2011	Guest Lecture
36	Dr. KRISHNA P KALIAPPAN Professor of Chemistry, IIT Bombay Powai, Mumbai – 400 076	11.11.2011	Guest Lecture
37	Prof. ALOYSIUS SIRIWARDENA Charge' de Recherches CNRS Laboratoires des Glucides CNRS-UMR 6219 Universite de Picardie Jules Verne Rue St Leu, Amiens, France	28.11.2011	Guest Lecture
38	Prof. Dr. ROLAND A FISCHER Anorganische Chemie-II (Organometallics & Materials) Ruhr- Universitat Bochum D - 44870 Bochum, Germany	28.11.2011	Guest Lecture
39	JEAN – FRANCOIS HALET Laboratoire Sciences Chimiques de Rennes UMR 6226 CNRS- Universite de Rennes1 Avenue du General Leclerc F -35042 Rennes, France	08.12.2011	Guest Lecture
40	Prof. CARMEN NAJERA Dept. of Chemistry University of Alicante, Spain	05.12.2011	Guest Lecture
41	Prof. MIGUEL YUS Dept. of Chemistry University of Alicante ; Spain	05.12.2011	Guest Lecture
42	Prof. SOUMYAJIT ROY Dept. of Chemical Science IISER, Kolkata, Mohanpur Campus Mohanpur, Nadia	15.12.2011	Guest Lecture
43	Prof. RAJESH VISWANATHAN Dept. of Chemical Science Laboratory of Chemical Synthesis & Chemical Biology Case Western Reserve University 10900 Euclid Ave. Cleveland	20.12.2011	Guest Lecture
44	Dr. SHAMIK CHAKRABORTY Post Doctoral Research Fellow Chemical Resources Laboratory Tokyo Institute of Technology, Japan	03.01.2012	Guest Lecture
45	Prof. MICHAEL VEITH Leibniz Institute for New Materials, Saarbrucken, Germany	10.01.2012	Guest Lecture
46	Prof. MANJEET DESHMUKH Dept. of Pharmaceutics, Rutgers The State University of New Jersey NJ 08854, USA	12.01.2012	Guest Lecture
47	Prof. MANAS K GHORAI Dept. of Chemistry IIT Kanpur, Kanpur 208016	12.01.2012	Guest Lecture

Sl. No	Name of the visitor and Designation	Date of visit	Purpose of visit
48	Jr. Assoc. Prof. YUICHI NEGISHI Dept. of Applied Chemistry Faculty of Science Tokyo University of Science, Japan	27.01.2012	Guest Lecture
49	Prof. G. VENKATARATHNAM Refrigeration & Air Conditioning Laboratory Dept. of Mechanical Engineering	25.01.2012	Guest Lecture
50	Prof. RODERICK BATES Chemistry & Biological Chemistry Nanyang Technological University, Singapore	09.02.2012	Guest Lecture
51	Dr. JAYASHREE NAGESH Dept. of Chemistry & Theoretical Chemistry Institute University of Wisconsin – Madison, U.S.A	21.03.2012	Guest Lecture
52	Prof. SANGAM BANERJEE Surface Physics Division Saha Institute of Nuclear Physics, Kolkata – 700 064	30.03.2012	Guest Lecture
53	Dr. UPENDRA HARBOLA Asst. Professor IPC Department Indian Institute Science, Bangalore	19.04.2012	Guest Lecture
54	HANNU HAKKINEN Professor Dept. of Physics & Chemistry Scientific Director, Nanoscience Center (NSC), University of Jyvaskyla, Finland	26.04.2012	Guest Lecture
55	Dr. ROBIN RAS Academy Research Fellow Molecular Materials Department of Applied Physics Aalto University, Puumiehenkuja, Finland	26.04.2012	Guest Lecture

4.6 DEPARTMENT OF CIVIL ENGINEERING

4.6.1 Introduction:

The Department of Civil Engineering has been in existence since the inception of IIT Madras in 1959, and has grown into a full-fledged Department with specializations in all the major branches of Civil Engineering. The departmental activities embrace Planning, Design, Construction and Management. The academic programmes of the Department in B.Tech, Dual Degree, M.Tech, M.S. and Ph.D. are some of the best in the country, and perhaps, in the world. The faculty members have received advanced degrees and/or training from reputed Institutions in India, Germany, U.K., U.S.A., Canada, Netherlands, the former USSR, etc.

The activities of the Department are carried out under different disciplines, administratively organized into five Divisions namely Building Technology and Construction Management (BTCM), Environmental and Water Resources Engineering (EWRE), Geotechnical Engineering (GT), Structural Engineering (ST) and Transportation Engineering (TR). There are fourteen well-equipped laboratories attached to different divisions. Environmental and Water Resources Engineering and Structural Engineering Laboratories have received substantial initial funding from the Federal Republic of Germany.

4.6.2 Academic Programmes:

The Department provides training to students in both theoretical and practical aspects of Civil Engineering. The students are trained in the current state-of-the-art technologies to enable them to adapt themselves to fast changing technological developments in the world.

The Department has postgraduate programmes leading to Dual Degree, M.Tech., M.S., and Ph.D. degrees in various disciplines of Civil Engineering in addition to the undergraduate B.Tech. programme in Civil Engineering.

New discipline/branch introduced:

Chennai Metro Rail Limited sponsored 'Post Graduate Diploma Course in Metro Rail Technology and Management' to be flagged off with effect from July-November 2011 semester. This is an interdisciplinary User Oriented Programme of 2 Semesters duration.

New Courses introduced:

S. No.	Course No.	Title
1	GN 5001	Self Awareness
2	CE 5011	Advanced Design of Masonry Structures
3	CE 5013	Bituminous Technology
4	CE 5014	Sustainable Construction
5	CE 5015	Environmental Monitoring and Data Analysis
6	CE 5016	Sustainability in River Basin Management
7	CE 5336	Professional Ethics in Engineering Practice
8	CE 7014	Structural Safety of Historical Monuments

New lab(s) established:

Intelligent Transportation Systems Laboratory of Transportation Engineering Division.

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	60	57	56	32	6	211
Dual Degree	34	38	28	37	33	170
M.Tech.	93	87	2	0	0	182
M.S.	10	8	15	5	0	38
Ph.D.	42	27	32	10	27	138
Total	239	217	133	84	66	739

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue
Abroad:				
1	Krishna Kumar S	CE08S005	Proc. Of 13 th Intl. Conference of the International Association of Computer Methods and Advances in Geomechanics	9-11 May 2011 Melbourne,
2	Anjana Bhasi	CE08D008	3 rd International Conference on Geotechnical Engg. For Disaster Mitigation and Rehabilitation	18-20 May 2011 Semarang, Indonesia
3	Reshma K V	CE09M056		
4	Krishna Kumar S	CE08S005	Proc. Of 14 th Asian Regional Conference on Soil Mechanics and Geotechnical Engg.	23-27, May 2011 Hong Kong
5	Vasantha Kumar S	CE08D006	2011 IEEE Intelligent Vehicles Symposium	5-9 June 2011 Baden, Germany
6	Srinivas Arkatkar	CE05D007	6 th International Symposium on "Highway Capacity and Quality of Service	28 June – 1 July Stockholm, Sweden
7	Liju Joshua	CE08D003	28 th International Symposium on Automation and Robotics in Construction	29 June – 2 July Seoul, South Korea
8	Balu A S	CE06D017	11 th US National Congress on Computational Mechanics in Minneapolis, MN	25 – 29 July 2011, USA
9	Muthulingam S	CE10D028	International Conference on Advances in Civil Engg. (ACE11)	21-23 Oct. 2011 KL University, Vijayawada,
10	Chithra, V.S.	CE09D023	Workshop on Sustainable Urban Development Strategies in UK and India	28 – 29 Nov. 2011, Newcastle Univ., UK
11	Kalaiselvi R	CE05D031	162 nd meeting of Acoustical Society of America	31 Oct. – 4 Nov. 2011, San Diego
12	Balu A S	CE06D017	The International Conference on Structural Engineering Construction & Management 2011	15-17 Nov.2011 Sri Lanka
13	Balamurugan M	CE09D020	International Conference on Structural Engineering & Construction Management (ICSECM 2011)	15-18 Dec. 2011 Univ. of Peradenia, Kandy, Sri Lanka
14	Kalanand A	CE08S006		
15	Balu A S	CE06D017		
India:				
1	Vasudevan M	CE10D005	4 th International Ground Water Conference	27-30 Sept. 2011 Madurai
2	Berlin M	CE10D010		
3	Ambika S	CE10D018		
4	Mekala C	CE10D027		
5	Shaik Shabber Hussain	CE10S002	National Conference on Composites and Solid Mechanics,	7-8 Dec. 2011 Sardar Vallabhbai Patel Instt. Of Technology, Gujarat
6	Rahima Shabeen	CE04D011		
7	Anitha Priyadarshini S	CE10D004		
8	Kalanand A	CE08S006	21 st International Conference on Structural Mechanics in Reactor Technology (SMiRT 21)	6-11 Nov. 2011 New Delhi
9	Balu A S	CE06D017		
10	Arun C O	CE05D002		
11	Ambika S	CE10D018	International Conference on Environmentally sustainable Urban Ecosystems (ENSURE 2012)	24-26 Feb. 2012 IIT Guwahati
12	Aviraj Datta	CE08D007		

Names of students/scholars who won outside prizes and awards:

S.No.	Name of the Student / Scholar	Roll No.	Name of Prize	Prize awarded by
1	Ananya Rath	CE08B001	Best Innovative Structural Steel Design.	INSDAG, Kolkatta on 4 th August 2011
2	Srinivasan G D	CE08B040		
3	Tamanna Sriram Nihar	CE08B042		

4	Kanhurkar Nishant Ankush	CE08B078		
5	Prashant A	CE09B003	Aadhar 2011	Dalmia Cement and All India Management Association.
6	Chaitanya D	CE09B089		
7	Marimuthu V	CE09D005	Dr. Ramaiah Prize	International Journal of Constructional Steel Research
8	Ganesh A Devkar	CE05D021	Best Paper Award	The Built Environment Project and Asset Management Journal

Name of Students/Scholars who won Institute Convocation/Institute Day Prize:

Sl.No.	Name of the Student/Scholar	Roll No.	Name of Prizes	Name of Donor
1	Harshavardhan Ravichandran	CE06B054	Institute Merit Prize	Institute Day
2	Kanmani Chockalingam	CE07B017	Institute Merit Prize	
3	Srikant Menon	CE08B076	Institute Merit Prize	
4	Sridhar G	CE08M046	Rajnikant Gandhi Memorial Award	
5	Vikas Goel	CE08M102	Prof. Juergen Plaehn Prize	
6	Meenu Francis	CE09M031	Institute Merit Prize	
7	Jamsheeda K	CE09M073	Prof Gerhard Rouve Memorial Prize	
8	Gideon Chella Kumar	CE09M151	Institute Merit Prize	

4.6.3 Faculty and their activities:

Faculty:

Name and Qualifications	Major Area of Specialization
Professors	
Dr. P. Alagusundaramoorthy, Ph.D.(IITM)	Composite Technology
Dr. A.Boominathan, Ph.D. (Moscow)	Geotechnical Engineering
Dr. Devdas Menon, Ph.D. (IITM)	Structural Engineering
Dr. S.R.Gandhi, Ph.D. (IITM)	Geotechnical Engineering
Dr. Koshy Varghese, Ph.D. (Texas, Austin)	Building Technology and Construction Mgmt.
Dr. Ligy Philip (Ms.) Ph.D. (IIT Kanpur)	Environmental Engineering
Dr. M.S.Mathews, Ph.D. (IITM)	Building Technology and Construction Mgmt.
Dr. A.Meher Prasad, Ph.D. (RICE)	Structural Engineering
Dr. S.Mohan, Ph.D. (IISc., Bangalore)	Environmental & Water Resources Engineering
Dr. B.S.Murty, Ph.D. (Washington St)	Environmental & Water Resources Engineering
Dr. C V R Murty, Ph.D. (California Instt.of Tech.)	Structural Engineering
Dr. K.Rajagopal, Ph.D. (Florida)	Geotechnical Engineering
Dr. Rajib Basu Mallick, Ph.D. (Auburn Univ.)	Transportation Engineering
Dr. A. Ramachandirah Ph.D. (IITM)	Building Technology and Construction Mgmt.
Dr. K.Ramamurthy, Ph.D. (IITM)	Building Technology and Construction Mgmt.
Dr.Ravindra Gettu, Ph.D.(Northwestern)	Building Technology and Construction Mgmt.
Dr. S.R. Satish Kumar, D.Engg. (Nagoya Univ.)	Structural Engineering
Dr. K.N. Satyanarayana, Ph.D. (Clemson)	Building Technology and Construction Mgmt.
Dr. R.Sivanandan, Ph.D. (Virginia Tech.)	Transportation Engineering
Dr.K.Srinivasan, Ph.D. (IITM)	Water Resources Engineering
Dr. V.Thamizh Arasan Ph.D. (IITM)	Transportation Engineering
Dr. A. Veeraragavan Ph.D. (Bangalore University)	Transportation Engineering

Name and Qualifications	Major Area of Specialization
Associate Professors	
Dr. Amlan Kumar Sengupta Ph.D. (Univ. of Missouri)	Structural Engineering
Dr. K.Ananthanarayanan, Ph.D. (IITM)	Building Technology and Construction Mgmt.
Dr. G.Appa Rao Ph.D. (IISc. Bangalore)	Structural Engineering
Dr. Arul Jayachandran, Ph.D. (IIT Madras)	Structural Engineering
Dr. G.R.Dodagoudar Ph.D. (IIT Bombay)	Geotechnical Engineering
Dr. Karthik K Srinivasan Ph.D. (Texas, Austin)	Transportation Engineering
Dr. Manu Santhanam Ph.D. (Purdue Univ.)	Building Technology and Construction Mgmt.
Dr. J. Murali Krishnan, Ph.D (IIT Madras)	Transportation Engineering
Dr. B. Nageswara Rao, Ph.D (Iowa Univ.)	Structural Engineering
Dr.R.G.Robinson Ph.D. (IISc., Bangalore)	Geotechnical Engineering
Dr.K.P.Sudheer, Ph.D. (IIT Delhi)	Water Resources Engineering
Assistant Professors	
Dr. Arun Menon, Ph.D.(Univ. of Pavia, Italy)	Structural Engineering
Dr. Ashwin Mahalingam (Stanford Univ)	Building Technology and Construction Mgmt.
Dr. Balaji Narasimhan, Ph.D. (Texas A & M Univ.)	Water Resources Engineering
Dr. Dali Naidu Arnepalli, Ph.D. (IIT Bombay)	Geotechnical Engineering
Dr. Gitakrishnan Ramadurai, Ph.D.(Univ.of Rensselaer)	Transportation Engineering
Dr. Indumathi M Nambi, Ph.D.(Clarkson Univ.)	Environmental Engineering
Dr. Lelitha Devi, Ph.D. (Texas A&M)	Transportation Engineering
Dr. Radhakrishna G Pillai, Ph.D. (Texas A&M Univ.)	Building Technology and Construction Mgmt.
Dr. S T G Raghukanth, Ph.D. (IISc Bangalore)	Structural Engineering
Dr. Rupen Goswami, Ph.D. (IIT Kanpur)	Structural Engineering
Dr. Sachin S Gunthe, Ph.D. (IITM Pune)	Atmospheric Chemistry and Physics
Dr. U. Saravanan, Ph.D. (Texas A&M)	Structural Engineering
Dr. S.M. Shiva Nagendra, Ph.D. (IIT Delhi)	Environmental Engineering
Dr. Sivakumar Palaniappan, Ph.D. (Arizona State Univ.)	Building Technology and Construction Mgmt.
Dr. Subhadeep Banerjee, Ph.D. (NUS, Singapore)	Geotechnical Engineering
Dr. T. Thyagaraj, Ph.D. (IISc Bangalore)	Geotechnical Engineering
Dr. Vidya Bhushan Maji, Ph.D. (IISc Bangalore)	Geotechnical Engineering
Adjunct Faculty	
Dr. A. Ramakrishna	Building Technology and Construction Mgmt.
Dr. N. Raghavan	Structural Engineering
Dr. Peter Fiener	Environmental & Water Resources Engineering

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1	Maiya M P Shiva Nagendra S M	National Conference on Refrigeration and Air Conditioning (NCRAC 2011)	7 – 9 July 2011 IIT Madras

2	Ashwin Mahalingam	Engineering Projects and Organizers Conference 2011	10-12 August 2011 Denver, Colorado, USA
3	Rajagopal K	National Conference on Geosynthetics India 2011	23-24 Sept. 2011 IIT Madras
Workshop:			
1	Ligy Philip Carrie Mitchell, IDRC Kevin Hall, Guleph Univ.	Improving Drinking Water Quality and Sanitary Conditions in Underprivileged Communities of Urban Areas	IIT Madras 20.04.2011
2	Boominathan A	National Workshop on Geotechnical / Geophysical Investigations for Seismic Microzonation Studies of Urban Centres in India	19 August 2011 NDMA, New Delhi
3	Balaji Narasimhan	Advanced SWAT workshop at Tamil Nadu Agricultural University	16 – 18 Sept. 2011
4	Indumathi M Nambi	Onshore Petroleum Spills Case Studies in Indian and the Way Forward	7 Feb. 2012 IIT Madras
Short term Course:			
1	Ravindra Gettu	Concrete Technology	IIT Madras 23.04.2011
2	Appa Rao G	CEP on Fracture Mechanics of Concrete; Research and Applications	12 – 18 July 2011 IIT Madras
3	Ligy Philip Murty B S	Decentralized Wastewater Management in Urban Areas – for Officials from Urban Local Bodies	15-17 Sept. 2011 IIT Madras
4	Lelitha Devi V Shankar Ram C S	Recent Trends in Intelligent Transportation Systems	19-24 Sept. 2011 IIT Madras
5	Rajagopal K	Computational Geomechanics for Geotechnical Designs	21 Sept. 2011 IIT Madras
6	Robinson R G Thyagaraj T	Site Investigation and Design of Foundations for GMR Engineers	29 – 31 Dec. 2011 IIT Madras
7	Arun Menon Mathews M S	Structural Restoration of Historical Monuments	2 – 7 Jan 2012 IIT Madras
Training :			
1	Indumathi M Nambi Shiva Nagendra S M	Decentralized Wastewater Management – Treatment and Reuse	IIT Madras 10 – 12 Nov. 2011
2	Ravindra Gettu Satyanarayana K N	Advanced Training Programme in Construction Management for Engineers of Shapoorj and Pallonji Co. Ltd.	IIT Madras 6 – 12 Nov. 2011
3	Ravindra Gettu Ashwin Mahalingam	Advanced Training Programme in Construction Management for Engineers of Shapoorj and Pallonji Co. Ltd.	IIT Madras 14 – 18 Nov. 2011

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1	Indumathi M Nambi	Controlling GHG Emissions in The Water Treatment Industry	St. Malo, France	27-30 June 2011
2	Sivakumar Palaniappan	Candy Project Control – General (Estimating, Planning, Control and Forecast)	L & T Ltd, Chennai	28 June 2011
3	Boominathan A	Indo-Norwegian Workshop on Geohazards	Ministry of Earth Sci., Gol, New Delhi	12 – 14 Sept. 2011
4	Robinson R G	Ground Improvement Techniques	IGS Chapter, Thanjavur	15 Oct. 2011
5	Thamizharasan V	National Workshop on Development of Indian Highway Capacity Manual	CRRI, New Delhi	24 – 25 Nov. 2011
6	Boominathan A	Indo Japan Workshop on Earthquake Geotechnical Engg.	Cochin	14 Dec. 2011
7	Shiva Nagendra S M	Workshop on Sustainable Urban Development Strategies in UK and India	Newcastle Univ.	28 – 29 Nov. 2011
8	Rajagopal K	Dam Repair and Improvement Project (DRIP)	Central Water Commission, New Delhi	7 Dec. 2011

Sl. No.	Name of faculty	Title	Institution	Period
9	Gandhi S R	Ash Dyke Maintenance and Management	NTPC-PM, Noida	10 Feb. 2012
Seminar:				
1	Gandhi S R	Piling and Associated Problems	IGS, Kochi	7 May 2011
2	Amlan K Sengupta	Structural Repair & Retrofit Engg.	Jadavpur Univ. Kolkata	6 August 2011
3	Alagusundaramoorthy P	Repair Retrofitting & Rehabilitation	ACCE, Bangalore	23 Feb. 2012
4	Nageswara Rao B	Structural Analysis	RMK College of Engg., Chennai	25 Feb. 2012
Symposia:				
1	Indumathi M Nambi	Battelle's International Symposium on Bioremediation and Sustainable Environmental Technologies	RENO, Nevada, USA	7-10 June 2011
2	Koshy Varghese	15 th Intl. Symposium on Construction Engg. And Management	Taipei, Taiwan	26-29 June 2011
		28 th International Symposium on Automation and Robotics in Construction	Seoul, South Korea	29 June – 2 July 2011
3	Ananthanarayanan K	28 th International Symposium on Automation and Robotics in Construction	Seoul, South Korea	29 June – 2 July 2011
4	Lelitha Devi V	2011 IEEE Intelligent Vehicles Symposium	Baden, Germany	5-9 June 2011
5	Thamizharasan V	6 th Intl. Symposium on 'Highway Capacity and Quality of Service'	Stockholm, Sweden	28 June – 1 July 2011
6	Ravindra Gettu	Effective Use of Superplasticizers for Sustainable Concrete	Fortaleza, Brazil	29-31 March 2012
7	Lelitha Devi V	4 th Indo-American Frontiers of Engineers Symposium	Maryland, USA	29 Feb – 3 March 2012
Conference:				
1	Appa Rao G	American Concrete Institute Convention	Tampa, USA	3-8, April 2011
2	Murty C V R Rupen Goswami (Chaired a Session)	Intl. Conference on 'Post Disaster Reconstruction'	Gujarat State Disaster Mgmt. Authority, Gandhi Nagar	14-16, April 2011
3	Shiva Nagendra S M	The 2011 Transportation Planning, Land Use and Air Quality	San Antonia, Texas, USA	9-10 May 2011
4	Rajagopal K	3 rd Intl. Conference on Geotechnical Engg. For Disaster Mitigation and Rehabilitation	Semarang, Indonesia	18-20 May 2011
5	Saravanan U	2011 Annual Society of Experimental Mechanics Conference	Mohegan Sun, USA	13-16 June 2011
6	Balaji Narasimhan	2011 International SWAT Conference	Univ. of Castilla La Mancha, Toledo, Spain	15-17 June 2011
7	Veeraragavan A	10 th International Conference on Low Volume Roads	Transportation Research Board, USA-Oriando, Florida	24 – 28 July 2011
8	Nageswara Rao B	11 th US National Congress on Computational Mechanics	Minneapolis, MN, USA	25 – 29 July 2011
9	Shiva Nagendra S M	Asia Oceania Geosciences Society 2011 (AOGS 2011) Conference	Taipei, Taiwan	8-10 August 2011
10	Indumathi M Nambi	National Conference on Materials, Design and Construction (NCDMC 2011)	Vel Tech Univ., Avadi	26 August 2011
11	Ravindra Gettu	International Conference on Advances in Construction Materials through Science and Engineering	Hong Kong, Univ.	4 – 9 Sept. 2011
12	Gandhi S R	Deep Foundation Institute, USA Conference	Hyderabad	12 Sept. 2011
13	Koshy Varghese	13 th International DSM Conference	MIT Cambridge, USA	13 – 19 Sept. 2011

Sl. No.	Name of faculty	Title	Institution	Period
14	Satish Kumar S R	International Conference on Steel and Composite Structures	Seoul, Korea	18 – 23 Sept. 2011
15	Shiva Nagendra S M	Air Pollution 2011 Conference	Malta	19 – 21 Sept. 2011
16	Indumathi M Nambi and students from EWRE Division	4 th International Ground Water Conference	Yadhava College of Arts & Science, Madurai	27 – 30 Sept. 2011
17	Ravindra Gettu	International Conference on 'Concrete 2011: Building a Sustainable Future'	Concrete Institute of Australia, Perth	12 – 14 Oct. 2011
18	Gandhi S R (Chief Guest)	National Geotechnical Paper Presentation for student of Civil / Geotechnical Engg. Geoconcept 11	Indian Geotechnical Society, Indore	14 Oct. 2011
19	Appa Rao G Nageswara Rao B	International Conference on Advances in Civil Engg. (ACE11)	KL University, Vijayawada	21 – 23 Oct. 2011
20	Balaji Narasimhan	First National students Conference on River Basin Planning	IIT Kanpur	5 Nov. 2011
21	Nageswara Rao B	21 st International Conference on Structural Mechanics in Reactor Technology	New Delhi	6 – 11 Nov. 2011
22	Devdas Menon Gandhi S R	Infrastructure Conference 2011	PWD, Kerala State Thiruvananthapuram	18 Nov. 2011
23	Boominathan A	International Conference of Earthquake Analysis & Design of Structures, PSG Tech.	PSG Tech.	1 – 3 Dec. 2011
24	Gandhi S R	National Conference on Fly Ash	Hyderabad	6 Dec. 2011
25	Gandhi S R Boominathan A	Indian Geotechnical Conference	Cochin Univ. of Science and Technology, Kochi	5 – 17 Dec. 2011
26	Shiva Nagendra S M	International Conference of Transportation Research Group of India	Bangalore	7 – 10 Dec. 2011
27	Alagusundaramoorthy P	National Conference on Composites and Solid Mechanics,	Sardar Vallabhbhai Patel Instt. Of Technology, Gujarat	7 – 8 Dec. 2011
28	Appa Rao G	International Conference on Structural Engineering & Construction Management (ICSECM 2011)	Univ. of Peradenia, Sri Lanka	15 – 18 Dec. 2011
29	Thamizh Arasan V	First International Conference of Transportation Research Group of India	Indian Institute of Science, Bangalore	7 – 10 Dec. 2011
30	Satish Kumar S R Boominathan A	International Conference on Earthquake Analysis and Design of Structures 2011 (EQADS 2011)	PSG Tech., Coimbatore	1 – 3 Dec. 2011
31	Shiva Nagendra S M	International Conference on Sustainable Habitat : Modern Bamboo Structures For Mass Housing, Ecosan and Sustainable Livelihoods	Centre for Sustainable Development, New Delhi	9 – 11 Dec. 2011
32	Meher Prasad A Devdas Menon Satish Kumar S R Appa Rao G Nageswara Rao B Dodagoudar G R	International Conference on Structural Engineering and Construction Management (ICSECM 2011)	Univ. of Peradenia, Kandy, Sri Lanka	15 – 18 Dec. 2011
33	Nageswara Rao B	International Conference on Colombo Affordable Housing Project	Colombo, Sri Lanka	18 – 21 Dec. 2011
34	Koshy Varghese	Autodesk University 2011 Conference and Exhibition	Auto Desk Univ., Las Vegas, USA	29 Nov. – 1 Dec. 2011
35	Satyanarayana K N Ashwin Mahalingam	Joint CIB W070, W092 & TG 72 International Conference	Cape Town, South Africa	Jan. 2012

Sl. No.	Name of faculty	Title	Institution	Period
36	Gandhi S R	Recent Development in Civil Engineering	SRM University	21 March 2012
37	Indumathi M Nambi Ligy Philip	Environmentally Sustainable Urban Ecosystems (ENSURE 2012)	IIT Guwahati	24-26 Feb 2012
Training:				
1	Satish Kumar S R	Refresher Course on 'IS800-2007 for Professional Design Engineers	India Habitat Centre, New Delhi	24 – 25 Feb. 2012
2	Nageswara Rao B	Recent and Future Trends in Industrial Mathematics for Engineers	NIST, Berhampur, Odysa	24 March 2012
3	Arun Menon	Autodesk Conclave on Preparing Next Generation Designers and Engineers for Mechanical and Civil Industry	NITTTR, Taramani	12 March 2012

Special Lectures delivered by the faculty in other Institutions:

S. No.	Name of faculty	Topic of Lecture	Institution	Date
1	Murty C V R	Review Safety of Indian Nuclear Power Plants Against External Events	Atomic Energy Regulatory Board, Mumbai	10 April 2011
2	Murty C V R	Post Disaster Reconstruction	Gujarat State Disaster Management Authority, Gandhi Nagar	15 April 2011
3	Murty C V R	Disaster Mitigation and Rehabilitation of Structures,	Annamalai Univ.	25 April 2011
4	Shiva Nagendra S M	Urban Air Pollution Modelling	Maharaj Vijayram Gajapathi Raj College of Engineering	30 Sept. 2011
5	Gandhi S R	Failures in Geotechnical Engineering	Association of Consulting Engineers, Madurai	30 April 2011
6	Arun Menon	Disaster Mitigation	Annamalai Univ.	2 May 2011
7	Amlan K Sengupta	Seismic Retrofit of Buildings	Annamalai Univ.	4 May 2011
8	Murty C V R	Basics on Earthquake Engg.	GSDMA, Gandhi Nagar	21 May 2011
9	Koshy Varghese	Construction Management Education in India & China		27-28 June 2011
10	Satish Kumar S R	Limit State Method for Design of Steel Structures Based on IS:800	INSDAG, Kolkatta	28-29 June 2011
11	Satish Kumar S R	Limit State Method for Design of Steel Structures Based on IS:800	INSDAG, Kolkatta	27 – 28 July 2011
12	Boominathan A	Gersavanov Research Institute of Bases and Underground Structures	Moscow, Russia	21 July 2011
13	Nageswara Rao B	Finite Element Analysis	Vel Tech Dr.RR & Dr.SR Tech. Univ., Avadi	July 2011
14	Gandhi S R	Case Study on Failures in Geotechnical Engineering	JNTU Univ. Kakinada	31 July 2011
15	Amlan K Sengupta	A Comparison of IS 456: 2000 and ACI 318-08 Codes	International Institute of Informational Technology, Hyderabad	20 August 2011
16	Gandhi S R	Under Ground excavations	Deep Foundation Instt., Hyderabad	12 Sept. 2011
17	Boominathan A	Seismic Site Characterization of Chennai City using Geophysical & Geotechnical Data	Ministry of Earth Sciences, New Delhi	12 Sept. 2011
18	Boominathan A	Seismic Microzonation Studies for Chennai City	IIT Bombay	30 Sept. 2011
19	Gandhi S R	Geotechnical Failures	IIT Hyderabad	6 Oct. 2011

S. No.	Name of faculty	Topic of Lecture	Institution	Date
20	Gandhi S R	Deep Excavations	Indian Geotechnical Society, Indore	14 Oct. 2011
21	Ravindra Gettu	Utilization of self compacting and fibre concretes	Curtin University, Perth	10 Oct. 2011
22	Ravindra Gettu	Challenges in Production of self compacting concrete	Boral construction Materials, Peerth	11 Oct. 2011
23	Devdas Menon	Ego Mechanics	ISTE Chapter, SSN College of Engg., Chennai	15 Oct. 2011
24	Satish Kumar S R	INSDAG	INSDAG Kolkata	4 – 5 Nov. 2011
25	Indumathi M Nambi	Planning & Delivering Urban Infrastructure for Chennai	Chennai	5 Nov. 2011
26	Indumathi M Nambi	5 th World Aqua Congress	New Delhi	16 – 18 Nov. 2011
27	Balaji Narasimhan	First National Students Conference on River Basin Planning,	IIT Kanpur	5 Nov. 2011
28	Devdas Menon	Design and Maintenance of Bridges	PWD, Kerala State Thiruvananthapuram	16 – 18 Nov. 2011
29	Gandhi S R	Foundation for Bridges	PWD, Kerala State Thiruvananthapuram	16 – 18 Nov. 2011
30	Thamizh Arasan V	Indian Traffic and Transport Scenereo	Seoul National University, Korea	19 Nov. 2011
31	Satish Kumar S R	Design for Compression Members & Design of Members subjected to Combined Forces	Anna Univ. Chennai	25 – 26 Nov. 2011
32	Rajagopal K	Use of Geosynthetics for Improving the Quality of Highway Pavements	L&T ECC Quality Week Celebrations, Chennai-Tada Site Office	26 Nov. 2011
33	Satish Kumar S R	INSDAG	Institution of Engineers, Pune	7 – 8 Dec. 2011
34	Satish Kumar S R	PEBS Pennar,	Hyderabad	28 – 29 Dec. 2011
35	Shiva Nagendra S M	Environmental Auditing	Tamil Nadu Pollution Control Board, Chennai	30 Jan. 2012
36	Indumathi M Nambi	Waste Water Reuse and Water Footprint	RMK College of Engg.	01 Feb. 2012

Visits abroad by faculty:

SI.No.	Name of faculty	Country Visited	Date	Purpose of visit
1	Appa Rao G	USA	3-8, April 2011	ACI Convention, Tampa
2	Gandhi S R	Malaysia	25-26, April 2011	Consultancy for Foundation of Iron Palletisation Plant, Lumupth, Malaysia
3	Shiva Nagendra S M	USA	9-15, May 2011	Intl. Conf. and University visit
4	Boominathan A	Australia	9-14, May 2011	Intl. Conf. and University visit
5	Boominathan A	Singapore	16-17, May 2011	University visit
6	Rajagopal K	Indonesia	18-20 May 2011	Intl. Conf. Semarang
7	Appa Rao G	Germany	1 May – 28 June 2011	Von Humboldt Fellowship and Univ. visit
8	Devdas Menon	Austria	4-7 June 2011	Visit to Vienna Univ. and DOKA Industry (Farmwork Manufacturers)
	Devdas Menon	Czech	8-10 June 2011	Paper presentation in a Symposium Pregue
9	Lelitha Devi V	Greece & Germany	30 May – 9 June 2011	Univ. visit, Greece International Symposium, Baden
10	Shiva Nagendra S M	UK	5-14 June 2011	UKIERI Sponsored project meeting, New Castle Univ.
11	Indumathi M Nambi	France	7-10 June 2011	Universities Club Meeting & Visit to Water Treatment Plants, St.Malo
12	Indumathi M Nambi	USA	27-30 June 2011	International symposium on Bioremediation, Nevada

13	Balaji Narasimhan	Spain	14-17 June 2011	International Conference, Toledo
14	Gandhi S R	Malaysia	15 – 18 June 2011	Visit to Univ. Teknologi Malaysia
15	Thamizharasan V	Sweden	24 June – 1 July 2011	International Symposium & Univ. visit, Stockholm
16	Koshy Varghese	Taiwan	26 – 29 June 2011	International Symposium, Taipei
17	Koshy Varghese	South Korea	29 June – 2 July 2011	International Symposium, Seoul
18	Ravindra Gettu	France	27 – 30 June 2011	Scientific Panel Meeting of Lafarge, Paris
19	Ananthanarayanan K	South Korea	27 June – 2 July 2011	International Conference and Pre Conference Meeting of ACIT, Seoul
20	Ligy Philip	Australia	1 – 15 July 2011	Visiting Academic, Univ. of Queens Land
21	Ashwin Mahalingam	UK	13 – 25 July 2011	Invited lectures and Research Collaboration, Univ. of Reading
22	Gandhi S R	Malaysia	19-20 July 2011	Site Inspection M/s Vale, Lumut Malaysia
23	Veeraragavan A	USA	24-28 July 2011	10 th International Conference on Low Volume Roads, Transportation Research Board, USA-Oriando
24	Nageswara Rao B	USA	25-29 July 2011	US National Congress on Computational Mechanics, Minneapolis
25	Boominathan A	Russia	21 – 29 July 2011	Paper Presentation, Univ. visit and International Symposium in Moscow and Khabarovsk
26	Sudheer K P	USA	3 – 11 Augt 2011	Annual International Meeting, Paper Presentation and University visits, Kentucky and West Lafayette
27	Ashwin Mahalingam	USA	7-11 August 2011	International Conference and Paper Presentation, Colorado
28	Shiva Nagendra S M	Taiwan	8 – 12 August 2011	International Conference and Paper Presentation, Taipei
29	Ravindra Gettu	China	30 Aug. – 2 Sept. 2011	University visit
30	Ravindra Gettu	China	4 – 7 Sept. 2011	International Conference, Hong Kong
31	Koshy Varghese	USA	13 – 19 Sept. 2011	International DSM Conference, Cambridge and University visits
32	Satish Kumar S R	Korea	18 – 23 Sept. 2011	International Conference, Seoul
33	Shiva Nagendra S M	Malta	19 – 21 Sept. 2011	International Conference, Malta
34	Ravindra Gettu	Australia	10-20 Oct. 2011	International Conferences and Invited Lectures
35	Ramachandraiah A	USA	24 – 28 Oct. 2011	Visit to Arizona State Univ.
36	Thamizh Arasan V	Japan	15 – 17 Nov. 2011	Group Meeting of the World Conference on Transport Research, Nagoya
37	Thamizh Arasan V	Korea	18 – 20 Nov. 2011	Visit to Seoul National University
38	Meher Prasad A Devdas Menon Satish Kumar S R Appa Rao G Nageswara Rao B Dodagoudar G R	Sri Lanka	15 – 18 Dec. 2011	International Conference, Univ. of Peradenia, Kandy
39	Nageswara Rao B	Sri Lanka	18 – 21 Dec. 2011	International Conference, Colombo
40	Koshy Varghese	USA	29 Nov. – 23 Dec.	International Conference and University visits
41	Shiva Nagendra S M	UK	26 Nov. – 3 Dec. 2011	Workshop and Project Meeting, New Castle University

42	Arun Menon Murty C V R Meher Prasad A	Italy	18 – 24 Jan. 2012	Project Review Meeting, Pavia Univ.
43	Ashwin Mahalingam	South Africa	19 – 25 Jan. 2012	Visit to Witwatersrand University, Johannesburg and International Conference at Cape Town
44	Alagusundaramoorthy P	USA	23 – 26 Jan. 2012	Annual Meeting of Transportation Research Board, Washington
45	Lelitha Devi V	USA	29 Feb. – 3 Mar 2012	International Symposium, Maryland
46	Ravindra Gettu	France	12-13 March 2012	RILEM Meetings, Paris
47	Ravindra Gettu	Brazil	29-31 March 2012	International Symposium, Fortaleza
48	Appa Rao G	USA	17-29 March 2012	Spring Convention of American Concrete Institute, Dallas and Visit to Univ. of Juarez Del Estado
49	Ligy Philip	Israel	4 – 6 March 2012	Part of Indian Delegation for Waste and Water Management.

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
i. Honours:					
1	Veeraragavan A Lt. Col. Shailendra Grover	CPWD Medal	Indian Road Congress, Lucknow	72 nd Annual Session of the Indian Roads Congress, Lucknow	3 Nov. 2011
ii. Awards:					
1	Lelitha Devi V	Indian Nodal PI for an Indo-US Science & Technology Forum (IUSSTF)	Indo-US Joint R & D Network Joint		July 2011
2	Arul Jayachandran	Dr. Ramaiah Prize	International Journal of Constructional Steel Research		
3	Mathews M S	Reach Foundation	Dr. T Sathyamurthy, Chairman, Reach Foundation	Chennai	01 Dec. 2011
4	Satyanarayana K N	PMI Distinguished Scholar Award 2011	Project Management Institute, Mumbai	PMI Research and Academic Conference 2011, Pune	9 Dec. 2011
5	Satyanarayana K N Ashwin Mahalingam	Best paper Award	The Joint CIB W070, W092 & TG 72 International Conference	Delivering Value to the Community	Jan 2012
6	Satyanarayana K N	Best Paper Award	The Built Environment Project and Asset Management Journal	External Agencies for Supplementing Competencies in Indian Urban PPP Projects: A Perception Analysis	Jan 2012
7	Ashwin Mahalingam Satyanarayana K N Geert Dewulf Stephan Jooste	Best Paper Award	The Procurement Theme	The Transition Towards a Sustainable PPP Regime	Jan 2012
8	Manu Santhanam	Outstanding Young Concrete Engineer 2011	Indian Concrete Institute	Institution of Engineers (India)	
9	Manu Santhanam	Corps of Engineers Prize	Indian Concrete Institute	Institution of Engineers (India)	

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1.	Thamizharasan V Shriniwas Arkatkar (Formerly Research Scholar)	Quantifying Traffic Flow on Intercity Roads	VDM Verlag Dr. Muller GmbH & Co, Germany	Author
2.	Thamizharasan V Divya G	Traffic Concentration and Level of Service of Roads	VDM Verlag Dr. Muller GmbH & Co.KG	Author
3.	Nageswara Rao Balu A S	Structural Reliability Bounds: Under Mixed Uncertainties	Lambert Academic Publishing AG & Co. KG Germany	Author
4.	Thamizh Arasan V Vedagiri P	Planning for Priority For Public Transport	VDM Publishing, Germany	Author

Fellowships of Academies and Professional Societies:

Details	Name of faculty	Year of admission
Others:		
Member, PM's Council on Trade and Industry, Ministry of Water Resources, Govt. of India, New Delhi	Gandhi S R Srinivasan K	3 years from July 2011
Central Jury Member of National Student Award Competition 2010-11 for Civil Engineering Students, INSDAG Office, Kolkatta	Satish Kumar S R	8-9 August 2011
Honorary Research Associate, Univ. of Cape Town, South Africa	Manu Santhanam	5 years
Member, Highway Research Board of the Indian Roads Congress	Veeraragavan A	2012-2014
External Member of the Board of Studies in Civil Engg., (PG – Environmental Engg.) Sri Venkateswara University, Tirupati	Shiva Nagendra S M	2012-2014
Member, Board of Studies in Environmental Engineering, Sri Jayachamarajendra College of Engg., Mysore	Shiva Nagendra S M	2012-13

Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name
1	Rajagopal K	Editorial Board Member	Indian Geotechnical Journal
2	Veeraragavan A	Editorial Board Member	International Journal of Pavement Research and Technology

4.6.4 Design and Development Activities:

Brief and specific details of Process/Instruments/Equipment/ Software designed and developed:

New facilities added or major equipment procured:

Sl.No.	Name of Equipment	Value (Rs. in lakhs)
1	Controller for adiabatic calorimeter	109920
2	Modification of pan mixer	168000
3	pundit lab with std accessories	236415
4	Upgradation of existing servo hydraulic system	1888760
5	Profile grinder & diamond tool bit	800000
6	5 KVA Numeric UPS	98433
7	AAS Fume hood	100100
8	Sampler transducer kit,	608880
9	Centralised vacuum system	119530
10	Sieve shaker ultra sonic bath	310272
11	Automatic triaxial system	1053265
12	Flexible wall permeater with toxic interface	816419
13	Respirable dust sampler	143300

14	Nikon japan trinocular microscope	978788
15	Students desk cum bench	123750
16	DUC for FTGT controller	961950
17	Deep freezer capacity 270 lts	156758
18	Core cutting machine	264444
19	Test sieve shaker with accessories	509600
20	Pundit Lab with std accessories	236415
21	Upgradation of servo hydraulic system	1888760
22	Profile grinder	740000
23	Sieve shaker	310272
24	Automatic Triaxial System	984578
25	Flexible wall permeater	816419
26	Test Sieve shaker with accessores	509600
27	3500 Ansi Lumen projector	110040
28	Hp compaq 8200 system	213844
29	Hp compaq 8200 system	354918
30	empty scrap container	226667
31	Dell systems & lapton	106300
32	CO measuring analyzer	468359
33	CO2 analyzer	468359
	Total	16883115

4.6.5 Research and Consultancy:

5.1 Sponsored Research Projects:

- No. of Project - 15
- Value of Project - 429.63 lakhs

S. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	Development and verification of a surface energy balance model using thermal remote sensing data assessment of crop water use and irrigation efficiency	8/17/2011 8/16/2014	Department of Science & Technology	22.35	Balaji Narasimhan
2	Biohydrometallurgy for metal recovery and stabilization of mining waste	4/28/2011 10/27/2011	Norut Narvik	5.18	Ligy Philip
3	Seismic vulnerability assessment of building types in India	7/11/2011 7/10/2012	National Disaster Management Authority	25.20	Arun Menon Meher Prasad A Murty C V R Devdas Menon
4	Intelligent transportation systems technologies	7/25/2011 7/24/2013	Indo-US Science & Technology Forum	41.71	Lelitha Devi V
5	The changing risks posed by petroleum hydrocarbons in groundwater environments: Multiphase fluid dynamics coupled to multispecies biodegradation	11/9/2011 11/8/2014	Department of Science & Technology	39.26	Indumathi M Nambi Ravikrishna R Suresh Kumar G
6	Finite fault slip models for past earthquakes in Indian by spectral finite element method	1/19/2012 1/18/2015	Ministry of Earth Sciences, New Delhi	10.10	Raghukanth S T G
7	New building system for affordable mass housing using glass fibre reinforced gypsum (GFRG) panels	1/10/2012 1/9/2015	Department of Science & Technology	131.36	Devdas Menon Meher Prasad A
8	Mw=8.0 kalka earthquake disaster scenario and national exercise	3/19/2012 3/18/2013	National Disaster Management Authority	25.20	Murty C V R

S. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
9	Enhancement and field trials of free and open source GIS software	3/9/2012 3/8/2015	Ministry of Rural Development	56.47	Koshy Varghese Lakshmana Rao C Sudheer K P Balaji Narasimhan Palaniappan Ramu
10	User Oriented Programmes	3/28/2012 3/27/2013	Indian Institute of Technology Madras	10.00	Koshy Varghese
11	Service life prediction, corrosion inhibition and corrosion detection of prestressed concrete structures	4/26/2011 4/25/2014	New Faculty Scheme	8.00	Radhakrishna G Pillai
12	Towards sustainable built environment: A study on embodied energy of construction materials and buildings	5/26/2011 5/25/2014	New Faculty Scheme	5.00	Sivakumar Palaniappan
13	Characterizing atmospheric aerosol properties in South Indian region	11/8/2011 11/7/2014	New Faculty Scheme	18.00	Sachin S Gunthe
14	A multi-scale approach for effective recycling of pavements in India with the help of nanodestructive testing and molecular dynamics modeling	12/1/2011 11/30/2013	New Faculty Scheme	13.80	Rajib Basu Mallick
15	Effect of anisotropy on nonlinear behaviour of Indian marine clay subjected to earthquake/cyclic loading	2/20/2012 2/19/2015	New Faculty Scheme	18.00	Subhadeep Banerjee

Industrial Consultancy projects: (on going & new)

No. of Project - 182; Value of Project - 725.64 lakhs

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
1	Gandhi S R	Slope restoration at MRPL Township	Mangalore Refinery & Petrochemicals Ltd.,	2.21
2	Appa Rao G	Proof checking of Railway Composite Bridges	M.P. Construction & KRV Infrastructures	3.00
3	Gandhi S R	Foundation for DB power plant at Raigarh	Larsen and Toubro Limited	2.21
4	Devdas Menon	Proof checking of ROB @ Km. 5+000 on NH 17	Navayuga Engineering Company Limited	1.49
5	Thamizh Arasan V	Evaluation of polymer modified Bitumen	BR Arora Associates Pvt. Ltd.,	0.92
6	Thamizh Arasan V Dali Naidu Arnepalli	Damage Control of Airport Pavement	Airports Authority of India	1.54
7	Gandhi S R	Proof checking of design of ash pond and rain water disposal pond	MN Dastur & Company Private Ltd	1.65
8	Boominathan A	DPL testing at GSPCL site in Kakinada	Larsen and Toubro Limited	9.10
9	Boominathan A	Block Vibration test for GTG Foundation	Sew Infrastructure Ltd.,	1.10
10	Devdas Menon Gandhi S R	Design of foundation and super structure at Betul and Achara point	Directorate of Lighthouses & Lightships	1.65
11	Meher Prasad A	Proof checking of design & structure /drawings for IISER Pune project	C R Narayana Rao	2.50
12	Devdas Menon	Load transfer test and Anchorage efficiency test for 1206	Tech9 Engineering Solutions Pvt. Ltd.,	2.21

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
13	Dodagoudar G R	Proof checking and foundation associated connection details for Indian Oil Corporation Limited, Bottling Plant at Trichy	Geo Marine Consultants Pvt. Ltd.,	0.80
14	Dodagoudar G R	Evaluation of design for ESIC medical college at Rajaji Nagar	Isa Structural Studio	0.90
15	Dodagoudar G R	Evaluation of design for ESIC hospital	Isa Structural Studio	0.90
16	Dodagoudar G R	Evaluation of design for ward block ESIC medical college & hospital	Isa Structural Studio	0.90
17	Thyagaraj T Robinson R G	Recommendation for the foundation system for residential project at Tondiarpet	Emaar MGF Land Private Limited	3.97
18	Appa Rao G	Testing of high tensile steel strand	Vijay Nirman Company P. Ltd.,	0.46
19	Arul Jayachandran S	Quality assessment of composite steel plate girders	IRCON International Ltd.,	1.10
20	Thyagaraj T Boominathan A	Stabilization of clayey soils with soil stabilizer STABILIG	Stabilig Road Solutions Pvt. Ltd.,	1.54
21	Alagusundaramoorthy P	Testing and analyzing of PC strands	Six Construct-Rizzani De Eccher J V	9.20
22	Gandhi S R	Proof checking of foundation design at OMPL	Hindustan Dorr-Oliver Limited	0.33
23	Devdas Menon	Testing load transfer tests on anchorage system	BBR (INDIA) LTD	1.10
24	Devdas Menon	Proof checking of ROB superstructure and substructure for ROB - 2 at RPR road	Pragati Consultants	1.49
25	Appa Rao G	concrete design mix for M15, M25, M30 and M35 grade	National Highways Authority of India	1.35
26	Appa Rao G	Non-destructive testing of existing mill foundations at Mysore, Madya Karnataka	K C P Limited	1.50
27	Satish Kumar S R	Proof checking of steel bow string arch	L & T Ramboll Consulting Engineers Ltd.,	1.10
28	Satish Kumar S R	Structural calculation of 45T EOT crane	REVA Industries	0.30
29	Satish Kumar S R	Proof checking of cold roll formed purlines design	Metal Kraft	0.20
30	Boominathan A	Dynamic test at NTPC Dhuvaran Site (Gujarat)	KCT Consultancy Services	3.31
31	Satish Kumar S R	Proof checking of the design of ROBs	Soma Enterprise Limited	5.52
32	Satish Kumar S R	Design calculation - Proof checking	Zamil Steel Buildings (I) P. Ltd.,	0.72
33	Thyagaraj T Gandhi S R	Recommendations for lateral pile capacity and zone of moisture change for DGEN mega power project	Siemens India Ltd.,	0.44
34	Devdas Menon	Testing of flat anchorage efficiency	Ultracon Structural Systems Pvt Ltd.,	1.32
35	Devdas Menon	Proof checking of the designs and drawings of 3 Nos of ROB's in the state of Bihar	Gammon India Ltd.,	6.45
36	Thamizh Arasan V	Mix design for highway pavement layers	JMC Constructions Pvt. Ltd.,	1.10
37	Meher Prasad A Arul Jayachandran S	Proof checking of design for pipe bridge over railway line-Kawai thermal power project	Adani Infra (India) Ltd.,	1.10

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
38	Devdas Menon	Proof checking for structural design vetting consultancy services of green building office complex at Tripura Asset	Oil and Natural Gas Corporatoin Ltd.,	6.18
39	Devdas Menon	Proof checking for structural design vetting consultancy services of residential complex of 90 units of 'C' type Quarters, Auditorium complex and Mini Shopping Center at Tripura Asset	Oil and Natural Gas Corporatoin Ltd.,	7.17
40	Meher Prasad A	Testing of LADder Beam	Leighton India Tril Infopark Ltd.,	0.55
41	Robinson R G Gandhi S R	Evaluation of vertical drain installation at Koyambedu Depot	Chennai Metro Rail Limited	0.33
42	Meher Prasad A	Testing of wall panels	JNTU College of Engineering	0.50
43	Alagusundaramoorthy P	Testing of HT strands	Common Code	4.00
44	Devdas Menon	Proof checking of design & drawing of road over bridge at chainage 48.676Km of four laning of Deoli-Kota section of NH-12 from Km.165.000 to junction of NH-76 on Kota Bypass (approximate length of 83.04km) in the state of Rajasthan on built, Operate and Transfer(Toll) basis on DBFOT pattern under NHDP phase III	GVK Deoli Kota Expressway Pvt. Ltd.,	4.85
45	Devdas Menon	Proposed construction of road over bridge at Km.106/000-100 between Ernakulam town and Ernakulam Junction Stations	Delhi Metro Rail Corporation Ltd.,	4.14
46	Devdas Menon	Testing of Duct tests and wobble and friction, Bond element	Rex Polyestrusion Ltd.,	12.79
47	Arul Jayachandran S	Design checking of a large top hung steel door frame and panels	CV Consultants	0.75
48	Appa Rao G	Testing of high tensile steel wires	Vijay Nirman Company P. Ltd.,	0.46
49	Meher Prasad A	Testing of fatigue test of cowhorn assy	Wheels India Ltd	10.83
50	Gandhi S R	Foundation for Iron Ore Plant in Malaysia	Aegis Limited	7.72
51	Rajagopal K	Recommendation of creep strength properties of Geogrida	Vijay Nirman Company P. Ltd.,	2.21
52	Gandhi S R	Stability check for ash dyke at Talcher super thermal power station	National Thermal Power Corporation Ltd.,	3.86
53	Appa Rao G	Proof Checking of Design of PSC I Girder Bridges	Alankar Constructions	1.20
54	Arul Jayachandran S	Proof checking and approval of design calculation of shelving system for NTPC	Godrej & Boyces Manufacturing Co. Ltd.,	0.66
55	Satish Kumar S R	PEB design for BEML phase II Project	Lloyd Insulations (India) Ltd.,	0.66
56	Satish Kumar S R	Vetting the design calculation	Tata Blue Scope Steel	1.35
57	Satish Kumar S R	Proof checking of design & drawing	Rites Limited	2.10
58	Manu Santhanam	Investigation of RCC chimney	Reliance Infrastructure Ltd.,	5.51
59	Ramachandraiah A	Acoustical design of Auditorium	Corporation of Chennai	1.76
60	Ravindra Gettu	Toughness Characterization of Novocon Fibres for Concrete	Nina Concrete Systems Pvt. Ltd.,	1.38

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
61	Appa Rao G	Proof checking of first IT building for Cyber Park, Calicut and stability assessment	Cyber Park Building	13.24
62	Indumathi M Nambi	Design of treatment scheme for pharmaceutical industrial estate of SIDCO	Tamilnadu Small Industries Development Corp. Ltd.,	5.52
63	Devdas Menon	Testing of load testing of L&T formwork components	Larsen and Toubro Limited	1.08
64	Dali Naidu Arnepalli Rajagopal K	Design of cover system for secured landfill at Hindustan Zinc Limited	Gareware-Wall Ropes Ltd.,	3.31
65	Ligy Philip	Vetting of scheme for sewage treatment plants and sewage line	Acme Tele Power Limited	2.76
66	Alagusundaramoorthy P	Proof checking the design of hanger buildings for Navy	Surface Tech. India Pvt. Ltd.,	4.41
67	Alagusundaramoorthy P	Repair and Rehabilitation of a fire damaged building with FRP composites	Larsen and Toubro Limited	2.76
68	Dali Naidu Arnepalli	Evaluation of Tensile Characteristics of HDPE Liner	Project Implementation Unit	0.50
69	Alagusundaramoorthy P	Testing and analyzing of HR Coils	Larsen and Toubro Limited	2.48
70	Devdas Menon Meher Prasad A	Proof checking / peer review of structural design - group housing project at Sector - 58, Gurgaon, Haryana	Ireo Residences Company Pvt. Ltd.,	17.92
71	Devdas Menon Meher Prasad A	Proof checking / peer review of structural design - Hotel / Office project at Sector - 58, Gurgaon, Haryana	Ireo Hospitality Company Pvt. Ltd.,	29.06
72	Appa Rao G	Concrete design mix for M 50 grade	Southern Railway	0.40
73	Subhadeep Banerjee Robinson R G	Geotechnical consultancy services for Chennai Outer Ring Road Project	GMR Infrastructure Ltd	8.05
74	Devdas Menon	Proof checking of patna site PSC super structure & sub structure	Vijay Nirman Company P. Ltd.,	2.98
75	Appa Rao G	Proof checking of design and drawings of retaining wall	Salem Municipal Corporation	1.00
76	Satish Kumar S R	Structural design and calculation check for HNGIL - Naidupet Silo	C R Narayana Rao	0.44
77	Satish Kumar S R	Proof checking of structural calculation	Heurtey Petrochem India Ltd.,	0.66
78	Manu Santhanam Arun Menon	Inspection of Telegraph Office Building	Bharat Sanchar Nigam Limited	0.70
79	Satish Kumar S R	Design check for HNGIL Naidupet and Nashik - Chimney (100 M height)	C R Narayana Rao	0.60
80	Dali Naidu Arnepalli Gandhi S R	Design of foundation for TPCIL - Krishnapattnam	BGR Energy Systems Limited	7.72
81	Veeraraghavan A	Land transport management and master plan for Sikkim	Scott Wilson Kirkpatrick(I) Pvt Ltd.,	3.31
82	Subhadeep Banerjee Boominathan A	Investigation of Borehole Collapse of Chennai Metro Rail Project at Vadapalani	Consolidated Construction Consortium Ltd	0.33
83	Devdas Menon	Proof checking of design southern railway - Trivandrum Nagercoil Section	Skilled Construction Company Ltd.,	1.49
84	Dali Naidu Arnepalli	Evaluation of Tensile Properties of Geogrid Samples	KNR-GVR Joint Venture	1.65
85	Robinson R G Thyagaraj T	Checking the suitability of soil for bus stand at Mamallapuram Town	Mamallapuram Town Panchayat	0.11
86	Devdas Menon	Testing on prop specimen (6 Nos)	PERI (India) Pvt. Ltd.,	0.50

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
87	Devdas Menon	Testing of dynamic load test 122	Vijay Nirman Company P. Ltd.,	3.31
88	Appa Rao G	Proof checking of structural design & drawings of the proposed hanger building at Bangalore	Sandilya Consulting Engineers Pvt. Ltd.,	1.00
89	Thyagaraj T Gandhi S R	Geotechnical and Structural Design Check for Ramanathapuram Bypass Retaining Walls	Highways Department	4.41
90	Meher Prasad A	Proof checking of 220kv substation, nellore	Transmission Corporation of Andhra Pradesh Limited	0.83
91	Rajagopal K	Testing and Advice for Construction of Reinforced Soil Retaining Walls	GMR Infrastructure Ltd	3.31
92	Dodagoudar G R Raghukanth S T G	Seismic hazard analysis for thermal power project in Dadri Khurd Village	Welspun Energy Limited	6.00
93	Arul Jayachandran S	Proof checking the design of an FoB at Jawaharlal Nehru Stadium	Tandon Consultants Pvt. Ltd.,	1.65
94	Arul Jayachandran S	Experimental evaluation of Dellner structural coupler product	Dellner Couplers India Ltd.,	3.75
95	Devdas Menon Meher Prasad A	Proof checking of L & T Housing Project - Eden Park Phase II at Siruseri	Stephen & Associates	11.48
96	Devdas Menon	TTC - Proof checking of designs and drawings for 2 major bridges	Transstroy (India) Limited	4.96
97	Meher Prasad A	Proof checking of ROB over Bengaluru - Salem line connecting the premises of DRDO Bangalore	PJB Engineers Pvt. Ltd.,	0.55
98	Muralikrishnan J	Testing of Bituminous Mixtures	Nagarjuna Construction Company Ltd.,	0.10
99	Robinson R G Thyagaraj T	Testing of moorum to check its suitability as fill material	Central Public Works Department	0.26
100	Robinson R G Gandhi S R	Recommendation for treatment of expansive soils below the building	SDP Telecom (India) Pvt. Ltd.,	0.20
101	Ligy Philip	Vetting of design of sewage treatment plant (STP)	Tamilnadu Small Industries Development Corp. Ltd.,	0.83
102	Dodagoudar G R	Design verification and stability of foundation of ROW type B houses	S P Infocity	0.70
103	Appa Rao G	Proof checking of Pre-Cast Box Culvert Bridge	N R P Projects Private Limited	0.60
104	Indumathi M Nambi	Impact of groundwater quality due to land application of distillery waste	Amaravathi Cooperative Sugar Mills Ltd.,	3.31
105	Rajagopal K	Consultancy for construction of Gabion faced reinforced soil retaining walls	IVRCL Infrastructures and Projects Ltd	6.62
106	Appa Rao G	Proof checking of design and drawing of composite steel girder bridge	South Western Railway Bangalore	1.25
107	Koshy Varghese Satyanarayana K N	Augmenting TCS Construction Project Management	Tata Consultancy Services	2.50
108	Satish Kumar S R	Checking structural model, analysis & design	ITC Limited	1.00
109	Satish Kumar S R	Checking of design of Jig for transformers	Transformers and Electricals Kerala Ltd.,	0.60
110	Robinson R G Thyagaraj T	Testing of soil samples for ash dyke and embankment	Coastal Soil Engineering Consultancy Services	0.50
111	Satish Kumar S R	Proof checking of PEB of pennar make	K Kumar Raja Projects Pvt. Ltd.,	0.66
112	Satish Kumar S R	Design checking of J.P. papers project at Ahmedabad	Phenix Construction Technologies	0.40

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
113	Satish Kumar S R	Proof checking of structural designs/drawings of Hubli New Station Building	South Western Railway	0.75
114	Alagusundaramoorthy P	Proof checking the foundation design of 400 kV transmission lines	Power Grid Corporation of India Limited	1.65
115	Alagusundaramoorthy P	Proof checking the design of canopy supported steel structure	Indian Bank	1.38
116	Satish Kumar S R	Proof checking of building designs at Haridwar and Baddi	ITC Limited	10.40
117	Arul Jayachandran S	Design checking of RMH nalla steel plate girder at TISCO Jamshedpur	Pragati Consultants	0.83
118	Thyagaraj T Gandhi S R	Recommendations for foundations for various water treatment units at Patna water supply project	Larsen and Toubro Limited	2.21
119	Satish Kumar S R	Checking and approval of design calculation	Pennar Engineered Building Systems Ltd.,	4.50
120	Appa Rao G	Stress Relaxation of 12.7mm 7-ply HTS strands at 60 c and 100 C	Tata Steel	2.50
121	Appa Rao G	Fatigue Testing of 12.7/15.7mm 7-ply High Tensile Steel Strands	Tata Steel	8.93
122	Appa Rao G	Proof checking of structural design and drawings of RCC Box Bet	K.P.R. Construction	0.50
123	Devdas Menon	Proof checking of retaining structure	Sree Giri Consultants	0.66
124	Alagusundaramoorthy P	Proof checking the design of POT and Elastomeric Bearings	Karnataka State Highway Improvement Project	3.31
125	Robinson R G Gandhi S R	Foundation for industrial structure at Sanand	Mukesh and Associates	1.76
126	Thyagaraj T Robinson R G	Ground treatment for new railway embankment construction in expansive soil	Rail Vikas Nigam Limited	1.65
127	Ligy Philip	Vetting of Design of Wastewater treatment plant for brewery industry	Potential Semac Consultants Pvt. Ltd.	2.76
128	Ravindra Gettu Manu Santhanam	Third party testing of materials used in the civil works of Chennai Metro Rail	Chennai Metro Rail Limited	94.11
129	Gandhi S R Dali Naidu Arnepalli	Proof check design for ash dyke raining	National Thermal Power Corporation Ltd.,	1.50
130	Devdas Menon Arul Jayachandran S	Four laning of Krishnagar - Baharampore section of NH-34, from km 115+000 to km 193+000 in the state of west bengal design calculation and drawing of super structure substructure for Rail Over Bridge	Sew Infrastructure Ltd.,	10.09
131	Thamizh Arasan V	Technical Advice for Providing Bituminous Overlay on Concrete Block Pavement	Accendas IT Park Chennai Ltd	1.49
132	Devdas Menon	Two laning with paved shoulder of Trichy-Karaikudi Section of NH210 from km10.000 to km94.000 and Trichy Bypass from km110.016 to km135.930 of NH-67 in the state of Tamil Nadu- Proof checking of ROB Drawings and designs	Transstory Trichy-Karaikudi Tollways Private Limited	3.64
133	Satish Kumar S R	Testing of ESP bearing to determine feasibility of using slide bearings	Bharat Heavy Electricals Ltd.,	5.00
134	Devdas Menon	Testing of cyclic & Tensile test for 32mm and 16mm	Jianman Building Technology P.Ltd.,	2.21
135	Satish Kumar S R	Vetting for PEB design	K S Softnet Solutions Pvt. Ltd.,	1.50

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
136	Satish Kumar S R	Vetting of Design for Thermax Project	Zamil Steel Buildings (I) P. Ltd.,	9.00
137	Devdas Menon	Proof checking of structural design	Myladoor Consultancy Services	2.54
138	Devdas Menon	Proof Consultancy Services and Technical Assistance for Eden Park - Phase II	L&T South City Projects Ltd.,	21.51
139	Meher Prasad A	Proof checking of structural design of 470M Guyed Mast	Larsen and Toubro Limited	2.21
140	Nageswara Rao B	Certification of FE Analysis of 55 ft/ 113ft low/flat bed trailer	Namakkal Transport Carriers Private Ltd.,	2.21
141	Boominathan A	Vibration Mitigation Measures at Forging Unit	Harihar Alloys Pvt. Ltd.,	1.10
142	Ligy Philip	Analysis of Carbon fractions in soil	Central Institute of Brackishwater Acquaculture	1.10
143	Alagusundaramoorthy P	Analysing and Testing the Mechanical and Relaxation Properties of strands for Doha Expressway Project	Yuksel Midmac JV	16.78
144	Dali Naidu Arnepalli	Evaluation of Geotechnical Properties of Soils used for Design of Ash Dyke at TPCIL Krishnapatnam	Gayatri Projects Ltd.	1.65
145	Alagusundaramoorthy P	Analysing and Testing of Stressing Materials for Ariyalur Valadi Track Doubling Railway Project	Theme Engg. Services Pvt. Ltd.	4.69
146	Meher Prasad A	Proof Checking of Shutters and Support for pier and piercap		0.83
147	Alagusundaramoorthy P	Proof checking the design of weigh bridge structural platforms	Essae Digitronics Pvt. Ltd.,	3.31
148	Meher Prasad A	Proof Checking of Structural Design at 485 m Height Guyed Mast (Top loaded monopole) for VLF Project	Electronics Corporation of India Ltd	2.21
149	Meher Prasad A	Proof checking of STUP consultants design and detailed engineering for 275 meters High Twin Flue Chimney	Abir Infrastructure P Ltd.,	4.41
150	Subhadeep Banerjee Robinson R G	Excavation of Egmore Under ground station	Chennai Metro Rail Limited	1.10
151	Thamizh Arasan V	Material Testing and Design Mix for Construction of Automotive Test Track	Rites Limited	3.55
152	Maji V B	Designs and Execution of lift Irrigation Scbeme for drawl and lifting of 146.24TMC of water from Medaram Reservoir	Irrigation and CAD (Project Wing) Dept.	5.24
153	Alagusundaramoorthy P	Proof Checking the design of FRP compostie Telecom Towers	Earth Builders	7.45
154	Devdas Menon	Dynamic test on 19DP15 Anchorages	Dynamic Prestress (I) Pvt. Ltd.	4.96
155	Alagusundaramoorthy P	Proof checking the structural design of Pre-Engineered Buildings	Supertech (India) Pvt. Ltd.,	6.40
156	Arun Menon	Investigation for low-cost housing prototype	World Haus Incorporation	3.31
157	Meher Prasad A	Proof checking of proposed extension of existing facility (Line-C) at Manesar for Maruti Suzuki India Limited	Larsen and Toubro Limited	15.99
158	Appa Rao G	Ultrasonic Testing on turbine generator deck slab (unit-111:1X500MW) at NTECL	NTPC Tamilnadu Energy Company Ltd.,	4.81

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
159	Boominathan A	Rechecking of Pile capacity calculation and Review of Pile Integration Test Report	CCCL Design & Build Sector	1.10
160	Devdas Menon	Proof checking of construction of 100 bed ESI Hospital at Ankleshwar, Gujarat	Technicaliya Consultants Pvt Ltd.,	6.62
161	Satish Kumar S R	Design checking of 3D staad files	Lloyd Insulations (India) Ltd.,	4.41
162	Satish Kumar S R	Proof checking of ICF sheds at Chennai	Lendi Associates	3.00
163	Manu Santhanam	Design of shrinkage compensating concrete	Soma Enterprise Limited	2.50
164	Devdas Menon	Proof checking and consultancy service for guindy railway crossing spans - Chennai Metro ECV 03 package	Larsen and Toubro Limited	3.64
165	Gandhi S R Subhadeep Banerjee	Raw water and ash pond design service	GMR Chhattisgarh Energy Limited	4.57
166	Meher Prasad A	Proof checking of residential apartments at Kazhipattur, OMR	Akshaya Pvt. Ltd.,	5.96
167	Arul Jayachandran S	Proof checking the design of 120m single span coal conveyor steel bridge super structure	MACMET India Ltd.,	1.93
168	Appa Rao G	Site Inspection and Assessment of quality of concrete irrigation structure in Andhra Pradesh	LEA Associates	1.10
169	Ligy Philip	Technical Assessment of DPR for Veerapandi (CETP)	Veerapandi Common Effluent Treatment Plant (P) Ltd.,	2.76
170	Ligy Philip	Technical Assessment of DPR for Andipalayam CETP	Andipalayam Common Effluent Treatment Plant (P) Ltd.,	2.76
171	Thamizh Arasan V	Characterisation of materials and mix design for highway pavement works	National Highways Authority of India	2.39
172	Ligy Philip	Zero discharge of liquid-technical assessment report of D.P.R.	Mannarai Common Effluent Treatment Plant (P) Ltd.,	2.76
173	Ligy Philip	Technical assessment of DPR for Karaipudur CETP	Karaipudur Common Effluent Treatment Plant (P) Ltd	1.65
174	Devdas Menon	Proof checking of designs and drawings for substructures and superstructures of ROB at Bikaner & Chittorgarh	Theme Engineering Services Pvt. Ltd	6.62
175	Gandhi S R	Design of approach and protection work to Indira Point lighthouse tower foundation	Directorate of Lighthouses & Lightships	3.46
176	Devdas Menon	Proof checking of design and drawings - Thiruvottiyur - Ponneri - Panchetti (TPP)	STUP Consultants Pvt. Ltd.,	14.34
177	Devdas Menon	Load Testing of L & T formwork components/systems/Timber/Aluminium beams	Larsen and Toubro Limited	2.70
178	Alagusundaramoorthy P	Repairing and rehabilitation of a multi-storied fire damaged warehouse building	Charoen Pokphand (India) Private Ltd.,	8.55
179	Gandhi S R Robinson R G	Geotechnical Consultancy Services for four seasons golf resort	Leading Hotels Ltd.,	16.00
180	Alagusundaramoorthy P	Proof checking the structural design of Pre-Engineered building for BSF at NAS Arakkonam	Vardhman Precision Profiles & Tubes Pvt. Ltd.,	1.65

S. No.	Name of Faculty	Title	Industry	Amount (Rs. in lakhs)
181	Satish Kumar S R	Vetting of design of anechoic Chamber	Combat Vehicles Research & Development Establishment	1.32
182	Satish Kumar S R	Proof checking of PEB for M/s Schwing Stetter Project	Pennar Engineered Building Systems Ltd.,	2.76

RBIC projects:

- No. of Project - 7
- Value of Project - 81.61 lakhs

S. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1	Ravindra Gettu Manu Santhanam	Performance evaluation of ultrafine slag for concrete	Ambuja Cement Ltd.,	16.55
2	Koshy Varghese Ashwin Mahalingam	A study on enhancing the teaching - learning process in civil engineering through bim tools	Autodesk India Pvt. Ltd.,	9.60
3	Koshy Varghese Satyanarayana K N	Development of Project Management System for Erection & Commissioning of Electrostatic Precipitator (ESP)	Bharat Heavy Electricals Ltd.,	22.06
4	Satish Kumar S R	Study and testing of bucking restrained bracking for ESP structure	Bharat Heavy Electricals Ltd.,	15.84
5	Ravindra Gettu	Study of cracking and creep response fibre reinforced concrete under uniaxial and biaxial bending	Bekaert Industries Pvt. Ltd.,	10.15
6	Ligy Philip	Evaluation of Filter Performance	Blue Gold Engineering LLC	4.41
7	Radhakrishna G Pillai	Performance Evaluation of Corrosion Inhibitors for Steel - Cementitious System	Ultra Pure Chemicals Pvt.Ltd.	3.00

Retainer Consultancy:

- No. of Project - 3
- Value of Project - 2.84 lakhs

S.No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1	Veeraraghavan A	Chennai-Tada road project	L&T Infrastructure Development Projects Limited	1.99
2	Manu Santhanam	Chennai Airport Elevated Corridor Inspection	Consolidated Construction Consortium Ltd	0.30
3	Meher Prasad A	Peer Review of the AIR cyclone model for India	Air Worldwide India Pvt. Ltd.,	0.55

Research Publications of the faculty members & research scholars:

- Total No. of papers published in Refereed National Journals - 17
- Total No. of papers published in Refereed International Journals - 74
- Total No. of papers presented in National Conferences - 24
- Total No. of papers presented in International conferences - 47

a. In Refereed National Journals:

- Rohit, D.H.H., Narahari P, Sharma R, Jaiswal A, and Murty C V R, 2011, "When RC Columns become RC Structural Walls, 'Indian Concrete Journal, The ACC Limited, Thane, Vol.85, No.5, May 2011, pp 35-45.

2. Muralikrishna, P and Veeraragavan, A, 'Decision Support System for Performance Based Maintenance Management of Highway Pavements', Indian Roads Congress Journal, Vol.72-3, 2011
3. Girish, V. V., Asha Anand, and Lelitha Vanajakshi, Effect Of Countdown Timers On Red Light Violations Under Heterogeneous Traffic Conditions, Journal of Institution of Engineers, Vol. 92, 2011.
4. Sengupta A K and Shetty, Analysis of Chord Forces in Floors with Large Openings or Re-entrant Corners in Reinforced Concrete Buildings', ICI Journal, Indian Concrete Institute, Vol.12, No.2, July-September, pp.7-15, 2011.
5. Deepak Krishnan, M A and Sengupta A K, "Investigation on Behaviour of Simply Supported Unbonded Post-Tensioned Beams", Journal of Structural Engineering, Structural Engineering Research Centre, Chennai, Vol.38, No.3, August-September, pp248-260, 2011.
6. Chattopadhyaya, S, and Sengupta A K, "Modelling of Tall Shear Walls for Pushover Analysis of Reinforced Concrete Buildings", The Indian Concrete Journal, The Associated Cement Companies Limited, Vol.85, No.8, August, pp.7-14, 2011.
7. Ghose, M.D., Lakshmana Rao, C., and Rao, B.N., "Numerical modelling of failure of cement concrete using a unit cell approach," Sadhana, Vol. 36, Part 1, pp. 1–17, February 2011.
8. Vijayanarayanan, A.R., Goswami, R., and Murty, C.V.R., "Determining Levels of Seismic Shaking in Buildings for Securing Non-Structural Elements," Proceedings of the *Fourth International Conference on Structural Stability and Dynamics (ICSSD 2012)*, 4-6 January 2012, Jaipur, India, pp. 1005-1026.
9. Mahalingam, A., Devkar, G.A., and Satyanarayana, K.N. 2011. "A Comparative Analysis of Public-Private Partnership (PPP) Coordination Agencies in India: What Works and What Doesn't", Public Works Management & Policy, 16 (4), Pp 341-72.
10. Nair, B., and Mahalingam, A. 2011. "An application of Lean Construction Techniques to MEP Systems in Indian Building Construction Projects", *Journal of the Institution of Engineers, India*, 92, Pp 3-8, August 18, 2011.
11. Mahalingam, A. and Vyas, A. 2011. "A Comparative Evaluation of Land Acquisition and Compensation Processes for Infrastructure Development in India", *Economic and Political Weekly, New Delhi*, 46 (33). Pp 94-102. August 6, 2011.
12. Kanagaraj, G. and Mahalingam, A. 2011. "Designing Energy Efficient Commercial Buildings – A Systems Framework", *Energy and Buildings*, 43(9), Pp 2329-43
13. Shobha, R., and Mahalingam, A. 2011 "Enabling Conditions for the Emergence and Effective Performance of Technical and Cultural Boundary Spanners in Global Virtual Teams", *Engineering Projects and Organizations Journal*, 1(2), Pp 121-141
14. Mukherjee D., Rao B.N., and Prasad A.M., "Cut-HDMR Based Fully Equivalent Operational Model for Analysis of Unreinforced Masonry Structure," Sadhana 2012.
15. Balu, A.S., and Rao, B.N., "Efficient Explicit Formulation for Practical Fuzzy Structural Analysis," Sadhana, Vol. 36, Part 4, pp. 1–26, August 2011.
16. Balu, A.S., and Rao, B.N., "Efficient high dimensional model representation based method for system reliability bounds estimation for problems with mixed uncertain variables," Journal of Structural Engineering, SERC, India October -November 2011.
17. Kalanad, A., and Rao, B. N., "Modified Two-Dimensional Cracked Finite Element For Crack Identification," Journal of Structural Engineering, SERC, India August -September 2011.

b. In Refereed International Journals:

1. Chirag Deb and Ramachandraiah A.,(2011). 'A simple technique to classify urban locations with respect to human thermal comfort, proposing the HXG Scale, Building and Environment, XXX (2011) 1-8
2. Rajasekhar E., Ramachandraiah A.,(2011). 'A study on thermal parameters in residential buildings associated with hot, humid environments, Architectural science review, 54, 23-38.
3. C.S. Sankar, A Ramachandraiah et.al ., Solving the Acoustical problems in polyvalant hall at Mauritius, Int. journal of Stem education Vol.12, issue 5 & 6, page 67-72. Sept. 2011.

4. Obuli P. Karthikeyan, S. Murugesan, Kurian Joseph, Ligy Philip (2011). Characterization of Particulate Matters and Volatile Organic Compounds in the Ambient Environment of Open Dump Sites. *Universal Journal of Environmental Research and Technology*. 1(2), 140-150
5. V. Somasundaram, Ligy Philip, S. Murty Bhallamudi (2011). Laboratory Scale Column Studies on Transport and Biotransformation of Cr(VI) through Porous Media in Presence of CRB, SRB and IRB. *Journal of Chemical Engineering*. 171(2), 572-581
6. Imran Ali, Morgan MacDonald; jincy kattupalam; K Arun Sambath; Vinothini G; Ligy Philip; Kevin Hall; Kristan Aronson (2011). Efficacy of an appropriate point-of-use water treatment intervention for low-income communities in India utilizing *Moringa oleifera*, sari-cloth filtration, and solar UV disinfection" *Journal of Water, Sanitation and Hygiene for Development*. 1(2), 112-123
7. K. Ramakrishna and Ligy Philip (2011). Bioremediation of Single and Mixture of Pesticide-Contaminated Soils by Mixed Pesticide-Enriched Cultures. *Appl. Biochem. and Biotech.* 164(8), 1257-1277
8. J. Jeyasingh, V. Somasundaram, Ligy Philip, S. Murty Bhallamudi (2011). Pilot scale studies on the remediation of chromium contaminated aquifer using bio-barrier and reactive zone technologies. *Journal of Chemical Engineering*. 167(1), 206-214
9. Balasubramanian P, Ligy Philip, S. Murty Bhallamudi (2011). Biodegradation of Chlorinated and Non Chlorinated VOCs from Pharmaceutical Industries. *Appl. Biochem. and Biotech.* 163(4), 497-518.
10. Jaya, V., Dodagoudar, G. R and Boominathan, A. (2012). "Seismic Soil - Foundation -Structure Interaction Analysis of Ventilation Stack", *Journal of Structural Engineering*, Vol. 36. No.4, pp. 258-270.
11. Sudheer, K. P., Lakshmi, G., and Chaubey, I. (2011). "A nonlinear sensitivity analysis method for pruning calibration parameters in complex watershed models". *Environmental Modelling and Software*, 26: 135-143.
12. Srivastav, R. K., Srinivasan, K., and Sudheer, K. P. (2011). Simulation-optimization framework for multi-season hybrid stochastic models. *Journal of Hydrology*, 404: 209-225.
13. Dhanesh, Y. and Sudheer, K.P. (2011). Comment on "Advances in ungauged streamflow prediction using artificial neural networks" by Besaw et al. [*Journal of Hydrology*, 386 (2010) 27-37]. *Journal of Hydrology*, 408: 314-315.
14. Soundharajan, B., and Sudheer, K. P. (2011). Irrigation water allocation in a simulation-optimization framework. *Water and Energy International*, 68(9): 40-47.
15. Chandapillai, J., Sudheer, K. P. and S. Saseendran. (2012). Design of water distribution network for equitable supply. *Water Resources Management*, 26(2): 391-406.
16. Soundharajan, B and Sudheer, K. P. (2011). Sensitivity Analysis and auto-calibration of ORYZA2000 using simulation-optimization framework. *Paddy and Water Environment* (available online).
17. Amiri, B. J., Sudheer, K. P. And Fohrer, N. (2012). Linkage between in-stream Total Phosphorous and Land Cover in Chugoku district, Japan: an ANN Approach. *Journal of Hydrology and Hydromechanics*, 60(1):33-44.
18. Singh, S. K., Bardossy, A., and Sudheer, K. P. (2012). Effect of resolution on regionalization of hydrological model parameters. *Hydrological Processes* (available online)
19. V.B.Maji (January 2012) "Simple approach to non-linear analysis of jointed rocks" *Journal of rock mechanics and Tunnelling technology*" Vol 18, issue 1, pp 55-64.
20. V.B. Maji & T.G. Sitharam (2011): Testing and evaluation of strength and deformation behaviour of jointed rocks, *Geomechanics and Geoenvironment: An International Journal*, DOI:10.1080/17486025.2011.590609.
21. S.G.Karthiga Devi, G.R. Dodagoudar & V.B.Maji (Feb-March, 2012) "Control of SDOF system using magneto-rheological damper and fuzzy logic" *Journal of Structural Engineering*, Vol 38, No.6. 519-511
22. Jayashree, P.K., Rajagopal, K., Gnanendran, C.T. Influence of Sidewall Friction on the Results of Small Scale Laboratory Model Tests: Numerical Assessment, *ASCE International Journal of Geomechanics* (posted online February 2011) , 2011
23. Punith, V.S, Veeraragavan, A and Serji Amirkhanian, N, ' Evaluation of Reclaimed Polyethylene Modified Asphalt Concrete Mixtures', *International Journal of Pavement Research and Technology*, Vol.4, No.1, January 2011, pp 1-10.
24. Dinu, R.R and Veeraragavan, A, ' Random parameter models for accident prediction on two-lane undivided highways in India', *Journal of Safety Research*, Elsevier, Vol. 42, 2011, pp 39-42.

25. Punith, V.S and Veeraragavan, A, Characterisation of OGFC mixtures containing reclaimed polyethylene fibers, *ASCE Journal of Materials in Civil Engineering*, Vol. 23, No.3, March 2011, pp 335-341.
26. Punith, V. S, Raju, S, Kumar, K, Bose, S and Veeraragavan, A, Laboratory evaluation of stone matrix asphalt mixtures with polyethylene and cellulose stabilizers, *ASTM Journal of Materials and Evaluation*, Vol.39-2, March 2011.
27. Punith, V.S and Veeraragavan, A, Behaviour of reclaimed polyethylene modified asphalt cement for paving purposes, *ASCE Journal of Materials in Civil Engineering*, Vol. 23, No.6, June 2011.
28. Mallick, Carelli, Albano, Bhowmick and Veeraragavan, A, 'Evaluation of the Potential of Harvesting Heat Energy from Asphalt Pavements', *International Journal of Sustainable Engineering*, Vol.2., No.4, 2011.
29. Rathnakara Reddy, K.B and Veeraragavan, A, ' Application of Highway Development and Management Tool (HDM-4) in Asst Management of Low Volume Roads, *Transportation Research Record, Journal of the Transportation Research Board*, Vol 2204, 2011, pp.29-34.
30. Murali Krishna and Veeraragavan, A, 'Decision Support Models for Asset Management of Low volume Roads', *Transportation Research Record, Journal of the Transportation Research Board, USA*, Vol. 2205, 2011, pp 181-188.
31. Anjan Kumar, S and Veeraragavan, A, ' Dynamic Mechanical Charaterisation of asphalt concrete mixes with modified asphalt binders', *Journal of Material Science and Engineering, Elsevier*, Vol.528, Issue.21, August 2011, . pp 6445-6454.
32. Rakesh J Pillai, R G Robinson and A Boominathan (2011). Effect of Microfabric on Undrained Static and Cyclic Behavior of Kaolin Clay. *Jl. Of Geotechnical and Geoenvironmental Engineering, ASCE*, Vol. 137, No. 4, pp. 421-429.
33. Sridhar G. and Robinson, R. G. (2011). Determination of Radial coefficient of consolidation using log t method. *International Journal of Geotechnical engineering*, Vol. 5, No. 4, pp. 373-381.
34. Srimuruganandam B, and S M Shiva Nagendra (2011) Characteristics of particulate matter and heterogeneous traffic in the urban area of India. *Atmospheric Environment*, 45(18), 3091-3102.
35. Srimuruganandam B and S M Shiva Nagendra (2011), Chemical characterization of PM₁₀ and PM_{2.5} mass concentrations emitted by heterogeneous traffic. *Science of the Total Environment*, 409(17), 3144-3157.
36. Vasantha Kumar, Lelitha Vanajakshi And Subramanian, S.C., Application of Location Based Data for Traffic State Estimation on Urban Arterial under Heterogeneous Traffic Conditions, *Transportation Research Record: Journal of the Transportation Research Board*, No. 2239, Transportation Research Board of the National Academies, Washington, D.C., pp. 16-22, 2011.
37. Sheik Mohammed Ali S., Bobby George, Lelitha Vanajakshi and Jayashankar V., A Multiple Inductive Loop Vehicle Detection System for Heterogeneous and Lane-less Traffic, *IEEE Transactions on Instrumentation & Measurement*, 99, 1 - 8, 2011.
38. Saravanan U. (2011) On large elastic deformation of prestressed right circular annular cylinders, *International Journal of Non linear Mechanics*, 46(1) pp. 96-113.
39. Saravanan U. (2011) On the adequacy of the existing restrictions on the constitutive relations to ensure reasonable elastic response of compressible bodies, *Mechanics Research Communications*, 38(2) pp. 123-125.
40. Rajagopal K.R., and Saravanan U. (2011) Spherical inflation of a class of compressible elastic bodies, *International Journal of Non linear Mechanics*, 46(11) pp. 1167-1176.
41. Sreenath S., Saravanan U., and Kalyanaraman V. (2011) Beam and shell element model for advanced analysis of steel structural members, *Journal of Constructional Steel Research*, 67(12) pp. 1789-1796.
42. Saravanan U. (2011) On elastic deformation of radially prestressed incompressible spherical shells, *International journal of advances in engineering sciences and applied mathematics*, 3 (1-4) pp. 140-147.
43. Rajesh, K.N., and Rao, B.N., (2012). "Mode I Crack Problems by Coupled Fractal Finite Element Method and Meshfree Method," *Computer Assisted Mechanics and Engineering Sciences*, 2012.
44. Anand, V., Patnaik, B.S.V., and Rao, B.N., (2012). "Efficient Extraction of Vortex Structures by Coupling Proper Orthogonal Decomposition (POD) and High Dimensional Model Representation (HDMR) Techniques," *Numerical Heat Transfer, Part B Fundamentals*, Vol. 2012.
45. Balu, A.S., and Rao, B.N., (2012). "Multicut-High Dimensional Model Representation for Structural Reliability Bounds Estimation Under Mixed Uncertainties," *Computer-Aided Civil and Infrastructure Engineering*, 2012.

46. Sivakumar, M.V.N., Rao, B.N., and Satishkumar, S.R., (2012). "The Effect of Pressure induced Hoop Stress on Bi-axially Loaded Through wall Cracked Cylindrical Structures – A Strain Based Method," Applied Mechanics and Materials, Vol. 110-116, No. 4, pp. 1525–1530, 2012.
47. Kalanad, A., and Rao, B. N., (2012). "Improved Two-Dimensional Cracked Finite Element for Crack Fault Diagnosis," Computer Assisted Mechanics and Engineering Sciences, 2012.
48. Balu, A.S., and Rao, B.N., (2012). "High Dimensional Model Representation Based Formulations for Fuzzy Finite Element Analysis of Structures," Finite Elements in Analysis and Design, Vol. 50, pp. 217–230, March 2012.
49. Balu, A.S., and Rao, B.N., (2012) "Inverse structural reliability analysis under mixed uncertainties using high dimensional model representation and fast Fourier transform," Engineering Structures, Vol. 37, pp. 224–234, April 2012.
50. Balu, A.S., and Rao, B.N., "Explicit Fuzzy Analysis of Systems With Imprecise Properties," International Journal of Mechanics and Materials in Design, Vol. 7, No. 4, pp. 283–289, 2011.
51. Rao, B.N., (2011). "Coupled Meshfree and Fractal Finite Element Method for Unbounded Problems," Computers and Geotechnics, Vol. 38, No. 5, pp. 697–708, July 2011.
52. Mandali, A.K. Sujith M. S., Rao, B. N., and Maganti, J., (2011). "Reliability Analysis of Counterfort Retaining Walls," Electronic Journal of Structural Engineering, Vol. 11, No. 1, pp. 42–56.
53. Chowdhury, R., and Rao, B.N., (2011). "Multicut High Dimensional Model Representation for Reliability Analysis," Structural Engineering and Mechanics, Vol. 38, No. 5, pp. 651–674.
54. Mukherjee D., Rao B.N., and Prasad A.M., (2011). "Global Sensitivity Analysis of Unreinforced Masonry Structure Using High Dimensional Model Representation," Engineering Structures, Vol. 33, No. 4, pp. 1316–1325.
55. Menon, A., Magenes, G., (2011). 'Definition of seismic input for out-of-plane response of unreinforced masonry – I. Parametric Study', Journal of Earthquake Engineering, Vol. 15, No. 2, pp. 165-194.
56. Menon, A., Magenes, G.,(2011). 'Definition of seismic input for out-of-plane response of unreinforced masonry – II. Formulation', Journal of Earthquake Engineering, Vol. 15, No. 2, pp. 195-213.
57. Ramadurai, G., Ukkusuri, S., B-Dynamic (2011)". 'An Ecient Algorithm for Dynamic User Equilibrium Assignment in Activity-Travel Networks, Computer-Aided Civil and Infrastructure Engineering, Volume 26, Issue 4, pg: 254-269.
58. Sudip Bhattacharjee and Rajib Mallick, (2012). Use of Continuum Damage Mechanics with Small Scale Accelerated Pavement Testing to Determine Damage Development in Hot Mix Asphalt, Journal of Transportation Research, Transportation Research Board's, 2012 (accepted for publication, 1/26/12)
59. Wenyi Gong, Mingjiang tao, Rajib Mallick and Tahar El-Korchi (2012). Investigation of Moisture Susceptibility of Warm Mix Asphalt (WMA) Mixes Through Laboratory Mechanical Testing. Transportation Research Board's 91st Annual Meeting at Washington D.C., 2012 (accepted for publication, 1/30/12)
60. Sudip Bhattacharjee and Rajib Mallick (2012). Effect of Temperature on Fatigue Performance of Hot Mix Asphalt Tested under Model Mobile Load Simulator. International Journal of Pavement Engineering. In press.
61. Sudip Bhattacharjee, and Rajib B. Mallick, (2012). Determination of Damage Development in Asphalt Concrete Using Small Scale Accelerated Pavement Testing via Frequency Domain Analysis Approach . Journal of Transportation Engineering doi:10.1061/(ASCE)TE.1943-5436.0000376, in press
62. Rajib B. Mallick, Bao-Liang Chen and Sankha Bhowmic, (2012). Harvesting heat energy from asphalt pavements: development of and comparison between numerical models and experiment. International Journal of Sustainable Engineering. [Volume 5, Issue 2](#).
63. Rakesh J. Pillai V., Robinson, R.G. and Boominathan, A. (2011)" Effect of microfabric on undrained static and cyclic behavior of kaolin clay", Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol 137, No 4, pp 421 -429.
64. Jaya, V., Dodagoudar, G. R and Boominathan, A. (2012). "Seismic Soil-Structure Analysis of a Deeply Embedded Ventilation Stack", Journal of Earthquake and Tsunami , Vol.6, Issue:
65. Belayneh, M. Z. and S. Murty Bhallamudi, (2012). "Optimization model for management of water quality in a tidal river using upstream releases", J. of Water Resources and Protection, Scientific Research Publications, Vol. 4, No. 3, pp. 149-162.

66. V. Somasundaram, Ligy Philip, S. Murty Bhallamudi (2011). Laboratory Scale Column Studies on Transport and Biotransformation of Cr(VI) through Porous Media in Presence of CRB, SRB and IRB. *Chemical Engineering Journal*, 171(2), 572-581.
67. J. Jeyasingh, V. Somasundaram, Ligy Philip, S. Murty Bhallamudi (2011). Pilot scale studies on the remediation of chromium contaminated aquifer using bio-barrier and reactive zone technologies. *Chemical Engineering Journal*. 167(1),206-214.
68. Balasubramanian P, Ligy Philip, S. Murty Bhallamudi (2011). Biodegradation of Chlorinated and Non Chlorinated VOCs from Pharmaceutical Industries. *Appl. Biochem. and Biotech.* 163(4), 497-518.
69. H. Prashanth Reddy, Shankar Narasimhan, S. Murty Bhallamudi, S. Bairagi, (2011). "Leak Detection in Gas Pipeline Networks Using an Efficient State Estimator - Part-I: Theory and Simulations", *Computers & Chemical Engineering*, Elsevier, 35(4), pp. 651-661, April 2011.
70. H. Prashanth Reddy, Shankar Narasimhan, S. Murty Bhallamudi, S. Bairagi, (2011). "Leak Detection in Gas Pipeline Networks Using An Efficient State Estimator - Part-II: Experimental and Field Evaluation", *Computers & Chemical Engineering*, Elsevier, 35(4), pp. 662-670, April 2011.
71. Prakash Nanthagopalan and Manu Santhanam, (2011). "Fresh and Hardened Properties of Self-Compacting Concrete Produced with Manufactured Sand," *Cement and Concrete Composites*, Vol. 33, No. 3, pp. 353 – 358.
72. Manu Santhanam, (2011). "Effect of Solution Concentration on the Attack of Concrete by Combined Sulphate and Chloride Solutions," *European Journal of Civil Engineering* Vol. 15, No. 7, pp. 1003 – 1015.
73. Jayasree, C., Santhanam, M., and Gettu, R.,(2011). "Cement-Superplasticizer Compatibility – Issues and Challenges," *Indian Concrete Journal* Vol. 85, No. 7, pp. 48 – 60.
74. Kaushal K. Garg, L. Bharati, A. Gaur, B. George, S. Acharya, K. Jella, and B. Narasimhan. 2011. Spatial Mapping of Agricultural Water Productivity using SWAT model in Upper Bhima Catchment, India. *Irrigation and Drainage*, 60: n/a. doi: 10.1002/ird.618.

c) In Proceedings of National Conferences:

1. Rajagopal, K. (2010) Geosynthetic Cellular Confinement System Contribution To Structural Pavement Reinforcement, India Roads, 2010, Hyderabad, January13, 2010.
2. Sivapriya S V, Gandhi S R and Sundaravadivelu R, (2011). 'Effect of lateral movement of soil in Diaphragm Wall – A Case Study', 3rd Indian Young Geotechnical Engineers Conference 2011, pp335-340.
3. Sivapriya S V and Gandhi S R, (2011). 'Behaviour of single pile in sloping ground under static lateral load', Indian Geotechnical Conference at Kochi, Vol.I, pp199-202
4. Gandhi S R, (2011). 'Deep Basement Excavation', Indian Geotechnical Conference 2011, Kochi, Vol.I, pp53-56.
5. Chithra V S and S M Shiva Nagendra, (2011) Analysis and Interpretation of Indoor PM₁₀, and PM_{2.5} and PM₁ Mass Concentrations in a Naturally Ventilated School Building. In Proceedings of National Conference on Refrigeration and Air Conditioning (NCRAC 2011), organized by Department of Mechanical Engineering and Civil Engineering, IIT Madras, July 7-9 2011, (pages 8).
6. D G Leo Samuel, S M Shiva Nagendra and M P Maiya (2011), Application of Passive Cooling System in Tropical Climate. In Proceedings of National Conference on Refrigeration and Air Conditioning (NCRAC 2011), organized by Department of Mechanical Engineering and Civil Engineering, IIT Madras, July 7-9 2011, (pages 9).
7. S.Vasantha Kumar, Leliitha Vanajakshi, (2011).Use of Multiplicative Decomposition Method for Bus Travel Time Prediction under Heterogeneous Traffic Conditions, *National Conference in Recent Advances in Civil Engineering*, Varanasi, India, Oct. 2011.
8. Akhilesh Koppineni, Krishna Chaitanya, Sidharth, Leliitha Vanajakshi, (2011).Development of a Bus Arrival Time Prediction System for Indian Traffic Conditions, *National Conference in Recent Advances in Civil Engineering*, Varanasi, India, Oct. 2011.
9. Sheik Mohammed Ali S., Leliitha Vanajakshi, and Boby George, (2011).Performance Evaluation of an Inductive Loop Detector Developed for Indian Roads, *2nd National Conference on Intelligent Transportation System (ITS)*, Mumbai, India August 2011.
10. Vasantha Kumar, Krishna Chaitanya, Akhilesh Koppineni and Leliitha Vanajakshi, (2011). Travel Time Pattern Identification under Heterogeneous Traffic Conditions for Bus Arrival Time Prediction, *2nd National Conference on Intelligent Transportation System (ITS)*, Mumbai, India, August 2011.

11. Lelitha Vanajakshi, (2011). ATIS for Indian cities, *2nd National Conference on Intelligent Transportation System (ITS)*, Mumbai, India, August 2011.
12. Lelitha Vanajakshi, (2011). "Intelligent Transport System (ITS) and its potential for India", 1st Conference of Transportation Research Group of India (CTRG), Bangalore, India, Dec. 2011.
13. Subhadeep Banerjee, (2011). Siang Huat Goh, Fook Hou Lee "A Total Stress Model for Undrained Cyclic Behaviour of Remoulded Clay", Indian Geotechnical Conference, Kochi, December 2011.
14. Sengupta A K, (2011). "Retrofitting of Structures – Research Prospects", Proceedings, National Conference on Advances in Materials and Structures, Pondicherry Engineering College, Puducherry, February 3 to 4 pp.29-33, 2011.
15. Vasudevan, Nambi I. M and Sureshkumar G (2011). "Simulation of a Petroleum Spill in groundwater using GMS" International Ground Water Conference in Madurai, September 2011
16. Berlin, Nambi I.M. and Suresh Kumar (2011). "Modelling Nitrate transport in soil irrigated with Wastewater" International GroundWater Conference in Madurai, September 2011
17. Mekala C, and Nambi I.M (2011). " Experimental Investigation of waste water reuse for irrigation" International GroundWater Conference in Madurai, September 2011
18. Ambika and Nambi (2011). "Sustained removal of heavy metals from wastewater using nano structured iron" International GroundWater Conference in Madurai, September 2011
19. Muthulingam, S., and Rao B.N., (2011). "Time Dependent Reliability of RC Structures Considering Creep, Shrinkage, and Corrosion," *International conference on Advances in Civil Engineering (ACE-11)*, KLU University, Vaddeswaram, Near Vijayawada, Andhra Pradesh October 21-23, 2011.
20. Rao B.N., (2011). "Fracture Analysis using Coupled Meshfree/Fractal Finite Element Method," *Meshfree-2011 Conference*, Department of Aerospace Engineering, IISc, Bangalore, January 10-11, 2011.
21. Kumar, M., Ramadurai, G., (2011). Qualitative Congestion Levels from Quantitative Data for Advanced Traveller Information Systems (ATIS), In 1st Conference of Transportation Research Group of India, Bangalore, Dec 2011.
22. Boominathan A. (2012) "Site – Specific Seismic Hazard Analysis", *Proceedings of National Level One Day Seminar on Seismic Hazard and Risk Assessment*, Sri Krishna College of Technology, Coimbatore, pp.19-42.
23. Srinivasan, K., and B. Narasimhan. 2011. Role of Academia in Water Partnerships. "Confluence of Ideas and Organizations" published during International Conference on "Water Partnerships towards Meeting the Climate Challenge", Chennai, INDIA. Jan.6 and 7, 2011.
24. V.B.Maji (2011) " A simple non-linear analysis of rockmass" Proceedings of Indorock conference, Roorkee, 13-15 October 2011.

d) In Proceedings of International Conferences:

1. R Kalaiselvi and A Ramachandraiah, (2011). 'A three dimensional noise mapping study for heterogeneous traffic conditions', 162nd Meeting of Acoustical society of America, Sandiago, ASA-2011.
2. Balasubramanian P, Ligy Philip and B S Murty (2011), *Effect of chloroform on aerobic biodegradation of organic solvents in pharmaceutical wastewater*, International conference on Environmental Engineering and Technology, July, 13–15, 2011, Amsterdam, The Netherlands. (WASET, 78(133):691-698).
3. Anjana Bhasi and K.Rajagopal (2011). "Performance analysis of geosynthetic reinforced piled embankments" Third International conference on geotechnical engineering for disaster mitigation and Rehabilitation, 17-20 May, 2011, Semarang, Indonesia, pp. 579-584.
4. Rajagopal, K. and Reshma, K.V. (2011). "Analysis and Design of Tiered Geosynthetic Reinforced Soil Retaining Walls", Third International conference on geotechnical engineering for disaster mitigation and Rehabilitation, 17-20 May, 2011, Semarang, Indonesia, pp. 216-223.
5. Anjana Bhasi and K.Rajagopal. (2011). Finite element analysis of geosynthetic reinforced piled embankments. SIMULIA International customer conference, 18-20 May 2011, Barcelona, Spain, pp-342 to 350
6. Sivapriya S V, Sundaravdivelu R, Gandhi S R and Murugadoss K, (2011). 'Static and dynamic slope stability analysis after dredging in Kandla Port, 8th International Conference on Coastal and port engineering in developing countries COPEDEC 2012, pp1520-1529.

7. A.Veeraragavan and Rajib Mallick. (2011). Pavement type selection guidelines in the Indian context. 1st Conference of Transportation Research Group of India (CTRG), 7th -10th December, 2011, Bangalore, India
8. Rajib Mallick, Karen O'Sullivan, A. Veeraragavan, (2011). Recycling of Hot Mix Asphalt –Use of Rejuvenators for Using High Reclaimed Asphalt Pavement (RAP) Content in Recycled HMA. 1st Conference of Transportation Research Group of India (CTRG), 7th -10th December, 2011, Bangalore, India
9. Rajib Basu Mallick and Veeraragaavn, A, (2011). Structural Design for Sustainable Pavements, International Conference on Structural Engineering, Construction and Management, Kandy, SriLanka, 15-17 December 2011.
10. Srimuruganandam B and S M Shiva Nagendra (2011) Characterizing temporal variations of roadside PM₁₀, and _{2.5} mass Concentrations. Proceedings of the ASCE – International Conference on Transportation, Planning, Land Use and Air Quality held during May 9-10th at the Pavilion, Hilton Palacio del Rio Hotel, San Antonio, Texas, USA (12 pages).
11. Shiva Nagendra S Mand Dayanand Patil S. (2011). Development of ANN based Particulate Matter Prediction Model for Air Quality Management at Busy Urban Corridors. In Proceedings of Asia Oceanic Geosciences Society (AOGS 2011), Taipei, August 8-12, 2011 (pages 12)
12. Shiva Nagendra S M, Mukesh Khare, Prince Vijay and Sunil Gulia. (2011). Performance evaluation of ADMS-urban model in predicting PM₁₀ concentration at roadside in Chennai, India and Newcastle U.K. In proceedings of Air Pollution 2011 conference, Malta, September 19-21, 2011 (pages 10).
13. Manoj, K Jha, Anil Namdeo, Shiva Nagendra S M and Jiang Li, (2011). Investigating the relative impacts of travel-time delays and vehicular emission on road user choice behavior: case studies from US, UK and India' in proceedings of 1st International Conference of transportation research group of India, December 7-10, 2011, Bangalore (pages 12).
14. Ajitha Thankappan, Lelitha Vanajakshi and Shankar C. Subramanian, An Optimal Traffic Stream Model for Indian Traffic Conditions, *Transportation Research Board*, National Research Council, Washington, D. C., 2011.
15. Vasantha Kumar, Lelitha Vanajakshi And Subramanian, S.C., A Model Based Approach to Predict Stream Travel Time using Public Transit as Probes, *IEEE Intelligent vehicles symposium, Germany, 2011*.
16. R. Asha Anand, Lelitha Vanajakshi, and Shankar C. Subramanian, Traffic Density Estimation under Heterogeneous Traffic Conditions using Data Fusion, *IEEE Intelligent vehicles symposium, Germany, 2011*.
17. Sheik Mohammed Ali S, Bobby George, Lelitha Vanajakshi, Jayashankar V and Jagadeesh Kumar V, A Multiple Loop Vehicle Detection System for Heterogeneous and Lane-less Traffic, *IEEE Instrumentation And Measurement Technology Conference*, Hangzhou, China, 1413-1417, 2011.
18. Sheik Mohammed Ali S, Bobby George and Lelitha Vanajakshi, A Simple Multiple Loop Sensor Configuration for Vehicle Detection in an Undisciplined Traffic, *IEEE International Conference on Sensing Technology*, New Zealand, 2011.
19. Paranjothi, K., Saravanan, U., Krishnakumar, R., Balakrishnan, K.R., Mechanical properties of abnormal human aortic and mitral valves. Editor Proulx, T., *Mechanics of Biological Systems and Materials*, Volume 2, Conference Proceedings of the Society for experimental mechanics series 9999, pp. 65-72.
20. Paranjothi, K., Saravanan, U., Krishnakumar, R., Balakrishnan, K.R., Mechanical properties of human Saphenous vein. Editor Proulx, T., *Mechanics of Biological Systems and Materials*, Volume 2, Conference Proceedings of the Society for experimental mechanics series 9999, pp 79-85.
21. Nambi I.M, Srinivas M and Ambika M (2011). "Sustainable removal of Chromium and Phenol from industrial waste water" Sustainable bioremediation conference organised by Battelle in Reno, U.S.A June 2011
22. Pavitra and Nambi I.M. (2011). "Dissolution of NAPLs from heterogeneous subsurface systems" American Geophysical Union Fall meeting, San Francisco, December 2011.
23. Kalanad A., and Rao B.N., (2011). "Crack Identification Using Improved 2D Cracked Finite Element in Conjunction with Micro Genetic Algorithm," The International conference on "Structural Engineering Construction and Management 2011 (ICSECM 2011)" at Earl's Regency Hotel, Kandy, Sri Lanka, 15-17 December 2011.
24. Balu A.S., and Rao B.N., (2011). "Inverse Reliability Analysis Using High Dimensional Model Representation," The International conference on "Structural Engineering Construction and Management 2011 (ICSECM 2011)" at Earl's Regency Hotel, Kandy, Sri Lanka, 15-17 December 2011.
25. Rao, B.N., and Balu, A.S., (2011). "Multicut-HDMR Based Reliability Bounds Estimation Under Mixed Uncertainties," The International conference on "Structural Engineering Construction and Management 2011 (ICSECM 2011)" at Earl's Regency Hotel, Kandy, Sri Lanka, 15-17 December 2011.

26. Kalanad A., and Rao B.N., (2011). "Two-Dimensional Elasto-Plastic Cracked Finite Element for Damage Diagnosis," 21st International Conference on Structural Mechanics in Reactor Technology (SMiRT 21), India Habitat Center, New Delhi, 6-11 November 2011.
27. Balu A.S., and Rao B.N., "High Dimensional Model Representation based Inverse Structural Reliability Method in Presence of Mixed Uncertain Variables," 21st International Conference on Structural Mechanics in Reactor Technology (SMiRT 21), India Habitat Center, New Delhi, 6-11 November 2011.
28. Arun, O.C., Rao, B.N., and Sivakumar, S.M., (2011). "Progressive Damage Analysis Using Stochastic Meshfree Method," 21st International Conference on Structural Mechanics in Reactor Technology (SMiRT 21), India Habitat Center, New Delhi, 6-11 November 2011.
29. Someswara Rao, K., and Rao, B.N., (2011). "X-FEM based Continuum Shape Sensitivity Method for Fracture Analysis of Cracks," 21st International Conference on Structural Mechanics in Reactor Technology (SMiRT 21), India Habitat Center, New Delhi, 6-11 November 2011.
30. Rao, B.N., and Balu, A.S., (2011). "High Dimensional Model Representation for Structural Reliability Bounds Estimation Under Mixed Uncertainties," 11th US National Congress on Computational Mechanics, Minneapolis, MN, USA during July 25-29, 2011
31. Kumar S (2011) 'Modeling the Hysteretic Behaviour of Steel-concrete Composite Connections', International Conference on Steel & Composite Structures (ICSCS11- ASEM) 18-23 September 2011, Seoul, Korea, Paper No : SC158_515.
32. Kumar S (2011) 'Two Decades of Seismic Testing – A Personal Journey', International Conference on Earthquake Analysis and Design of Structures (EQADS2011) December 1-3, 2011, Coimbatore, India.
33. Kumar S (2011) 'Cyclic Testing of Hollow Inter-locking Block Masonry', International conference on structural engineering and construction management (ICSECM 2011), 16-18 Dec 2011, Kandy, Sri Lanka.
34. Kumar S (2011) 'Revised Indian Code for Structural Steel Design in India', International conference on structural engineering and construction management (ICSECM 2011), 16-18 Dec 2011, Kandy, Sri Lanka.
35. Boominathan A., Maji V.B. and Krishna Kumar S. (2011) "Site specific Ground Response and Seismic Slope Stability Analysis of Rock Slopes", *Proceedings of 4th International Geotechnical Symposium (IGSH4)*, Khabarovsk (Russia), 26-29 July 2011, pp 191-194.
36. Boominathan A. and Krishna Kumar S. (2011) "Site – Specific evaluation of design ground motion parameters", *Proceedings of International Conference of Earthquake Analysis & Design of structures EQADS*, PSG College of Technology, Coimbatore (India) Dec 1-3, 2011, pp 30-37.
37. Krishna Kumar S. and Boominathan A. (2011) "Endochronic Modeling of Cyclic Response of Sand", *Proceedings of 13th International Conference of the International Association of Computer Methods and Advances in Geomechanics (13IACMAG)*, Melbourne (Australia), May 9-11, 2011, Vol.2, pp.792-797.
38. Krishna Kumar S. and Boominathan A. (2011) "An Endochronic Approach in Modelling Liquefaction of Sand", *Proceedings of 14th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering (14ARC)*, Hong Kong, May 23-27, p.331
39. Balasubramanian P, Ligy Philip and B S Murty (2011), *Effect of chloroform on aerobic biodegradation of organic solvents in pharmaceutical wastewater*, International conference on Environmental Engineering and Technology, July, 13–15, 2011, Amsterdam, The Netherlands. (WASET, 78(133):691-698.
40. Moltot, Z.B. and S.M. Bhallamudi, "Multiobjective Optimization Model for Waste Load Allocation in a Tidal River, 3rd international Conference on Environmental Management, Engineering Planning and Economics (CEMEPE2011) and SECOTOX conference, Skiathos Island, Greece, June 19 -24, 2011.
41. Narasimhan, B., P. M. Allen, S. Capello, D. Coffman, J. G. Arnold and R. Srinivasan. 2011. Development and testing of improved physically based streambank erosion and sediment routing routines in SWAT. Presented in the 2011 International SWAT Conference, Toledo, SPAIN, June 15-17, 2011.
42. V.B. Maji (2011) "Understanding failure mode in uniaxial and triaxial compression for a hard brittle rock, Proceedings of ISRM conference, Beijing, 19-22 October 2011.
43. Kiran Kumar DEVS, Ramachandraiah A and Rajasekar E, "Energy savings and occupant comfort studies for a conditioned open plan office building", proceedings of ECOS 2011, Serbia, July 4-7, 2011.
44. The Transition towards a sustainable PPP regime', by Geert Dewulf, Ashwin Mahalingam and Stephan Jooste, CIB W92 Conference, Cape Town, South Africa, Jan 2012.
45. Organizational Field Configurations for State Level Public Private Partnership Programs in India', by Venkata S.K. Delhi and Ashwin Mahalingam presented at the Engineering Projects and Organizations 2011 conference, Estes Park, CO, USA, August 9-11, 2011.

46. 'Investigation of the effects of Project Structure on BIM adoption', by Aruna M, Ashwin Mahalingam and Koshy Varghese, presented at the Engineering Projects and Organizations 2011 conference, Estes Park, CO, USA, August 9-11, 2011.
47. "Impact of Communication Technology on Virtual Team Process and Project Performance in Offshored Engineering Projects", by Shobha Ramalingam, Ashwin Mahalingam and Timo Hartmann, presented at the Engineering Projects and Organizations 2011 conference, Estes Park, CO, USA, August 9-11, 2011.
48. 'The Transition towards a sustainable PPP regime', by Geert Dewulf, Ashwin Mahalingam and Stephan Jooste, presented at the Engineering Projects and Organizations 2011 conference, Estes Park, CO, USA, August 9-11, 2011.
49. Balasubramanian, P., Philip, L., S. Murty Bhallamudi (2011), Effect of chloroform on aerobic biodegradation of organic solvents in pharmaceutical wastewater *Proceedings of World Academy of Science, Engineering and Technology* 78 , pp. 953-960.

Distinguished Visitors to the Department:

S.No.	Name of the visitor and Designation	Date of visit	Purpose of visit
1	Dr. Nagendra R Velaga, Research Fellow Centre for Transport Research, King's College, University of Aberdeen	1 April 2011	Delivered a lecture
2	Prof. Hota Ganga Rao, Distinguished Alumni Awardee for the year 2011	22 April 2011	Visited the Department and discussed project.
3	Dr. P Rajeev Kumar, Asst. Professor University Technology Malaysia	22 – 24 August 2011	Visited the Department and delivered a seminar talk
4	Dr. Arul Ayyasamy, Vice President, Terrasure / Gannet Fleming, USA	14 Sept. 2011	Visited the Department and delivered a seminar talk
5	Delegation from Panasonic, Japan headed by Dr. Daisuke Ueda, Director and Senior Executive Engineer, ATRL	15 Sept. 2011	Visited the Department and discussion with faculty
6	Dr. N E Shanmugam, Professor, National University of Malaysia	16 Sept. 2011	Visited the Department and delivered a seminar talk
7	Prof. Hemanta Hazarika, Kyushu University, Japan	22 Sept. 2011	Visited the Department and delivered a seminar talk
8	Prof. Mark Alexamnder, University of Cape Town, South Africa	22 – 24 Sept. 2011	Visited the Department
9	Paul Acker (Head, Research) and Mr. Eric Brouard (Project Leader), Lafarge, France	4 – 5 Oct. 2011	Visited the Department and presented the Research Goals of Lafarge and also held discussions on the progress in joint projects
10	Delegation from the Univ. of Queensland, Australia headed by Prof. Luis Feduchi	21 Nov. 2011	Visited the Department and discussion with faculty
11	Dr. Serji Amirkhanian, Director of Research and Development Phoenix Industries, USA	7 Dec. 2011	Visited the Department and delivered a seminar talk
12	Prof. Srinivas Peeta, Dept. of Civil Engg. And Director, NEXTRANS Center, Purdue University	12 Dec. 2011	Visited the Department and delivered a seminar talk
13	Dr. S Okamoto, Senior Researcher, JFE	13 Dec. 2011	Visited the Structural Engg. Lab.
14	Dr. Rahul Nair, Research Scientist, Centre for Advanced Transportation Technologies, Univ. of Mayland	13 Dec. 2011	Visited the Department and delivered a seminar talk
15	Dr. Vikas Thakur, Special Advisor, SINTEF Foundation for Industrial Research, Norway	26 Dec. 2011	Visited the Department and delivered a seminar talk
16	Mr. D Dayalan, Archaeological Survey of India	04 Jan. 2012	Visited the Department and delivered a seminar talk
17	CE Alumni, Mr. Navneet T Narayan, Technical Manager, Bekaert in India and Ms. Neelima Vallangi	17 Jan. 2012	Visited the Department and delivered a seminar talk
18	Dr. Tazoh, Dr. Nakamura, Researchers, Shimizu Corporation, Tokyo, Japan	20 Jan. 2012	Visited the Department and delivered a seminar talk

S.No.	Name of the visitor and Designation	Date of visit	Purpose of visit
19	Dr. Kamineni P Rao, Associate Head, Mechanical & Biomedical Engg. City University of Hong Kong	31 Jan. 2012	Visited the Department to explore the possible student exchange programme
20	Dr. Kei Teshima, Mr. Narikaki Nakayasu, Mr. Hiroaki Nakayama of Nippon Steel Corporation	01 Feb. 2012	Visited the Department and discussion
21	Prof. Seetharam Kallidaikurichi E, Director Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore	6 Feb. 2012	Visited the Department and delivered a seminar talk
22	Mr. B V Ramana, Minister of Environment, Govt. of Tamil Nadu Mr. T Srinivasamurthy, Member Secretary, TNPCB, Mr. C V Shankar, IAS, Principal Secretary, Dept. of Environment Government of Tamil Nadu Prof. Bhaskar Ramamurthy, Director, IITM	7 Feb. 2012	Participated in the Inaugural Session of the Workshop
23	Dr. Greg Davis, CSIRO, Australia Dr. Prabhakat T Clement, Auburn Univ.	7 Feb. 2012	Participated in the Workshop and project discussion
24	Prof. P Paramasivam, Professorial Fellow, National University of Singapore	9 Feb. 2012	Visited the Department and delivered a lecture
25	A Delegation from the University of South Australia's Division of Information Technology Engineering and Environment (ITEE) comprises of Profs. Nanda Nandagopal, Peter Majewski, Stephen Cook, Dr. Ravi Naidu and Mr. Raju Narayanan	14 Feb. 2012	Visited the department. They discussed with HoD about the signing of possible MoUs
26	Dr. H Annamalai, Senior Researcher, International Pacific Research Centre (IPRC), Hawaii	16 Feb. 2012	Visited the Department and delivered a seminar talk
27	Dr. Ravi Naidu, Univ. of South Australia	17 Feb. 2012	Visited the Department and held discussions on the possible collaboration with IITM
28	A Delegation comprises of Profs. Sambit Datta, Department Architecture and Inter Architecture, Curtin University, Ravi Naidu, Director, Centre for Contamination Assessment and Remediation, University of South Australia	21 Feb. 2012	Visited the Department and held discussions with HoD and Faculty
29	Mr. Phanisri Pradeep Pratapa, Graduate Research Assistant in the Offshore Technology Research Center of Department of Civil, Architectural and Environmental Engineering UT (Austin)	21 Feb 2012	Visited and shared his experiences in and after IITM on academics, higher studies, research, career opportunities, etc.
30	A Group of faculty from Ghent University and Representatives of a Consortium of few Belgium Industries including Prof. Victor, Prof. Luc Teerwe mr. V Parthasarathy Ravi	23 Feb. 2012	Visited the Department and held discussions with HoD and Faculty
31	Mr. R Narendrakumar, Chief Executive of Ideal Structures Ltd	4 Mar. 2012	Visited the Department and delivered a seminar talk
32	Prof. Timothy McCarthy, Professor of Steel Structures, University of Wollongong, Australia	5-29 Mar. 2012	Delivered lectures and interacted with PG students and Research Scholars.
33	Dr. Anand Gopal, Researcher, International Energy Studies Group, Lawrence Berkeley National Laboratory	7 Mar. 2012	Visited the Department and delivered a seminar talk
34	Mr. V Subramanian, Director, CAPRI (I) Water Proofing Specialists (P) Ltd.	8 Mar. 2012	Visited the Department and delivered a seminar talk
35	Prof. A G Iyer, Editor-in-Chief & Publisher, ENERTIA	14 Mar. 2012	Visited the Department and delivered a seminar talk

4.6.6 Other Activities of the Department/Centre:

Annual Staff Retreat 2011: Annual Staff Retreat 2011 held at Yercaud and Hogenakkal during 15-17 July 2011. Staff Members participated with family members. Discussions were held for the future development of the Department.

The Second Meeting of the Governing Council of Centre for Excellence in Urban Transport held on 26.11.2011. Dr. Job Kurian, Chairman, Governing council, Shri S K Lohia, OSD (UT) & EO Joint Secretary, COE Coordinators and Partner Institutes' Coordinators participated.

The Department in association with Indian Geotechnical Society Madras Chapter, organized a one day seminar to discuss the revisions in IS 1892 On Subsurface Investigation For Foundations on 21.12.2011. This technical event was attended by Faculty, Students and Professionals from Industry.

IIT Madras along with Federation of Science Clubs in Tamil Nadu and Maharishi Vidya Mandir conducted a two day program titled "Science and Engineering – Journey" at IIT Madras on 17th and 18th February 2012. School Children visited the laboratories and facilities of the Department.

Dr. M S Mathews and Dr. Devdas Menon conducted "Teaching Learning Programme" for young Faculty Members of the Department on 3rd and 10th March 2012.

Inter disciplinary group achievements of the Departments.

Sl.No.	Coordinator(s)	Title	Period
Conference:			
1	Maiya M P Shiva Nagendra S M	National Conference on Refrigeration and Air Conditioning (NCRAC 2011)	7 – 9 July 2011 IIT Madras
Workshop:			
1	Ligy Philip Carrie Mitchell, IDRC Kevin Hall, Guleph Univ.	Improving Drinking Water Quality and Sanitary Conditions in Underprivileged Communities of Urban Areas	IIT Madras 20.04.2011
Short term Course:			
1	Lelitha Devi V Shankar Ram C S	Recent Trends in Intelligent Transportation Systems	19-24 Sept. 2011 IIT Madras

Sponsored Research Projects :

S. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	The changing risks posed by petroleum hydrocarbons in groundwater environments: Multiphase fluid dynamics coupled to multispecies biodegradation	11/9/2011 11/8/2014	Department of Science & Technology	39.26	Indumathi M Nambi Ravikrishna R Suresh Kumar G
2	Enhancement and field trials of free and open source GIS software	3/9/2012 3/8/2015	Ministry of Rural Development	56.47	Koshy Varghese Lakshmana Rao C Sudheer K P Balaji Narasimhan Palaniappan Ramu

International collaboration achievements by the Department

- **Student visit:**
Chithra, V.S., CE09D023, visited University of Newcastle University, during 27 to 29, November 2011 to participate in the technical discussion of UKIERI joint research project. Collaborating institutes are IIT Delhi, IIT Madras and Newcastle University, UK.
- **Faculty visit:**
Dr. S.M. Shiva Nagendra, visited University of Newcastle University, during 26 November to 4 December 2011 to participate in the technical discussion of UKIERI joint research project. Collaborating institutes are IIT Delhi, IIT Madras and Newcastle University, UK.

Major infrastructure development made in the Department

Inauguration of Laboratory: Intelligent Transportation Systems Laboratory of Transportation Engineering Division has been inaugurated by Prof. M S Ananth, Former Director, IIT Madras in the presence of Deans Planning, Administration and IC & SR on 26.07.2011.



*Video Image Processing of Traffic Flow at
Intelligent Transportation Systems Laboratory*

Dr. Rajib Basu Mallick's efforts brought brand new Foamed Bitumen Production and Pugmill Mixing Equipment from Wirtgen, GmbH to IIT Madras as gift. The equipment has been installed in Pavement Engineering laboratory of the Department. The handing over ceremony was held on 28.02.2012.



*SPT equipment for
bituminous mixtures*

4.7 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

4.7 Introduction:

Started as Computer Center in 1973, the Department of Computer Science and Engineering was established as a full-fledged department in 1983. It currently offers B.Tech, Dual Degree, M.Tech., M.S. and Ph.D programmes. The Department has the highest number of M.S. / Ph.D. scholars among all CS Depts. of like institutions in the country.

4.7.2 Academic Programmes:

B.Tech, Dual Degree, M.Tech, M.S., Ph.D.

New Courses introduced:

Sl.No	Course No.	Title
1	CS6846	Quantum Algorithms and Quantum Complexity
2	CS6847	Cloud Computing
3	CS6848	Principles of Programming Languages
4	CS6840	Advanced Complexity Theory
5	CS5800	Modern Techniques in Theory of Computation

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	33	33	27	25	4	122
Dual Degree	29	29	20	18	22	118
M.Tech.	61	67	3	0	0	131
M.S.	25	17	25	18	9	94
Ph.D.	9	3	14	12	27	65
Total	157	149	89	73	62	530

Names of Student/Scholar who attended Conference/ Seminar and Symposia Abroad/India:

Sl. No	Name of the Student/ Scholar	Name of the Conference/Seminar / Symposia/ Workshop	Date and Venue
Abroad:			
1	Narendran Krishnan (MS)	India-UK Adv. Tech. Center Project Review Meeting	31 st May to 3 rd June 2011, University College of London
2	Rajendra Singh Panwar (PhD)	Short Term Course on OFMD and 4G Wireless Networks	9 th – 11 th May 2011, IIT Kanpur
3	Arpit Joshi (MS)	ACM Symposium on Networks on Chip (NOC)	1 – 4 May, 2011, Pittsburg, PA, USA
4	Sarang Deshpande (MS)	31 st International Conference on Distributed Computing Systems (ICDCS 2011)	31 st May – 3 rd June, 2011, University College of London, U.K.
5	Shiva Rudrani (MS)	International Conference on Image Analysis and Recognition (ICIAR 2011)	22 nd June to 24 th June, 2011, Burnaby, BC, Canada.
6	S. Shivashankar (MS)	Summer School on Machine Learning	13 th – 20 th June, 2011, National University of Singapore
7	S. S. Manimaran (MS)	Summer School on Machine Learning	13 th – 20 th June, 2011, National University of Singapore
8	Cyriac James (MS)	7 th Euro NGI	27 th -29 th June, 2011, Kaiserslautern, Germany
9	Kunal Korgaonkar Kishore, (MS)	Advanced Parallel Processing Technologies	26 th -27 th , September, 2011, Fudan University, Shanghai, China.

10	Himanshu Prakash Jain (MS)	5th International Conference on Computer Vision / Computer Graphics Collaboration Techniques And Applications (MIRAGE 2011)	10 th – 12 th October, 2011, INRIA Rocquencourt, France.
11	Gireesan Namboothiri (MS)	IFIP Wireless Days 2011 Conference	10 th -12 th , October, 2011, Niagara Falls, Canada.
12	KVS Dileep (Phd)	JENESYS-SAARC exchange program	24 th Oct- 4 th Nov, Japan
13	Sarang Deshpande (MS)	ICDCN 2012	3 rd – 6 th Jan, 2012, Hong Kong, China
14	Saravanan Manickam (M.S.)	ICDCN 2012	3 rd – 6 th Jan, 2012, Hong Kong, China
India:			
1	Chiranjoy Chattopadhyay (PhD)	Workshop on “Advances in Visual Object Recognition and Retrieval”	July 4-8, 2011; Madurai
2	Suranjana Samanta (PhD)	Workshop on “Advances in Visual Object Recognition and Retrieval”	July 4-8, 2011; Madurai
3	Sanjay Burman (M.Tech)	IEEE Field Programmable Technology, International Annual Conference	12 th – 15 st Dec., 2011, New Delhi, India
4	Purval Shyam Sule (Phd)	IEEE Field Programmable Technology, International Annual Conference	12 th – 15 st Dec., 2011, New Delhi, India
5	Achint Setia (MS)	National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics	Bhoomaraddi College of Engineering, Hubli. Dec 15-17, 2011,
6	Raj Gupta (PhD)	Mysore Park Workshop on Computer Vision	Infosys Campus, Mysore, Dec 20 – 23, 2011
7	Bharuka Rahul Rajesh (MS)	17 th International Conference on Management of Data	19 th – 21 st Dec., 2011, Bangalore, India
8	Kunal Mulay (MS)	17 th International Conference on Management of Data	19 th – 21 st Dec., 2011, Bangalore, India
9	Ankit Kagiwal (MS)	25 th International Conference on VLSI Design	7 th – 11 th January, 2012, Hyderabad
10	Gyanesh Dwivedi (MS)	First Indo-Japan Conference on Perception and Machine Intelligence (PerMIIn)	January 12-13, 2012; Kolkata
11	V. K . Chaithanya Manam (MS)	IEEE Communication Systems and Networks	3 rd – 7 th January, 2012, Bangalore
12	Preetha Mathew K (PhD)	INDO-US Workshop on Cryptography	12 th – 14 th January, 2012, ISI Kolkata
13	Sangeetha Jos (PhD)	INDO-US Workshop on Cryptography	12 th – 14 th January, 2012, ISI Kolkata
14	R. Rangaduai Karthic (MS)	Conference on Information Security Education awareness	4 th -9 th January 2012, Bangalore.
15	Swarna Kamlam (MS)	ICTS school on Network Science in Electrical Engineering & Computer Science	IISc, Bangalore, Jan 2 – 7, 2012
16	M J Shankar Raman (PhD)	Network Science in Electrical Engg and Computer Science School and Workshop	2 nd – 13 th January, 2012, Bangalore
17	R. Golda Brunet (PhD)	NCC 2012	3 rd – 5 th Feb, 2012, IIT Kharagpur
18	Shubhadeep Dey (MS)	NCC 2012	3 rd – 5 th Feb, 2012, IIT Kharagpur
19	Vadiraj Panchamukhi (MS)	NCC 2012	3 rd – 5 th Feb, 2012, IIT Kharagpur
20	Santosh Chaudhari (MS)	NCC 2012	3 rd – 5 th Feb, 2012, IIT Kharagpur
21	Bisawabandan Panda	CHEW 2012	25 th March – 1 st April 2012, IIT Kharagpur

Names of students/scholars who won outside prizes and awards:

SlNo.	Name of the Student/Scholar	Name of Prize	Prize awarded by
1	Ms. S. Sharmila Deva Selvi (Phd)	Best Student Paper Award "Identity Based Deterministic Signature Scheme Without Forking-Lemma"	IWSEC 2011
2	D. Praveen Raja	Best Student Paper Award	COMSNET 2012
3	Praneel Raja	Special Mention by the Jury (4 th rank)	ITU Green ICT Application Challenge

Honours and Awards obtained by faculty:

Sl. No	Name of faculty	Name of Award	Awarded by	Awarded for
Honours:				
1	Prof. Siva Ram Murthy	IEEE Fellow	IEEE	Contributions to Resource Management in High Performance Real-time Computing and Communication Systems
2	Prof. Siva Ram Murthy	INAE Chair Professorship	IEEE	Awarded for the years 2012-2014 for significant research contributions

4.7.3 Faculty and their activities:

Faculty:

Name and Qualifications

Major area of specialization

Professor:

Deepak Khemani, Ph.D (IIT Bombay)	Artificial Intelligence, Knowledge based systems, Natural Language Processing and Neural Networks.
Gonsalves T.A., Ph.D (Stanford)	Computer Networks, Distributed Systems, NMS, Operating Systems, Performance Evaluation, Telecom Software
Janakiram D, Ph.D (IIT Delhi)	Object Oriented Systems, Software Engineering, Parallel and Distributed Systems, Database Systems, Mobile Computing, Computing Education, Computing for Developing Regions, Mobile Telemedicine
Kamala Krithivasan, Ph.D (Madras)	Theoretical Computer Science, Computational Geometry, Languages and Automata Theory Formal Languages and Automata Algorithms, Molecular Computing.
Kamakoti V., Ph.D (IIT Madras)	Software for VLSI Design, Computational Geometry, High Performance Computing.
Krishna Moorthy Sivalingam., Ph.D (SUNY Buffalo)	Wireless Sensor Networks, Optical Network
Sreenivasa Kumar P, Ph.D (IISc)	Graph Theory, Algorithms, Parallel Computations, Data Mining and Data Bases.
Hema A Murthy., Ph.D (IIT Madras)	Speech processing, Computer Graphics and Pattern Recognition.
Siva Ram Murthy C., Ph.D (IISc) [Head of the Department]	Parallel and Distributed Computing, Real-Time Systems, Lightwave Networks and Wireless Networks
Raghavan S.V., Ph.D (IIT, Madras)	Real-time Systems, Optical and Wireless Networks E-Banking E-Learning, Intelligent Search Engines, Multicasting, Multimedia Presentation Systems, Mobile Agents, Mobile Wireless Networks, Next Generation Web Browsers, Secure WAN Design in Heterogeneous Systems.

Sukhendu Das, Ph.D (IIT Kharagpur) Visual Perception, Image Intelligence, Graphics and Visualization

Chandra Sekhar C, Ph.D (IIT Madras) Speech Recognition, Artificial Neural Networks, Kernel Methods.

Pandu Rangan C., Ph.D (IISc.) Algorithms, Parallel and VLSI Algorithms, Graph Theory, Computational Geometry, Randomized Algorithms, Computational Learning theory, Crypto-analysis

Associate Professor:

Anurag Mittal., Ph.D (University of Maryland) Computer Vision

Narayanaswamy N.S., Ph.D (IISc) Algorithms and Complexity Theory.

Ravindran B., Ph.D (University of Massachusetts, Amherst) Machine Learning, Reinforcement Learning, Data/Text Mining

Madhu Mutyam, PhD (IIT Madras) Computer Architecture and VLSI CAD

Assistant Professor:

Shankar Balachandran., Ph.D (UT, Dallas) CAD for VLSI, Reconfigurable Computing, Computer Architecture

Sutanu Chakraborti, Ph.D. (The Robert Gordon University, UK) Information Retrieval, Memory-based reasoning and Machine learning

Jayalal sarma, M.N., Ph.D (Institute of Mathematical Sciences, chennai) Computational complexity theory, Structural and Circuit complexity, Lower bounds and Derandomization

V Krishna Nandivada, Ph.D(University of California, Los Angeles) Compilers, Program Analysis, Programming Languages, Fault Localization and Multicore systems

John Augustine Ph.D(University of California, Irvine) Optimization of algorithms, Computational geometry, Distributed algorithms and Algorithmic game theory.

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1	Prof. Krishna Sivalingam	Fundamental Concepts of Data Structures, Algorithms and Software Design	May- July, 2011
2	Prof. B. Ravindran	European Conference on Machine Learning and European Workshop on Reinforcement Learning, Athens, Greece	5 th -9 th Sept., 2011
Workshop:			
1	Prof. B. Ravindran	Workshop on "Social Networks" organized jointly with Prof. Sitabhra Sinha from IMSc	20 th -24 th February, 2012

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1	Prof. Kamala Krithivasan	Expert Meeting of DST (WOJ – a scheme)	Vijayawada	8 th – 9 th April, 2011.
2	Prof. D. Janakiram	The Expert Committee Meeting of DST (WOS-A Scheme).	Vijayawada, Andhra Pradesh	8 th – 9 th April, 2011.
3	Prof. Kamala Krithivasan	INAE Sectional Committee Meeting.	New Delhi, India	12 th August, 2011.
4	Prof. Kamala Krithivasan	Doctoral Committee Synopsis Meeting.	VIT, Vellore	25 th August, 2011.
5	Prof. Kamala Krithivasan	DST - Expert Committee Meeting WOS-A Scheme.	Hyderabad, Andhra Pradesh	29 th - 30 th August, 2011.
6	Dr. Nandivada V. K.	Workshop	Mysore, Karnataka	27 th February – 2 nd March, 2012.
Seminar:				
1	Prof. D. Janakiram	Seminar and Discussion, Samsung Delhi	Delhi , India	3 rd to 4 th May, 2011.
2	Dr. A. V. Tendulkar	DBT IYBA Review Meeting	New Delhi , India	19 th May, 2011.
3	Prof. Krishna Sivaligam	Network Technologies for smart grids, Project meeting	IRL, Bangalore, Karnataka	8 th July, 2011.
4	Prof. D. Janakiram	Project review of SOA for Linux Kernel	Delhi, India	15 th Sept., 2011.
5	Prof. D. Janakiram	Project review of SOA for Linux Kernel	Hyderabad, Andhra Pradesh	19 th -20 th Oct., 2011.
	Prof. D. Janakiram	Project Review Meeting, CDAC, Hyderabad	Hyderabad, Andhra Pradesh	20 th October, 2011.
6	Dr. Sukhendu Das	CAIR/DRDO Project	Bangalore, Karnataka	22 nd -23 rd November, 2011.
7	Dr. Nandivada Venkata Krishna	Meeting to start to a new Consultancy Project	Metacube, Jaipur	28th November 2011.
8	Prof. Krishna Moorthy Sivalingam	Meeting with M.Tech. students on final year Projects to DST Project	Puttaparthi, Andhra Pradesh	17 th -21 st December, 2011.
9	Prof. Deepak Khemani	Meeting on Planning Repositories	CAIR, Bangalore	21 st -30 th Dec, 2011.
10	Dr. Nandivada Venkata Krishna	Planning and Design of Minerva Project	Jaipur, Rajasthan	19th-21st January 2012.
11	Dr. Hema A Murthy	Frontiers of Research on Speech and Music, 2012	Delhi, India	18 th -21 st January, 2012.
12	Dr. Hema Murthy	TTS Project Meet	Delhi, India	18 th – 21 st January, 2012.
13	Prof. V. Kamakoti	Discussion related to MoC	CAIR, DRDO, Bangalore	3 rd Jan, 2012.
14	Prof. D. Khemani	Discussion on Planning Repositories	CAIR, Bangalore	8 th – 9 th February, 2012.
15	Prof. D. Khemani	Discussion on Planning Repositories	CAIR, Bangalore	15 th – 16 th February, 2012.
16	Prof. D. Janakiram	Project Meeting on Service Oriented Architecture	Delhi, India	14 th Feb, 2012.
17	Dr. Nandivada V. K.	Presentation on Service Oriented Architecture	Delhi, India	14 th Feb, 2012.
18	Dr. Sukhendu Das	Technical Discussion / Seminar	ISI Kolkata, West Bengal	2 nd – 6 th March, 2012.
19	Dr. Hema Murthy	TTS Project Meet	Delhi, India	20 th – 21 st Feb, 2012.
20	Prof. P. Sreenivasa Kumar	Sicussion CAIR MOC	Bangalore, Karnataka	3 rd March, 2012.

21	Prof. Deepak Khemani	Discussion on Academic in Research Technologies	CAIR, Bangalore, Karnataka	1 st – 3 rd April 2012.
Conference:				
1	Dr. V. Kamakoti	Discussion on academic issue	Sri Chandrasekhandra Saraswathi Viswa Mahavidyalaya, Kancheepuram, Tamilnadu	15 th June, 2011.
2	Dr. V. Kamakoti	IEEE Field Programmable Technology, International Annual Conference	New Delhi	12 th – 15 st Dec., 2011.
3	Prof. P. Sreenivasa Kumar	17 th International Conference on Management of Data	Bangalore, India	19 th – 21 st Dec., 2011.
4	Dr. Sukhendu Das	The Centenary Conference of the Department of Electrical Engineering (CCEE 2011)	IISc, Bangalore	December 15-17, 2011.
5	Prof. B. Ravindran	Indo US collaborative workshop and International conference on Mathematics and Computer Models	Bangalore and Coimbatore	18 th -21 st Dec, 2011.
6	Prof. Krishna Sivaligam	Paper presentation at COMSNET 2012, Indo-UK IU-ATC Project Theme 5	Bangalore	5 th – 7 th Jan, 2012.
7	Dr. C. Chandra Sekhar	Winter School on Speech and Audio Processing (WiSSAP-2012)	Bangalore	6 th – 9 th Jan, 2012.
8	Prof. V. Kamakoti	Conference Presentation	Bangalore, Karnataka	4 th – 9 th January, 2012.
9	Prof. D. Khemani	Congrence COMPUTE 2012 + ACM Meet	Pune, Maharastra	21 st – 26 th January, 2012.
10	Prof. Krishna Sivalingam	NCC 2012	Kharagpur, WestBengal	3 rd – 5 th Feb, 2012.
11	Dr. Nandivada V. K.	To present paper at ISEC 2012	Delhi and Kanpur	22 nd – 24 th Feb, 2012.
12	Dr. B. Ravindran	Annual Conference of INSNA	Los Angeles, USA	14 th – 20 th March, 2012.
13	Dr. V. Kamakoti	Keynote on "Building Root of Trust for FPGA Based Embedded Systems Design"	IEEE International Conference on Field Programmable Technology (FPT 2011), New Delhi.	12 th -14 th December, 2011.
14	Dr. Sukhendu Das	Target Recognition and Feature Based Approaches	IISc Bangalore	15 th -16 th December, 2011.
15	Dr. Sukhendu Das	Location and Identification Future based Approach	Mysore park Workshops, Mysore.	21 st -23 rd December, 2011.
16	Dr. D. Janakiram	Invited Talk on Indian Science Congress	Bhuvaneshwar, Orissa	5th-6th January, 2012.
17	Dr. V. Kamakoti	Keynote Address in RASDAT Workshop	Hyderabad, Andhra Pradesh	8 th January, 2012.
Miscellaneous:				
1	Dr. D. Janakiram	Faculty Selection; Expert Member	IIT Indore	13th July, 2011.

2	Dr. Sukhendu Das	Final CARS Project Presentation (DRDO)	DRDO,Bangalore	26th – 28th September, 2011.
3	Dr.Kamala Krithivasan	Board of Studies Meeting	VIT, Vellore.	17th November 2011.
4	Dr. Kamala Krithivasan	Board of Directors Meeting	IIITMK.	19th November 2011.
5	Dr. Kamala Krithivasan	Ph.D Viva Voce Examination	Kerala University.	21st November 2011.
6	Prof. Krishna Sivaligam	M.Tech. Viva	Anna University, Chennai	2nd December, 2011.
7	Prof. Krishna Sivaligam	Ph.D. Viva	Anna University, Chennai	16th December, 2011.

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1	Prof. Krishna Sivalingam	Optical and Wireless Networks	Sri Sathya Sai Institute of Higher Learning	18 th -29 th July, 2011.
2	Dr. P. Sreenivasa Kumar	“Semantic Web: Issues and Challenges”	College of Engineering, Trivandrum.	19th August 2011.
3	Dr.Kamala Krithivasan	L systems and Picture Generator.	VIT, Vellore	25 th August, 2011.
4	Dr.Kamala Krithivasan	“Recent Trends in Formal Languages and Automata Theory”.	Sri Venkateswara College of Engineering, Sriperumbudur.	5 th September 2011.
5	Dr.Kamala Krithivasan	"DNA Computing".	Anna university, Chennai.	21st September 2011.
6	Prof. N.S. Narayanaswamy	Research Talk for Research Promotion Workshop	IIT Guwahati	20 th -21 st Oct., 2011.
7	Prof. C. Chandra Sekhar	Neural networks and support vector machines	Rajiv Gandhi Institute of Technology, Kottayam, Kerala	14 th Nov., 2011.
8	Prof. Krishna Sivalingam	Mobile Data Collection in Wireless Sensor Networks	Amrita University, using video conferencing software	3 rd Nov., 2011.
9	Prof. Krishna Sivalingam	Target Tracking in Wireless Sensor Networks	Dept. of Electronics Engineering, MIT Campus	28 th Nov., 2011.
10	Dr. D. Janakiram	Invited talk on Service Oriented Architecture	Indian Science Conference, Bhuvaneshwar.	5 th – 6 th January, 2012.
11	Dr. V. Kamakoti	Keynote Address on Issues in Transactional Memory	ASDAT Workshop , Hyderabad.	8 th Jan, 2012.
12	Dr. C. Chandra Sekhar	Board of Meeting	Sri Vidyaniketan Engineering College , Tirupathi.	18 th April, 2012.
13	Dr. B. Ravindran	To present Seminars	IISc Bangalore, IIT Kharagpur.	16 th – 23 rd April 2012.
14	Prof. Krishna Sivalingam	Target Tracking in Wireless Sensor Networks	SENNET, VIT Vellore.	Jan 2012.
15	Prof. Krishna Sivalingam	Networking Architectures for the Smart Grid	International Conference on Advanced Computing, MIT Campus, Chennai.	13 th -15 th December, 2011.

Visits abroad:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit
1	Prof. Hema Murthy	U. K.	30 th May to 2 nd June, 2011	To visit University of Ulster in connection with the project "Security and Resilience for NGNs (IU-ATC)"
2	Prof. Krishna Sivalingam	U.K.	31 st May to 1 st June 2011	To attend India-UK Adv. Tech. Center Project Review Meeting, University College of London
3	Prof. Krishna Sivalingam	U.K.	31 st May to 1 st June 2011	To attend Technical Workshop as a part of Joint Technical Meeting India-UK Project, University College of London
4	Prof. D. Janakiram	San Fransisco, SA	12 th – 16 th June, 2011	To attend and present paper at the Pervasive Computing
5	Prof. D. Janakiram	Columbia	16 th to 18 th June 2011	To attend Project Discussion with Saxon Infotech
6	Prof. D. Janakiram	Rochester	18 th to 21 st June 2011	To attend Project Discussion with Xerox
7	Prof. Kamala Kirtivasan	Las Vegas, USA	18 th to 21 st July 2011	To visit International Conference on Foundations of Computer Science
8	Dr. Jayalal Sharma	Arhus University, Denmark	24 th July – 6 th Aug. 2011	Research talk on Simulations and lower bounds in circuit complexity
9	Prof. Hema Murthy	Edinburgh, London, UK	27 th – 31 st July, 2011	Conference on Empirical Methods in Natural Processing
10	Dr. Ashish V Tendulkar	Vienna, Austria	15 th -19 th July, 2011	Intelligent Systems in Molecular Biology
11	Prof. B. Ravindran	San Francisco, USA	5 th -11 th Sept., 2011	To attend the conference, "Conference on Machine Learning"
12	Prof. Krishna Sivalingam	Norwegian University of Science and Technology, Trondheim, Norway.	2nd-9th October, 2011	To present an Invited Paper "ICT Empowered Grid - India's Future Power", held in Association with "India 2011 Event" Organized by NTNU.
12	Dr. Sukhendu Das	Barcelona, Spain	6-13 November 2011	International Conference on Computer Vision (ICCV'2011)
13	Dr. B. Ravindran	California, USA	14 th – 19 th March, 2012	XXXII Sunbelt Conference
14	Dr. D. Janakiram	HAWAII, USA	16 th – 25 th April, 2012	Network Operations and Management Symposium (NOMS 2012)
15	Dr. Sukhendu Das	Barcelona, Spain	6-13 November 2011	To attend 13 th International Conference on Computer Vision (ICCV'2011); Also live DEMO on "VIDLOOKUP", short-listed for the event.
16	Dr. John Augustine	Nanyang Technological University, Singapore.	30 th Nov. – 11 th Dec., 2011	Collaborative Research Work

Fellowships of Academies and Professional Societies:

Sl. No.	Name of faculty	Year of admission
INAE:		
1.	C. Siva Ram Murthy	April, 2012 – March, 2014
Others:		
1.	C. Siva Ram Murthy (IEEE)	2011

4.7.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	Hardware Security Module (HSM) Software Proposal	Six Months	Yalamanchilli Research Center	36,00,000	Prof. V.Kamakoti
2	Information Technology Consultant	3 Years	Indian Overseas Bank	7,20,000	Prof. V.Kamakoti

RBIC projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1.	Prof. Krishnamoorthy Sivalingam	Networking Technologies for the Smart Grid, Sep. 2010 - Sep. 2011,	IBM Open Collaborative Research (OCR) Project, PI	US\$15,000.00
2.	Anurag Mittal	Collaborative Development of a Nudity Detection Solution	Mobicip Inc.	US\$10,000.00

Retainer Consultancy:

SI.No.	Name of faculty	Industry
1.	Dr. B. Ravindran	Mobius Knowledge Services Pvt. Ltd 11 th June 2010 to 10 th June 2012

Research Publications of the faculty members & research scholars:

- a. Total No. of papers published in Refereed National Journals - 03
- b. Total No. of papers published in Refereed International Journals - 20
- c. Total No. of papers presented in National Conferences - 02
- d. Total No. of papers presented in International conferences - 38

a. In Refereed National Journals:

Sl.No	Authors	Title of the paper published	Name of the Journal	Pages
1.	Kavish Seth, V. Kamakoti and S. Srinivasan	Motion Vector Recovery based Error Concealment for H.264 Video Communication: A Review	IETE Technical Review	Vol. 28 (1), pp. 29-39, 2011.
2.	V. Kamakoti and Kunal Korgaonkar Kishore	Thread Synchronization: From Mutual Exclusion to Transactional Memory	IETE Technical Review	Vol. 28 (4), pp. 302-315, 2011.
3.	Karthik Raghavan and V. Kamakoti	Utilizing Faulty Cores	IETE Technical review	Vol. 28 (5), pp. 400-409, 2011.

b. In Refereed International Journals:

SI.No	Authors	Title of the paper published	Name of the Journal	Pages
1	Nikunj Aggarwal, R. Saravana Manickam, and C. Siva Ram Murthy	Cross-Layer User Pairing for CSM in IEEE 802.11 Networks	IEEE Communications Letters	vol. 15, no. 5, pp. 515-517, 2011.
2	B. Venkata Ramana and C. Siva Ram Murthy	Learning-TCP: A Stochastic Approach for Efficient Update in TCP Congestion Window in Ad hoc Wireless Networks	Journal of Parallel and Distributed Computing	vol. 71, no. 6, pp. 836-878, 2011.
3	Vibhav Bukkapatnam, A. Antony Franklin, and C. Siva Ram Murthy	On the End-to-end Flow Allocation and Channel Assignment in Multi-channel Multi-radio Wireless Mesh Networks with Partially overlapped Channels	Computer Communications	Vol. 34, no. 15, pp. 1858-1869, 2011.
4	Shoaib Mahammad, Noor Mahammad and V. Kamakoti	Hardware-based Genetic Evolution of Self-Adaptive Arbitrary Response FIR Filters	Journal of Applied Soft Computing	Vol. 1 (11), 2011, pp. 842-854, Elsevier
5	Karthik Raghavan and V. Kamakoti	ROSY: recovering processor and memory systems from hard errors,	ACM SIGOPS Operating Systems Review	Vol. 45, No. 3, 2011, pp. 82-94.
6	Anish S Kumar, M Pawan Kumar, Srinivasan Murali, V Kamakoti, Luca Benini and Giovanni De Micheli	A Buffer Sizing Algorithm for Network on Chips with mutiple Voltage-Frequency Islands	Journal of Electrical and Computer Engineering	Volume 2012 (2012), Article ID 537286, 12 pages, doi:10.1155/2012/537286
7	Ganesh Patil, Sally McClean, and Gaurav Raina	Drop-Tail and Queue Management with Small Buffers: Stability and Hopf Bifurcation	ICTACT Journal on Communication Technology	Vol 1, No 2, pp. 339-344, June 2011.
8	T. T. Mirmalinee, Sukhendu Das and Koshy Varghese	An Integrated Multistage Framework for Automatic Road Extraction from High Resolution Satellite Imagery.	Journal of the Indian Society of Remote Sensing (Springer-Verlag)	Volume 39 (1), pp 1-25, March 2011.
9	Shiva Rudrani and Sukhendu Das	Face Recognition on Low Quality Surveillance Images by Compensating Degradation.	International Conference on Image Analysis and Recognition (ICIAR 2011, Part II). Burnaby, BC, Canada, Lecture Notes in Computer Science (LNCS), 2011.	Volume 6754/2011, pp 212-221, June 2011.
10	Venkata Padmavati Metta Kamala Krithivasan and Deepak Garg	Spiking Neural P Systems with Anti-spikes as Transducers.	Romanian Journal of Information Science and Technology.	Vol.14, Number 1, 2011, pp. 20-30.
11	K. Lakshmanan, M. Anand, K. Krithivasan and M. Khalid	The Study of Ambiguity and the Trade-off between Measures and Ambiguity in Insertion-Deletion Systems.	Nano Communication Networks.	Volume 2, Issues 2-3, June-September 2011, Pages 106-118
12	V. P. Metta, K. Krithivasan and D. Garg	Modeling and Analysis of Spiking Neural P Systems with Anti Spikes using Pnet lab.	Nano Communication Networks.	Volume 2, Issues 2-3, June-September 2011, Pages 141-149

13	T. T. Mirmalinee, Sukhendu Das and Koshy Varghese	Use of Salient Features for the Design of a Multistage Framework to Extract Roads from High Resolution Multi-Spectral Satellite Images	IEEE Transactions on Geosciences and Remote Sensing (Impact Factor 2.23);	Vol. 49, No.10, pp. 3906-3931, October, 2011.
14	Kartikey Mittal, Arpit Joshi and Madhu Mutyam	Timing Variation-Aware Scheduling and Resource Binding in High-level Synthesis	ACM Transactions on Design Automation of Electronic Systems	16(4), Article No. 40, 19 pages, October, 2011.
15	Madhu Mutyam	Fibonacci codes for crosstalk avoidance	<i>IEEE Transactions on Very Large Scale Integration Systems</i>	accepted
16	N.S. Narayanaswamy and N. Sadagopan.	A Unified Framework for Bi(Tri)connectivity and Chordal Augmentation.	International Journal of Foundations of Computer Science 2011	accepted
17	S. Kanthi Kiran and N.S. Narayanaswamy	Hardness of Subgraph and Supergraph Problems on c-Tournaments.	Theoretical Computer Science	412(35): pp 4629-4635 (2011)
18	N.S. Narayanaswamy and C.R. Subramanian	Dominating Set Based Exact Algorithms for 3-coloring	Information Processing Letters	111(6): 251-255 (2011)
19	B. V. Raghavendra Rao, Jayalal M. N. Sarma	On the Complexity of Matroid Isomorphism Problem	Theory of Computing Systems	49(2): 246-272 (2011)
20	S. Y. Yerima, G.P. Parr, S. McClean, P. J. Morrow and Krishna M. Sivalingam	Design and Implementation of A Measurement-Based Policy-Driven Resource Management Framework for Converged Networks	ICTACT Journal on Communication Technology, Special Issue on Next Generation Wireless Networks and Applications	Vol. 2, No. 2, pp. 329-338, 2011.

c. In Proceedings of National Conferences:

1	Anand Kumar, P. Gireesan Namboothiri, Sarang Deshpande, Sreejith Vidhyadharan, Krishna M. Sivalingam and S.A.V. Satya Murty	A Testbed Based Throughput Analysis in a Wireless Sensor Networks	National Conference on Communications (NCC), (Kharagpur, India), Feb. 2012
2	Suchith Rajagopal and V. Kamakoti	Airborne Radar Clutter Simulation and Signal Processing using Graphics Processing Unit	International Radar Symposium, IEEE Bangalore Section, December 2011.

d. In Proceedings of International Conferences:

Sl.No	Authors	Titles	Conferences	Date
1	John Jose, J. Shiva Shankar, K.V. Mahathi, D. Kranthi Kumar, and Madhu Mutyam	BOFAR: Buffer occupancy factor based adaptive router for mesh NOCs	4 th ACM International Workshop on Network on Chip Architectures, Porto Alegre, Brazil.	December 04 - 05, 2011
2	Preethi Chandur, R. M. Karthik and Krishna M. Sivalingam	Performance Evaluation of Scheduling Algorithms for Mobile WiMAX Networks	Eighth IEEE PerCom Workshop on Pervasive Wireless Networking (PWN), in conjunction with 10th Annual IEEE International Conference on Pervasive Computing and Communications (PerCom 2012), (Lugano, Switzerland).	March 2012
3	Anusha Sivakumar, C. S. Ganesh and Krishna M. Sivalingam	Comparative Study of DBA algorithms for Long Reach Passive Optical Networks	IETE Technical Review	Jan. 2012.

4	Bharat Udai Seth and Krishna M. Sivalingam	Wireless Sensor Node Based Smart Mine Design	Sixth the annual workshop on Wireless Systems: Advanced Research and Development (WISARD), part of Fourth International Conference on COMMunication Systems and NETWORKS (COMSNETS), (Bangalore, India).	Jan. 2012
5	Rahul Kulkarni and Krishna M. Sivalingam	WiMAX Mesh Based Back-Haul For Tactical Military And Disaster Area Networks	Fourth International Conference on COMMunication Systems and NETWORKS (COMSNETS), (Bangalore, India).	Jan. 2012
6	Anand Kumar and Krishna M. Sivalingam	Target Tracking in a WSN with directional sensors using electronic beam steering	Fourth International Conference on COMMunication Systems and NETWORKS (COMSNETS), (Bangalore, India).	Jan. 2012.
7	Sarang Deshpande and Krishna M. Sivalingam	Adaptive Velocity Based Guided Navigation in Wireless Sensor Networks	International Conference on Distributed Computing and Networking (ICDCN), (Hong Kong, P.R.C.).	Jan. 2012.
8	M.S. Najeem and C. Siva Ram Murthy	Enhancing the Random Linear Network Coding	Proc. 17th IEEE International Conference on Networks (ICON), Singapore.	December 14-16, 2011.
9	R. Saravana Manickam, Lalit Dhingra, and C. Siva Ram Murthy	Performance of MIMO over SUI Channels for IEEE 802.16 Networks	Proc. 13th International Conference on Distributed Computing and Networking (ICDCN), Hong Kong.	January 3-6, 2012.
10	Penumarthi Phani Krishna, R. Saravana Manickam, and C. Siva Ram Murthy	MIMO Enabled Efficient Mapping of Data in WiMAX Networks	Proc. 13th International Conference on Distributed Computing and Networking (ICDCN), Hong Kong.	January 3-6, 2012.
11	V. Mahendran, T. Praveen, and C. Siva Ram Murthy	Buffer Dimensioning of Delay-Tolerant Network Nodes - A Large Deviations Approach	Proc. 13th International Conference on Distributed Computing and Networking (ICDCN), Hong Kong.	January 3-6, 2012.
12	V. Mahendran, T. Praveen, and C. Siva Ram Murthy	Impact of Persistent Storage on the DTN Routing Performance	Proc. 13th International Conference on Distributed Computing and Networking (ICDCN), Hong Kong.	January 3-6, 2012.
13	M. Chaitanya, V. Mahendran, and C. Siva Ram Murthy	Performance Modeling of Routing in Delay-Tolerant Networks with Node Heterogeneity	Proc. 4th International Conference on Communication Systems and Networks (COMSNETS), Bangalore.	January 3-7, 2012.
14	S. Srinivasan, V. Kamakoti and A. Bhattacharya	Towards Quick Solutions for Generalized Placement Problem	International Symposium on Electronic Design (ISED), Kochin.	December 2011, pp. 106-111.
15	Kunal Korgaonkar, Prabhat Jain, Deepak Tomar, Kashyap Garimella and V. Kamakoti	Reconstructing hardware transactional memory for workload optimized systems	9th International Conference on Advanced Parallel Processing Technologies, Lecture Notes in Computer Science, Vol. 6965, pp.1-15.	Sep 26-27, 2011
16	Anish S. Kumar, M. Pawan Kumar, Srinivasan Murali, V. Kamakoti, Luca Benini and Giovanni De Micheli	A Simulation Based Buffer Sizing Algorithm for Network on Chips	IEEE Annual Symposium on VLSI Design, Chennai, pp.206-211.	July 2011

18	M. Pawan Kumar, Anish S. Kumar, Srinivasan Murali, Luca Benini and V. Kamakoti	A Method for Integrating Network-on-Chip Topologies with 3D ICs,	IEEE Annual Symposium on VLSI Design, Chennai, pp.60-65.	July 2011
19	John Augustine, Gopal Pandurangan, Peter Robinson, and Eli Upfal	Towards Robust and Efficient Computation in Dynamic Peer-to-Peer Networks	Proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA)	Jan 17-19, 2012
20	Praveen Raja and Gaurav Raina	Delay based feedback, transport protocols and small buffers	IEEE/ACM IWQoS	June 2011
21	Praveen Raja and Gaurav Raina	Delay and loss based transport feedback: buffer sizing and stability	COMSNETS	January 2012
22	Sairam Gurajada, P Sreenivasa Kumar	Index tuning for query-log based on-line index maintenance	Proceedings of 20 th ACM Conference on Information and Knowledge Management (CIKM)	October 2011
23	Parthasarathy K., Sreenivasa Kumar P and Dominic Damien	Ranked answer graph construction for keyword queries on RDF graphs without distance neighbourhood restriction	WWW(Companion Volume),: 361-366.	April 2011
24	Kunal Munay, P Sreenivasa Kumar	SPRING: Ranking the results of SPARQL queries on Linked Data	Proceedings of the 17th International Conference on Management of Data (COMAD), Bangalore, India.	December 2011
25	Ananda Narayanan B., Balaraman Ravindran	Fractional Moments on Bandit Problems	Proceedings of 27 th Uncertainty in Artificial Intelligence (UAI), Barcelona, Spain.	July 14-17, 2011
26	Prabakararaj Swapna Raj, Balaraman Ravindran	Utility Driven Clustering	Proceedings of 24 th International Florida Artificial Intelligence Research Society Conference	Dec 2011
27	Ankit Malpani, Balaraman Ravindran, Hema Murthy	Personalized Intelligent Tutoring System Using Reinforcement Learning	Proceedings of 24 th International Florida Artificial Intelligence Research Society Conference	Dec 2011
28	R. Rangadurai Karthick, Vipul P. Hattiwale, Balaraman Ravindran	Adaptive network intrusion detection system using a hybrid approach	4 th International Conference on Communication Systems and Networks.	COMSNETS 2012
29	C.S.Ganesh and Krishna M. Sivalingam	ONU Buffer Elimination for Power Savings in Passive Optical Networks	IEEE International Conference on Communications (ICC), (Kyoto, Japan)	June 2011
30	Surendra Sharma, Sarang Deshpande and Krishna M. Sivalingam	On Guided Navigation in Target Tracking Sensor Networks using Alpha-Beta Filters	The8th Workshop on Wireless Ad hoc and Sensor Networks (WWASN2011), in conjunction with the 31st IEEE International Conference on Distributed Computing Systems (ICDCS), Minneapolis, USA.	June 2011.
31	P Gireesan Namboothiri, Anand Kumar, Krishna M. Sivalingam, and S. A. V. Satya Murty	A Testbed for Distributed Target Tracking with Directional Sensors	Proc. of IFIP Wireless Days Conference, (Niagara Falls, Canada).	Oct. 2011
32	Sarang Deshpande and Krishna M. Sivalingam	A Study of Energy vs. Quality of Tracking Trade-off in Wireless Sensor Networks	IEEE International Conference on Advanced Networks and Telecommunication Systems (ANTS) 2011, (Bangalore, India)	Dec. 2011

33	R. M. Karthik, Narendran Krishnan and Krishna M. Sivalingam	Convergence Conditions for Iterative Transmission Power Control Algorithms in Wireless Networks	IEEE International Conference on Advanced Networks and Telecommunication Systems (ANTS) 2011, (Bangalore, India).	Dec. 2011.
34	Anusha Sivakumar, C. S. Ganesh and Krishna M. Sivalingam	ONU-Wavelength Grouping Scheme for Efficient Scheduling in Long Reach-PONs	IEEE International Conference on Advanced Networks and Telecommunication Systems (ANTS) 2011, (Bangalore, India).	Dec. 2011
35	C.J. Janraj, T.V. Kalyan, Tripti Warriar, and Madhu Mutyam	Way sharing set associative cache architecture	25th International Conference on VLSI Design, IEEE, Hyderabad	Jan 2012
36	Arpit Joshi and Madhu Mutyam	Prevention flow-control for low latency torus networks-on-chip.	ACM/IEEE International Symposium on Networks-on-Chip (NOCS), Pittsburg PA	May 2011
37	Youming Qiao, Jayalal M. N. Sarma, Bangsheng Tang	On Isomorphism Testing of Groups with Normal Hall Subgroups	Symposium on Theoretical Aspects of Computer Science (STACS), 2011	2011
38	B. V. Raghavendra Rao, Jayalal M. N. Sarma	Isomorphism testing of read-once functions and polynomials	Foundations of Software Technology and Theoretical Computer Science (FSTTCS), Hyderabad	Dec 2011

Distinguished Visitors to the Department:

Sl. No.	Name of the visitor and Designation	Date of visit	Purpose of visit
1	Prof. Nanda Nandagopal, Dean External, University of South Australia	13.06.2011	To discuss common area of interest and expertise and explore opportunities for collaboration
2	Mr. Jeremy Wyatt, University of Birmingham	25.06.2011	For Joint project discussion on UKIEI grant
3	Prof. Ivo Sbalzarini ETH Zurich	26.07.2011	Seminar Talk on "Theory, Algorithms and Software for Particle Methods".
3	Prof. Sabarish Babu, Assitant Professor, Clemson University, USA	19.08.2011	Virtual Environments and 3D Human-Computer Interaction
4	Dr. N.V. Krishna	10.08.2011 – 11.08.2011	Seminar Talk
5	Dr. Nitesh Chawla, University of NorteDame	08.08.2011	Seminar Talk on "Networked Thinking in Communication, Social, and Natural Systems".
6	Dr. Magimai Doss Mathew Martigny, Switzerland	10.08.2011	Seminar talk on "Kullback-Leibler Divergence based Hidden Markov Models".
7	Dr. Sabarish V. Babu Clemson University, USA	18.08.2011	Seminar talk on "Mining of Network Data".
8	Dr. Guna Seetharaman (From Tokyo Office of the AFOSR, also from Ohio State University)	12.08.2011	Explore Technical Collaboration for Initiative in Strategic INDO-US Partnership. (part of wider set of visits to DRDO Labs., IISc and IITs.)
9	Dr. Chandrasekaran, (From Tokyo Office of the AFOSR, also from Ohio State University)	01.09.2011	Explore Technical Collaboration for Initiative in Strategic INDO-US Partnership. (part of wider set of visits to DRDO Labs., IISc and IITs.)
10	Dr. Pradeep Ramachandran (Intel Corporation, Bangalore.)	02.09.2011	Seminar Talk: "SWAT: A Complete Solution for Low-Cost In-Core Fault Resiliency".

11	Dr. Kalyan	15.09.2011	Seminar Talk
12	Kanna Rajan, Principal Researcher, MBARI	29.11.2011	Inference-based robotic exploration of the costal ocean
13	Prof. Pierluigi Frisco, Heriot-Watt University, Edinburgh, UK	03.10.2011	Seminar Talk on "Membrane Computing"
14	Dr. Dharmaraja, Dept. of Mathematics, IIT Delhi	05.10.2011.	Guest Lectures on "Stochastic Petri Networks"
15	Dr. Vineeth Balasubramanian, Arizona State University, USA	11.10.2011	Seminar Talk: "Machine Learning for Human-centered Multimedia Computing: Inspirations from Assistive and Rehabilitative Technologies"
16	Prof. C.E. Veni Madhavan, IISc, Bangalore	14.10.2011	Seminar Talk on "Generativity in Cognitive Networks"
17	Dr. Sriram Ganapathy, Johns Hopkins University	01.12.2011	Seminar Talk on "Signal Analysis using Autoregressive Models of Amplitude Modulation"
18	Murali Krishna Ramanathan, Coverity Inc, SFO, CA, USA	05.12.2011	Seminar Talk: Static Path-Aware Analysis of Program Invariants
19	Dr. Gopal Pandurangan, Nanyang Technological University	14.12.2011	Seminar Talk: How fast can you compute in a distributed network?
20	Dr. Bhaskara Marthi Research Scientist at Willow Garage, Inc	30.12.2011	Seminar Talk: Planning, What's it Good For?
21	Dr.Manimaran Govindarasu, Iowa State University	10.01.2012	Seminar Talk on Cyber Security for Smart Grid
22	Anurag Verma Ph.D. candidate in the Industrial Engineering Program at Texas A&M University	13.01.2012	Seminar Talk on Clique Relaxation Models in Network Analysis
23	Prof. Gopal Pandurangan, Nanyang Technological University	16.01.2012	Seminar Talk on Distributed Random Walks
24	Prof.Shakhar Smorodinsky, Department of Mathematics, Ben-Gurion University, Israel	10.02.2012	Seminar Talk on Conflict Free and List Conflict Free Colorings.
25	Dr.G. Viswanath, Samsung India Research Lab	16.02.2012	Seminar Talk on Visual Saliency Modeling and Facial Expression Analysis
26	Dr.Yael Moses, IDC Herzliya, Israel	17.02.2012	Seminar Talk on Multi-Camera: Video Synchronization

4.7.6 Other Activities of the Department/Centre:

Results obtained in research work (from M.S. & Ph.D thesis) of the scholar/faculty

- A novel approach and a web-based prototype for Content based Video Retrieval (CBVR), for non-annotated video query samples, using a joint spatio-temporal representation.
- Combining Decision and Feature fusion techniques for a novel multi-classifier framework

International collaboration/ achievements by the Departments

Prof. Sivalingam is co-ordinator for one of the 10 Themes of India-UK Advanced Technology Centre (IU-ATC) of Excellence in Next Generation Networks Systems and Services “ Theme 5: Converged Networks QoS Frameworks”, Co-PI. (UK Part funded by EPSRC; Project PIs: Prof. Ashok Jhunjunwalla of IIT Madras, India and Prof. Gerard Parr of Univ. of Ulster, UK).

As part of this project, Prof. Sivalingam and two research scholars (Preethi Chandur and Madanagopal Ramachandran) visited UK in June 2010 to attend the joint bi-annual meeting. Also, Ms. Naghmeh Moradpoor, Ph.D. student at Univ of Ulster visited our lab. in Feb. 2011 for about 10 days.

Major infrastructure development made in the Department

- Exebit 2011: Annual Department Tech. Fest
- Department has received an amount of Rs.3.60 Lakhs from Microsoft Research India for constituting MSR India Outstanding Young Faculty Award.
- The Department has initiated a new series of weekly talks called the "Research Seminar series" The seminar series consists of two talks every week by PhD scholars.
- HackU! 2011: It is an annual event organized by Yahoo! in the department that consists of some programming contests for students.

4.8 DEPARTMENT OF ELECTRICAL ENGINEERING

4.8.1 Introduction:

The department comprises several laboratories, grouped into five major areas:

- EE1 – Communication, Wireless and Optical Networks and Systems
- EE2 – Power Systems, Power Electronics, High Voltage, Machines and Drives
- EE3 – Analog and Digital Circuits, Microelectronics, MEMS and VLSI design
- EE4 – Control, Robotics Measurements and Instrumentation
- EE5 – Photonics

All faculty members in the department have PhDs received from reputed universities.

EE1 - COMMUNICATIONS, SIGNAL, SPEECH & IMAGE PROCESSING, WIRELESS & OPTICAL NETWORKS

Facilities:

- Vector Network Analyzer
- Circuit Simulation and Layout Tools
- True RMS Voltmeter
- RF Frequency Generator and Spectrum Analyzers
- Wide Band Noise Generator
- Logic Analyzers
- DSP Emulators
- FPGA Facilities
- Digital Communication Trainer
- HP ADS System

EE2 - POWER SYSTEMS, POWER ELECTRONICS, HIGH VOLTAGE MACHINES AND DRIVES

Facilities:

Machines and Drives Laboratory

- Motor Generator Sets
- Cradle Type DC Dynamometer
- Regulating Transformer
- Torque Transducer
- Data Acquisition Systems
- Vector Visualizer
- Special Purpose AC Supply Generators
- Measurement Storage Oscilloscopes
- Microprocessor Based Drive Systems
- Simulation Software for Power Electronic Systems, PSIU
- Magnet 2D,3D FEM Software
- Motor Control DSP Kits
- FPGA Kits - Altera, Xilinx
- Multilevel Inverters

High Voltage and Power System Laboratory

- HV Testing Transformer (800 Kv, 400 kva)
- Lightning Impulse Generator (1.5 MV, 37.5kj)
- High Frequency Voltage Generator
- Digital Bandwidth Storage Oscilloscopes
- Capacitance Measurement Unit
- PD Detector Unit
- Power System Simulator
- Power System Analysis and Application Software
- Power Quality, Monitoring and Analysis Unit
- Facts And Custom Power Devices Experimental Units
- DSP Based Power Controllers

EE3- ANALOG AND DIGITAL CIRCUITS, VLSI DESIGN, MICROELECTRONICS AND MEMS

Facilities:

Microelectronics and MEMS Lab

- Class 100 /Class 1000 Clean Rooms
- Laser Writer for Mask Making
- E-Beam Metallization Unit
- Furnaces for Oxidation and Diffusion
- Double Sided Mask Aligner and Exposure Systems
- PECVD System for Silicon Dioxide and Silicon Nitride Deposition.
- LPCVD System for Polysilicon Deposition
- Reactive Ion Etching System
- Substrate Bonder

Characterization:

- Autogain Ellipsometer
- Interferometric 3 -D Surface Profiler
- Four Point Probe
- Contact Angle Measurement System
- DLTS System
- Manual Wafer Probe Station
- Semiconductor Parametric Analyzer
- Multifrequency LCR Meters
- Lock-in Amplifier and Chopper
- Device Simulation

ANALOG & DIGITAL CIRCUITS AND VLSI DESIGN LAB

- Workstations and EDA Tools for complete IC Design Flow
- EPLD / FPGA Design Software and Workstations
- DSP Kits and Workstations
- IC Test Facilities

EE4 – CONTROL, ROBOTICS, MEASUREMENTS AND INSTRUMENTATION

Facilities:

Control Laboratory

- Micro Selection C Development Systems for VLSI Based Control
- Simulation Packages: MATLAB, PSPICE, MAXPLUS II
- Motor Control Systems
- Speed Control Systems (Analog and Digital)
- Benchmark Vision System
- High Precision Measuring Instruments
- Cobra RS-23-5 Axis Robot
- Eshed ERIII, Eshed E&V: 5 Axes Robots
- Position Control Systems (AC and DC)

Measurements and Instrumentation Laboratory

- Precision Indicating Instruments
- Standard R, L and C Components
- Virtual Instrumentation Laboratory with ELVIS
- Meter Calibrator
- Pressure Calibrator
- Energy Meter Testing Desk
- Instrument Transformer Calibrator
- High Current AC and DC Supply Units
- Biomedical Instrumentation (Ultrasonic and Optical)

EE5 – PHOTONICS

Facilities:

- Fibre Optic Educational Kit/Laboratory
- Experimental Optics Laboratory with Lightwave Measurement Unit, BER Tester, Optical Spectrum Analyzer
- Fibre Grating Fabrication
- Fibre Laser Laboratory
- Integrated Optoelectronics (LiNbO₃ and Si-on-Insulator Platforms)

4.8.2 Academic Programmes:

New Courses introduced:

Sl. No.	Course No.	Title
1	EE 5211	Switched Mode Power Conversion

New Lab(s) established:

Microelectronics and MEMS Simulation laboratory was created

Students on Roll:

Programme	I year	II Year	III Year	IV Year	V Year & extended	Total
B.Tech.	53	54	47	38	12	204
Dual Degree	76	69	56	55	53	309
M.Tech.	62	64	2	0	0	128
M.S.	63	48	32	16	3	162
Ph.D.	22	26	19	17	25	109
Total	276	261	156	126	93	912

Endowment Prize instituted:

Name of the Prize	Name of Donor	Amount of Corpus Fund	Nature of Award	Criteria of selection
Prof. M K Achuthan Prize	Dr. Amitava DasGupta & Dr.Nandita DasGupta	₹ 1,00,000/-	A silver medal & cash award of ₹ 5,000/-	Student with the Best Academic record in 1 st and 2 nd semesters of the M.Tech. Programme in EE
Sri V Rajagopalan Memorial Prize	Mr. R Muralidharan (1968 B.Tech. EE)	₹ 1,00,000/-	A silver medal & cash award of ₹ 5,000/-	Student with the Best Academic record in 3 rd and 4 th semesters of the B.Tech./DD Programme in EE

Names of Student/Scholar who attended Conference/ /Seminar and Symposia in India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
1	Ms. Devika Jay	EE10S034	IEEE PES International Conference on Innovative Smart Grid Technologies (ISGT) –India	01.12.11 to 03.12.11 Kerala	IIT Madras
2	Ms. Devika Jay	EE10S034	INDICON 2011	17.12.11 BITS Hyderabad	
3	Mr. Yashwant	EE10S042			
4	A.R. Karthikeyan	--	National Conference on Communication	03.02.12 to 05.02.12 IIT Kharagpur	---

5	N.Y. Dhiraj Reddy	EE06B066	International Conference on VLSI Design, Hyderabad	08.01.12 to 10.01.12	No financial assistance
6	S. Usha Rani	EE08D001	18 th National Conference on Communications (NCC 2012)	03.02.12 to 05.02.12 IIT Kharagpur	IIT Madras

Names of Students/Scholars who won outside prizes and awards:

Sl.No	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by	Date
1	Anandanarayanan.B Enbasekhar D Satish Kannan	EE07B058 EE07B074 EE07B077	Tom Engibus Prize (joint first prize) for the TI Analog Design Contest 2010	Texas Instruments India, Bangalore	April 2011
2	Ashwin Ram Suresh	EE07B090	First Prize in Project work	Electrical Division in the Jed-I Competition, Bangalore	June 2011
3	Vikas Singh	EE07S019	Innovative Student Projects Award	INAE	September 2011
4	Dilip K.Kainikkara Rohan Jaishankar	EE11B015 EE11B033	Aditya Birla Scholarship	----	October 2011
5	Anil Kulhare Arindam B Choudhury	EE10M102 EE10M104	First Prize Winner of the Best Student Paper Award	The paper "Stabilization of a Tri-rotor UAV"	February 2012
6	Pradeep Krishna	EE10S052	Silkroad Award	The paper "A 15mW 3.6 Giga Sample/S CT-Delta Sigma ADC with 36 MHz Bandwidth and 83dB Dynamic Range in 90nm CMOS"	March 2012

Name of Students/Scholars who won Institute Convocation/Institute Day Prize:

Sl.No.	Name of the Student/Scholar	Roll No.	Name of Prizes
1	Avinash K Krishnakumar V Sashidharan	EE07B087 EE09M026	Siemens Prize
2	Ramya Korlakai Vinayak Dinesh Jayaraman	EE07B088 EE07B013	K. Srinivasan and Indira Srinivasan Prize
3	Dinesh Jayaraman	EE07B013	Dr. Dilip Veeraraghavan Memorial Award K. Srinivasan and Indira Srinivasan Prize Rajalakshmi Krishnamurthy English Prize
4	Ujwal Radhakrishna	EE06B095	Institute Merit Prize
5	Ramya Korlakai Vinayak	EE07B088	Sri Ramasarma V Kolluri Memorial Prize
6	Mala K R M Amarsagar Reddy Jami hima Tej	EE08D004 EE06B081 EE07B016	Bhagyalakshmi and Krishna Ayengar Award
7	Archit Mohan	EE09B007	Sri S. Subramanian Prize
8	Aniruddha Roy R M Amarsagar Reddy Srinidhi Tirupattur Ramamurthy	EE09M072 EE06B081 EE06B077	Institute Merit Prize
9	Rakesh Misra	EE06B097	D Anand Subramanian Memorial Award
10	Ramya Korlakai Vinayak	EE07B088	Swati/Jayalakshmi Memorial Award
11	<u>Bibin Varghese</u>	EE09M004	Prof. Achim Bopp Endowment Prize
12	<u>Renny Edwin Fernandez</u>	EE05D003	Dr. M. Mukunda Rao Endowment Prize

4.8.3 Faculty and their activities:

Faculty:

Name and Qualifications

Major Area of Specialization (Only 5 Areas)

Professor:

Enakshi Bhattacharya [Head]

EE1 – COMMUNICATIONS, SIGNAL, SPEECH & IMAGE PROCESSING, WIRELESS & OPTICAL NETWORKS

Aravind R

Communications, Video, Estimation Theory

Ashok Jhunjunwala

Fibre-Optic Communication, Communication Network, Computer Networking, Microprocessor Based Systems, SAW

Bhaskar Ramamurthi

Digital Communication Systems, DSP, Wireless Networks

David Koilpillai R

Cellular and Broadband Wireless Systems, DSP Applications in Wireless, Cognitive Radio

Devendra Jalihal

Statistical Signal Processing, Estimation Theory

Giridhar K

Communication Systems, Adaptive Signal Processing

Prabhu K.M.M.

Algorithms for Digital Signal Processing, DSP for Communications, Non-uniform Sampling, Acoustic Noise Control

Rajagopalan A. N.

Image Processing and Computer Vision

Harishankar Ramachandran

Computational Electromagnetics, Access Networks, Plasma Physics

Umesh S.

Speech and Signal Processing

EE2 – POWER SYSTEMS, POWER ELECTRONICS, HIGH VOLTAGE MACHINES AND DRIVES

Krishna Vasudevan

Electrical Machines, Industrial Drives and Power Electronics

Mahesh Kumar

Custom Power Devices, Power Quality Monitoring, Analysis and Interpretation

Sarathi R

High Voltage Engineering

Shanthi Swarup K

Power Systems, Computational Intelligence and Energy Management Systems

EE3- ANALOG AND DIGITAL CIRCUITS, VLSI DESIGN, MICRO ELECTRONICS AND MEMS

Amitava DasGupta

Silicon and Gallium Arsenide Devices, Technology Modeling and Simulation, MEMS

Enakshi Bhattacharya

Amorphous, Porous and Polycrystalline Silicon Material and Devices, MEMS and Biosensors

Karmalkar S

Modeling and Fabrication of Semiconductor Devices, MEMS/Microfluidics, Nano Technology, Education

Nandita DasGupta

Silicon and III-V Semi-Conductor Devices, Technology and Modeling, MEMS

Shanthi Pavan

Analog & Mixed-Signal VLSI, RF and Microwave IC Design

Vinita Vasudevan

Statistical & Noise Analysis of Circuits, VLSI Design

EE4 – CONTROL, ROBOTICS, MEASUREMENTS AND INSTRUMENTATION

Jagadeesh Kumar V

Electrical and Electronic Measurements, Sensors and Signal Conditioning, Instrumentation and Biomedical Devices.

Jayashankar V

High Voltage, Power System and Biomedical Instrumentation

Sridharan K	Robotics, Vision, Architectures for Transforms, FPGA-Based System Design
	EE5 – PHOTONICS
Anil Prabhakar	Lasers, Quantum Optics, Nonlinear Systems, Magnetic and Magnetic-Semiconductor Devices, Sensor Networks, Metrology
Harishankar Ramachandran	Nonlinear Optics, Computational Plasma Physics and Optics, Edge Plasma Physics
Associate Professor:	EE1 – COMMUNICATIONS, SIGNAL, SPEECH & IMAGE PROCESSING, WIRELESS & OPTICAL NETWORKS
Andrew Thangaraj	Error Control Coding, Information Theory
Ramalingam C S	Signal Processing; Speech Recognition, Synthesis, and Coding
Srikrishna B	Wireless Communications, Information Theory, Signal Processing for Communication Systems
	EE3- ANALOG AND DIGITAL CIRCUITS, AND VLSI DESIGN, AND MICRO ELECTRONICS AND MEMS
Nitin Chandrachoodan	Digital Systems, Microprocessors, VLSI Design
Nagendra Krishnapura	Analog VLSI, RF & Microwave IC
	EE5 – PHOTONICS
Balaji Srinivasan	Fiber Lasers, Distributed Fiber Sensors, Fiber Bragg Gratings
Bijoy Krishna Das	Optoelectronic Devices and Circuits, Silicon Photonics, Lithium Niobate Integrated Optics
Shanti Bhattacharya	Fibre Interferometry, Diffractive Optics, Optical MEMS
Assistant Professor:	EE1 – COMMUNICATIONS, SIGNAL, SPEECH & IMAGE PROCESSING, WIRELESS & OPTICAL NETWORKS
Arun Pachai Kannu	Wireless and Cellular Communications
Manivasakan R	Performance Analysis of Communication Networks in General: Optical and Computer Networks.
Venkatesh R	Stochastic Modeling, Queuing Theory, Wireless Communication
Venkatesh T G	Stochastic Modeling, Computer Networks, Computer Architecture, Multimedia applications using the Java Media Framework
Krishna P. Jagannathan	Communication Networks, Stochastic Modeling, Queuing Theory, Wireless Networks
Radha Krishna Ganti	Wireless Communication and Networking
Gaurav Raina	Performance Modeling of Communication Networks, Control Theory and Non-Linear Systems
	EE2 – POWER SYSTEMS, POWER ELECTRONICS, HIGH VOLTAGE MACHINES AND DRIVES
Kalyan Kumar B	Power System Stability, Facts, Power Quality
Krishna S	Power System Stability Analysis and Control
Lakshmi Narasamma	Power Electronics and Drives, Switched Mode Power Converters, Resonant Converters
Srirama Srinivas	Electrical Machines, Power Electronics and Industrial Drives

	EE3- ANALOG AND DIGITAL CIRCUITS, VLSI DESIGN, MICRO ELECTRONICS AND MEMS
Aniruddhan S	Analog and RF Integrated Circuit Design
Anjan Chakravorty	Compact Modeling of Sige Hbts, LDMOS, Nanofets, Inductors
Deleep R. Nair	Semiconductor Devices - design, Fabrication and Characterization
Mathiazhagan C	Telematics, RF Communication, Analog Circuits
Soumya Dutta	Printable electronic, optoelectronic, chemical sensor devices based on organic/inorganic semiconductors, hybrid structures, graphene etc
	EE4 – CONTROL, ROBOTICS, MEASUREMENTS AND INSTRUMENTATION
Arun D. Mahindrakar	Nonlinear and Robust Control with Application to Underactuated Systems
Bharath Bhikkaji	Identification Algorithms for Resonant Systems, Vibration Control of Resonant and Active Structures and Control and Actuation of Mechatronic Systems
Boby George	Sensors and Signal Conditioning, Measurements and Instrumentation and Biomedical Devices
Mohanasankar.S	Biomedical Instrumentation, Implantable Devices
Ramkrishna Pasumarthy	Modeling and Control of Physical Systems
	EE5 – PHOTONICS
Ananth Krishnan	Nanophotonics, Plasmonic Devices, Nanofabrication, Material Science, Optical MEMS, Characterization
Deepa Venkitesh	Nonlinear Optics, Fiber Amplifiers and Fiber Lasers, Optical Components for Communication, Components/Devices for All-Optical Signal Processing/ Switching.
Visiting Faculty:	EE4 – CONTROL, ROBOTICS, MEASUREMENTS AND INSTRUMENTATION
Dr. Subhas Chandra Mukhopadhyay	Instrumentation and Measurements
Adjunct Faculty:	EE1 – COMMUNICATIONS, SIGNAL, SPEECH AND IMAGE PROCESSING, WIRELESS AND OPTICAL NETWORKS
Kiran Kumar Kuchi	Wireless and Cellular Communications
	EE3- ANALOG AND DIGITAL CIRCUITS, AND VLSI DESIGN, AND MICRO ELECTRONICS AND MEMS
Ravishankar A	Digital VLSI, CAD
Ravikumar C.P	Digital VLSI Design and Testing
	EE4 – CONTROL, ROBOTICS, MEASUREMENTS AND INSTRUMENTATION
Rashmin Gandhi	Ophthalmologist specialising in Neuro Ophthalmology
	EE3- ANALOG AND DIGITAL CIRCUITS, AND VLSI DESIGN, AND MICRO ELECTRONICS AND MEMS
Srinivasan S	Digital Systems, Computer Architecture, Digital Signal Processing, VLSI Design
Scientific Officers / Instrumentation Engineer/ Technical Officer	EE1 – COMMUNICATIONS, SIGNAL, SPEECH & IMAGE PROCESSING, WIRELESS AND OPTICAL NETWORKS
	Prabhakar Rao P

EE2 – POWER SYSTEMS, POWER ELECTRONICS, HIGH VOLTAGE MACHINES AND DRIVES

Jayasudha Avudai Thangam

Power Electronics and Drives

EE3- ANALOG AND DIGITAL CIRCUITS, VLSI DESIGN, MICRO ELECTRONICS AND MEMS

Ponnuraju K

Semi-Conductor Devices and Technology

Departmental Computer Facility

Dhanabalan S

Electronics and Communication Engineering

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Seminar:			
1	R.D. Koilpillai K. Shanti Swarup	Large Scale Solar Photovoltaic Power Plants	09.01.12 to 13.01.12
Workshop:			
1	Srikrishna Bhashyam	Workshop on Wireless Systems: Advanced Research and Development - WISARD 2012 (part of COMSNETS 2012)	03.01.12 to 04.01.12
Lecture Series:			
1	Nagendra Krishnapura	IEEE Solid-State Circuits Society Distinguished Lecture Series on Analog/Mixed Signal Design and Industry Challenges	09.12.11

Short-term Courses/ Workshops/ Meetings/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution/Place	Period
Workshop:				
1	Bhaskar Ramamurthi	The IU-TAC workshop for the Indo-UK project	University College London, U.K.	31.05.11 to 03.06.11
2	K. Giridhar			
3	Devendra Jalihal			
4	Nitin Chandrachoodan			
5	Gaurav Raina			
6	Gaurav Raina	ACM/IEEE International Workshop on Quality of Service	San Jose, USA	04.06.11 to 05.06.11
7	Ashok Jhunjunwala	The IU-TAC workshop for the Indo-UK project	University College London, U.K.	31.05.11 to 03.06.11
8		3rd International Workshop on Infrastructures for Health care : Global Health Care	IT University of Copenhagen, Denmark	22.06.11 to 25.06.11
9		NAIP Review Workshop Sub-Projects of Component	New Delhi	15.11.11
10	Enakshi Bhattacharya	Bio MEMS	IISc. Bangalore	15.07.11 to 16.07.11
11		16th International Workshop on Physics of Semiconductor Devices IWPSD 2011 -Chaired the session on "Modeling and Simulation"	IIT Kanpur	19.12.11 to 22.12.11
12	David Koilpillai	Canada-India Workshop on Frontiers in Science and Engineering 2011	York University, Toronto, Canada	11.10.11 to 15.10.11
13		6th QS University Rankings and Evaluation Workshop	Manila, Philippines	15.11.11
14	Balaji Srinivasan	OSA India Workshop	New Delhi	02.12.11
15	Bijoy Krishna Das	INDO - UK Workshop on Micro structured Optical Fibers and Contemporary Research Trends in Photonics	Kochi	15.12.11 to 16.12.11

16	Anjan Chakravorty	16th International Workshop on Physics of Semiconductor Devices IWPSD 2011	IIT Kanpur	19.12.11 to 22.12.11
17	S. Karmalkar	16th International Workshop on Physics of Semiconductor Devices IWPSD 2011 - Chaired the session on "Modeling and Simulation"	IIT Kanpur	19.12.11 to 22.12.11
18	Krishna Jagannathan	ICTS Workshop on Network Science in Electrical Engineering and Computer Science	IISc. Bangalore	09.01.12 to 13.01.12
19	S. Umesh	Winter School on Speech and Audio Processing – WISSAP 2012	IISc. Bangalore	--
Meetings :				
1	R. David Koilpillai	Reliance Infotel Advisory Council Meeting	Mumbai	20.10.11
2		German International Cooperation (GIZ) Representative Mr. Carsten Vonnoh to plan an IITM-RENAC Training programme on Solar PV Systems	IIT Madras	21.10.11
3		Tamil Nadu State Planning Commission Twelfth Plan Working Group on Information Technology	TN Secretariat, Chennai	24.10.11
4	Gaurav Raina	Architectures for mobile payments	National Payments Corporation of India, Mumbai	22.09.11 & 23.09.11
5	Ashok Jhunjunwala	CSIR – Society Meeting	Delhi	04.04.11 to 05.04.11
6		3i Infotech Limited – Board Meeting	Dubai	22.04.11 to 23.04.11
7		Special Governing Council Meeting	Dept. of Telecom., New Delhi	08.06.11
8		The Second meeting of the Committee constituted to examine the structural reengineering of the National Internet Exchange of India (NIXI)	DIT, New Delhi	
9		Meeting with Dept. of Scientific & Industrial Research (DSIR) R & D Meeting	Ministry of Science & Tech., New Delhi	16.06.11
10		Special governing council meeting of Telecom Center of Excellence (TCoE)	TCoE, New Delhi	16.06.11
11		7th GC Meeting of Center of Excellence in Wireless Technology (CEWiT)	CEWiT, Chennai	16.06.11
12		Working Sub-group on S & T Society	DST, New Delhi	16.06.11
13		14th Meeting of Scientific Advisory Council to the Prime Minister and meeting with Prime Minister	CSIR, New Delhi	20.06.11
14		2nd Meeting of the Board of Governors of IIITDM	IIITDM, Jabalpur, New Delhi	30.06.11
15		National Internet Exchange of India	Nixi, Mumbai	04.07.11
16		Technical Advisory Committee Meeting	SEBI, Mumbai	
17		8th Management Advisory Committee Meeting	ISI, Kolkata	06.07.11
18		Working sub-group on Societal Intervention of S & T	DST, New Delhi	07.07.11
19		Round table on Science Education	Observer Research Foundation, Mumbai	10.07.11

20		Universal service obligation fund meeting	USOF, New Delhi	11.07.11
21		First meeting of the working group on Telecom Sector for the Twelfth Five Year Plan (2012 – 2017)	Department of Telecom, New Delhi	18.07.11
22		2nd Meeting of the Planning Commission	CSIR Science, New Delhi	25.07.11
23		Working group on Information Technology of the Twelfth Five year plan (2012 – 2017)	DIT, New Delhi	
24		Euro – spirit Workshop	ERCIM eWorld, New Delhi	01.08.11
25		MHRD Committee Meeting on Research Park	DST, New Delhi	01.08.11
26		DoT Committee on Twelfth Five Year Plan (2012-17)	DoT, New Delhi	02.08.11
27		Board Meeting of National Internet Exchange of India (NIXI)	NIXI, New Delhi	02.08.11
28		27th Meeting of the Governing Council of IIIT Hyderabad	IIIT, Hyderabad	05.08.11
29		25th Meeting of the Governing Council of LNMIT, Jaipur	LNM Institute of Information Technology, Jaipur	06.08.11
30		Committee on Technical Education for 12th part MHRD	MHRD, New Delhi	08.08.11
31		Second Meeting of the Working Group on Telecom Sector for the Twelfth Five Year Plan (2012 – 2017)	DoT, New Delhi	08.08.11
32		2nd Meeting of the Sub-group on e-Innovation/R&D to formulate 12th Five Year Plan for IT Sector	DIT, New Delhi	18.08.11
33		Second Meeting of Working Group on Technical Education for the Formulation of the Twelfth Five Year Plan (2012-2017)	MHRD, New Delhi	18.08.11
34		15th Meeting of Scientific Advisory Council to the Prime Minister (SACPM)	SACPM, New Delhi	18.08.11
35		Technical Advisory Committee Meeting of Securities and Exchange	SEBI, Mumbai	23.08.11
36		BCNM Forum Meeting	GIZ NABARD, New Delhi	01.09.11
37	Ashok Jhunjunwala	Brainstorming Meeting on Technology Vision 2035	GIZ NABARD, New Delhi	
38		27th Meeting of Board of Governors	NIT Trichy, Bangalore	03.09.11
39		43rd Meeting of the IIT Council	MHRD, New Delhi	14.09.11
40		39th Meeting of the Research Council of CEERI, Pilani	CEERI, New Delhi	
41		16th Meeting of Scientific Advisory Council to the Prime Minister	SACPM, New Delhi	20.09.11
42		Constitution of a Committee on Micro ATMs/Pos Devices	IBA, Mumbai	24.09.11
43		Third Meeting of CSIR/DSIR working group for 12th Five Year Plan	CSIR, New Delhi	28.09.11
44		Third Meeting of the NIXI Committee Meeting	NIXI, New Delhi	
45		ATMs Specifications Meeting with Financial Secretary	Department of Financial Services, New Delhi	
46		Technical Advisory Committee Meeting	SEBI, Mumbai	

47	Ashok Jhunjhunwala	Chairman Committee on ATMs Specification	Indian Bank's Association, Mumbai	11.10.11	
48		National Research Advisory Committee (Engineering)	National Innovation Foundation , Ahmedabad	17.10.11	
49		Advisory Council of Infotel Broadband Services Ltd – Reliance Infotel	Reliance Infotel Broadband Services Ltd, Mumbai	20.10.11	
50		Chairman Committee on Micro ATM s/ POS Devices – IBA	Indian Bank's Association, Mumbai	20.10.11	
51		17th Meeting of the Scientific Advisory Council to the Prime Minister (SACPM)	SACPM, New Delhi	25.10.11	
52		Advisory Group on Online Payments in India	Department of Financial Services, New Delhi	25.10.11	
53		Meeting of the Extended National e-governance Advisory Council	DIT, New Delhi	31.10.11	
54		4th TCOE India Coordinator's Meeting	TCOE, New Delhi	02.11.11	
55		Global Superangels Forum Meeting	GSF, New Delhi	14.11.11	
56		Empowering Lives through MGNREGA: Strengthening the Reform Agenda - UNDP	UNDP, New Delhi		
57		Online Payment working group Meeting – MHRD	MHRD, New Delhi		
58		5th Technical Advisory Committee Meeting of Technology Development and Demonstration Programme	DSIR, New Delhi	15.11.11	
59		Standing Committee of the Council of NITs Meeting	MHRD, New Delhi		
60		Third Meeting of the Society Translational Health Science and Technology Institute (THSTI)	THSTI, New Delhi	21.11.11	
61		Constitution of the Advisory Committee Thematic Area Information and Communication Technologies	TIFAC, New Delhi		
62		3rd Meeting of the Committee about the ID of Citizens	Ministry of Finance, New Delhi		
63		Technical Advisory Committee Meeting – SEBI	SEBI, Mumbai	22.11.11	
64		Third PRSG Project Meeting	IISc., Bangalore	28.11.11	
65		NMITLI Arbitration Project Meeting	IISc., Bangalore	28.11.11	
66		Technical Advisory Committee Meeting	SEBI, Mumbai	30.11.11	
67		A Panel discussion on Mobile	IBEX, Mumbai	01.12.11	
			Banking – IBEX	--	--
68			Online Payment Working Group Meeting – MHRD	MHRD, New Delhi	02.12.11
69			OSA India Workshop Group – OSA	The Optical Society of America, New Delhi	02.12.11
70			India Telecom 2011	TCOE, New Delhi	07.12.11
71			Task force to discuss Aadhaar Enabled Payment Infrastructure	Dept. of Financial Services, New Delhi	07.12.11
72			SAC-PM Meeting	SAC PM, Bangalore	18.12.11
73			Committee on Micro ATMs/Pos Devices Meeting - IBA	Indian Bank's Association , Mumbai	28.12.11

74	Ashok Jhunjunwala	28th Governing Council Meeting	IIT Hyderabad	05.02.12
75		2nd Jury Meeting of Marico Innovation Foundation	Marico Innovation Foundation, Mumbai	09.02.12
76		GeolCT PAMC Meeting – DST	DST, New Delhi	10.02.12
77		First Meeting of the Empowered Task force for Implementation of Dr. Anil Kakodkar Committee – MHRD	MHRD , New Delhi	14.02.12
78		Review Committee Meeting of NIT System - IIT Bombay	MHRD, New Delhi	14.02.12
79		7th Technical Advisory Committee Meeting - DSIR	MST , New Delhi	15.02.12
80		Board of Governors Meeting – IIITDM	IIITD&M, New Delhi	24.02.12
81		Governing Council Meeting – LNMIIT	The LNM Institute of Information Technology, New Delhi	25.02.12
82		Final Meeting of the Committee on Micro ATMs/Pos Devices- IBA	Indian Banks Association, Mumbai	27.02.12
83		Technical Advisory Committee Meeting – SEBI	Securities and Exchange Board of India, Mumbai	28.02.12
84	Next Meeting of the Key Advisory Group on Payments Systems	Ministry of Finance, New Delhi	29.02.12	
85	Sixth Meeting of CSTRl DST	Ministry of Science and Technology, New Delhi	29.02.12	
86	Department of Bio-technology IISER Partnership Programme	Dept. of Biotechnology, New Delhi	29.12.11	
87	Ashok Jhunjunwala	Meeting of the Committee Constituted for Continuous R&D and timely delivery of 'Aakash' Tablet - MHRD	Ministry of Human Resource Development , New Delhi	07.03.12
88	Recommendations of the Advisory Group on Online Payments	Ministry of Finance, Department of Financial Services, New Delhi	07.03.12	
89	3rd Meeting of the NRDMS Steering Committee in DST	Department of Science and Technology , New Delhi	07.03.12	
90	Technical Advisory Committee Meeting of Securities and Exchange Board of India (SEBI)	Securities and Exchange Board of India, Mumbai	12.03.12	
91	2nd PRSG Meeting for the project on Design and Development of Adaptive OFDM Transceiver being implemented by SAMEER	Dept. of EE, IIT Madras	13.03.12	
92	GeolCT PAMC, DST Meeting	ICSR, IIT Madras	15.03.12	
93	Meeting of the Committee Constituted to review the NIT System - IIT Delhi	Indian Institute of Technology Delhi, New Delhi	21.03.12	
94	MHRD Recommendation of Dr. Anil Kakodkar Committee Meeting - IIT Delhi	Indian Institute of Technology Delhi, New Delhi	22.03.12	
95	A.N. Rajagopalan	CVPR Area Chairs Meet	Long Beach, California	24.02.12 to 26.02.12
96	Anil Prabhakar	Brainstorming Session on Fibre Lasers	RRCAT, Indore	05.09.11

Symposia:				
1	David Koilpillai	International Symposium on Wireless Communication Systems ISWCS 2011	Aachen, Germany	06.11.11 to 09.11.11
2	Bijoy Krishna Das	XXXVI OSI Symposium of OSI, FOP11	New Delhi	03.12.11 to 05.12.11
3	Balaji Srinivasan			
Conference:				
1	V. Jayashankar	World Renewable Energy Conference	Linkoping, Sweden	08.05.11 to 11.05.11
2	V. Jagadeesh Kumar	2011 IEEE International Instrumentation and Measurement Technology Conference	Sheraton, Binjiang, Hangzhou China	10.05.11 to 12.05.11
3		5th International Conference on Sensing Technology	Palmerston, New Zealand	28.11.11 to 01.12.11
4	K. Giridhar	National Conference on Frontiers in computer networks	Bengaluru	20.05.11
5		IEEE WPMC 2011	Brest, France	02.10.11 to 07.10.11
6	Bhaskar Ramamurthi	IEEE WPMC 2011	Brest, France	02.10.11 to 07.10.11
7	S. Umesh	36th International Conference on Acoustics, Speech and Signal Processing (ICASSP-2011)	Prague, Czechoslovakia	22.05.11 to 27.05.11
8		Interspeech-2011 Conference	Florence, Italy	27.08.11 to 31.08.11
9		International Conference on Acoustic Speech and Signal Processing - ICASSP 2012	Japan, Kyoto	25.03.12 to 30.03.12
10	Dr. Ashok Jhunjhunwala	LNMIT Governing Council Meeting	Jaipur	01.05.11
11		TCoE Meeting	New Delhi	05.05.11
12		Round Table Conference (R&D units, Manufacturers, Telecom Service Providers, Associations)	New Delhi	05.05.11
13		Technical Advisory Committee (TAC) Meeting, IIIT Bangalore	Bangalore	09.05.11
14		Constitution of Working Group of The Department of Science and Technology for Twelfth Five Year Plan	New Delhi	10.05.11
15		Industry Academia Confluence on Research & Innovation	New Delhi	10.05.11
16		Presentation of Dr. Anil Kakodkar Committee	New Delhi	12.05.11
17		Working Group on S&T for the Vulnerable Section of the Society	New Delhi	18.05.11
18		Meeting in SEBI	Mumbai	23.05.11
19		Business correspondent Network Managers' Forum	Mumbai	23.05.11
20		Mobile Plus International Conference on Inclusive Growth through Mobile applications	MSSRF, Chennai	15.09.11
21		2nd edition of the PARADISO International Conference	Brussels, Belgium	08.09.11 to 09.09.11
22		Valuex India Conference	Mumbai	07.11.11
23		Communication Policy Research South6 Conference (CPRSOUTH6)	Bangkok, Thailand	08.12.11 to 10.12.11
24		International Conference on Wireless Technologies for Humanitarian Relief (ACWR2011)	Amrita University, Kochi	18.12.11
25	On Haat 2012	OMIDYAR Network, New Delhi	20.03.12	

26	Gaurav Raina	IEEE International Conference on Communications	Kyoto, Japan	06.06.11 to 07.06.11
27		India Telecom 2011	Pragati Maidan, New Delhi	07.12.11 to 09.12.11
28	Enakshi Bhattacharya	Gordon Research Conference on Micro fluidics : Physics and Chemistry	New Hampshire, USA	26.06.11 to 01.07.11
29	Shanthi Pavan Y	European Solid state circuits Conference (ESSCIRC 2011)	Helsinki, Finland	12.09.11 to 16.09.11
30	Arun D Mahindrakar	18th IFAC world congress	Milan, Italy	28.08.11 to 02.09.11
31	Mahesh Kumar	IET Renewable Power Generation Conference (RPG) 2011	Edinburg, UK	06.09.11 to 08.09.11
32	Nagendra Krishnapura	Custom Integrated Circuits Conference	San Jose, USA	18.09.11 to 21.09.11
33	Anjan Chakravorty	IEEE Bipolar/BiCMOS Circuits and Technology meeting 2011	Atlanta Georgia, USA	09.10.11 to 11.10.11
34	Andrew Thangaraj	IEEE Information Theory Workshop 2011	Paraty, Brazil	16.10.11 to 20.10.11
35		National Conference on Communications 2012	IIT Kharagpur	03.02.12 to 05.02.12
36	S. Karmalkar	Low carbon Earth Summit and BIT world Congress and Nano S & T	Dalian, China	20.10.11
37		To attend BIT's First Annual World Congress of Nano S & T		23.10.11 to 26.10.11
38	Anil Prabhakar	LIGO-Lab visit collaboration with Caltech	IUCAA, Pune	22.10.11 to 22.10.11
39	Manivasakan R	Asian Himalayas International Conference on Internet AH-HCI 2011	Katmandu, Nepal	04.11.11 to 06.11.11
40	Lakshmi Narasamma	37th Annual Conference of the Industrial Electronics Society	Melbourne, Australia	07.11.11 to 10.11.11
41	Shanti Bhattacharya	Asia Communications and Photonics Conference & Exhibition	Shanghai, China	13.11.11 to 16.11.11
42	Balaji Srinivasan	Asia Communications and Photonics Conference & Exhibition	Shanghai, China	13.11.11 to 16.11.11
43	Deepa Venkitesh	Asia Communications and Photonics Conference & Exhibition	Shanghai, China	13.11.11 to 16.11.11
44		Frontiers in Material Science	VES College, Mumbai	26.11.11
45	Krishna Vasudevan	Annual International Conference of IEEE TENCON 2011	Bali, Indonesia	21.11.11 to 24.11.11
46	Bijoy Krishna Das	International Conference on Trends in Optics & Photonics, ICONTOP - 2011	Kolkata	07.12.11 to 09.12.11
47	S. Krishna	Centenary Conference – Electrical Engineering Indian Institute of Science	IISc., Bangalore	15.12.11 to 17.12.11
48	K.S. Swarup	INDICON 2011 – Chaired the Session on “Deregulated Power Systems	BITS Hyderabad Campus	17.12.11
49	Nitin Chandrachoodan	International Conference on VLSI Design	Hyderabad	08.01.12 to 10.01.12
50	Srikrishna Bhashyam	COMSNETS 2012	Bangalore	03.01.12 to 07.01.12
51		National Conference on Communications 2012	IIT Kharagpur	03.02.12 to 05.02.12
52	Devendar Jalihal	National Conference on Communications 2012	IIT Kharagpur	03.02.12 to 05.02.12
53		WIDE Conference followed by DISANET Project	Nagano, Japan	05.03.12 to 09.03.12

54	Ramakrishna Pasumarthy	2nd International Conference on Control and Optimization of Dynamical Systems (ACODS)	IISc. Bangalore	16.02.12 to 18.02.12
55	R.K. Ganti	National Conference on Communications 2012	IIT Kharagpur	03.02.12 to 05.02.12
56	Krishna Jagannathan	National Conference on Communications 2012	IIT Kharagpur	03.02.12 to 05.02.12
57	Ananth Krishnan	DST workshop on plasmonic Photo Voltais	Bengal Engineering and Science University, Shibpur	17.03.12

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of Faculty	Topic of Lecture	Event/Place	Date
1	Giridhar K	Research Challenges in OFDM	Anna University, Thiruchi	02.04.11
2	Swarup.K.S	Developments in Inter Disciplinary Research in Electric Power Engineering	SRM-Easwari Engineering College , Chennai	20.04.11
3		Optimization techniques in power system problems	Dept. of Elec. Engg., Adhiparasakthi Engg. College, Melmaruvathur	04.06.11
4		Computational intelligence to power system analysis control and optimization	Dept. of Elec. Engg., Pondichery Engg. College	06.06.11
5		Economic Operation of Power Systems using Hybrid Optimization Techniques	SRM University, Chennai	10.02.12
6		Micro Smart Grid in Power Systems	Dept. of Mechanical Engineering, IIT Madras	23.02.12
7		Latest Research Directions in Electrical Power Engineering	ICGAR Kalpakkam	24.02.12
8		Computer Modelling Methods and Simulation in Power Systems	GITAM University, Visakhapatnam	25.02.12
9		Power System Planning, Operation and Optimization	Dept. of Elec. & Electronics Engg., Univ. College of Engg. J.N.T.U., Kakinada	17.06.11
10		Smart Grid: Issues and Challenges In Power Systems Engineering	S.V. University, Tirupati	20.08.11
11		Computational Intelligence in Electrical and Electronics Engineering	Department of Electrical and Electronics Engineering of Sathyabama University	01.03.12 to 04.03.12
12		Digital Simulation Power Systems for TANGEDCO Engineers	Digital Simulation Power Systems for TANGEDCO Engineers	08.03.12 to 09.03.12
13		Soft Computing Techniques in Power Systems	Sree Sastha Institute of Technology, Chennai	30.03.12
14		Soft Computing Techniques in Power Systems	Saveetha Engineering College	30.03.12
15		Manivasakan R	Next Generation Optical Internet: IP over WDM	VIT, Chennai Campus
16	Introduction to PoN: BpON and EPoN, Technologies and Trends		Simulation and Performance of Gigabit capable Passive Optical Network (G-PoN)" in CAIR, Bangalore	07.10.11
17	The GPoN (ITU-T 984.* series of standards) Technology with emphasis on MAC			08.10.11
18	Srikrishna B	Resource allocation for Multi-terminal Wireless Communication Systems	SPCOMS 2011 held at ANU College of Engineering and Technology, Nagarjuna Nagar, Guntur District	01.04.11
19		Cross-layer scheduling and resource allocation in Wireless Communication Systems	NIT, Calicut	21.06.11

20		Information flow in Wireless Networks	NCC, IIT Kharagpur	03.02.12
21	Gaurav Raina	Mobile payments for financial inclusion	SWIFT, Mumbai	01.06.11 to 02.06.11
22		Design of a rate control transport protocol	Network Science in Electrical Engineering and Computer Science Indian Institute of Science, Bangalore	12 .01.12
23	Ashok Jhunhunwala	Academic and Industry partnering towards nurturing innovation & enterprise	Expert Committee Meeting under the Chairmanship of Dr. T. Ramasami, DST, IIT Madras Research Park	16.07.11
24		How do we accelerate financial inclusion?	Business Correspondents Network Managers (BCNM), CAB, Pune	30.07.11
25		Leveraging Technology for Banking Towards for Enhancing cost-efficiency & expanding market	FICCI-IBA Conference on Global Banking (FIBAC 2011), Mumbai	23.08.11
26		India – “Opportunities in partnership” – ICT sector	INDIA 2011, 04.10.11 at Trondheim, Norway	04.10.11
27		Smart-Grid in Indian Context	India - NTNU 2011, Conference on ICT Empowered Grid, Trondheim, Norway	05.10.11
28		Role of Innovation in India's Development Journey	Valuex India Conference, Mumbai	07.11.11
29		Development of ICT based Tools/Technology towards an interactive Multimedia Agriculture Advisory System'	NAIP Review Workshop Sub-projects of Component, New Delhi	15.11.11
30		My scholarly work with most policy impact	Communications Reform: From Research to Practice, Bangkok, Thailand	09.12.11
31		Dynamic Rural Survey for National Rural Employment Guarantee Scheme in India Using Mobile Phones		10.12.11
32		E-agriculture : Crop Disease Mitigation and Management System	IUATC Technical Workshop, IITM Research Park, Chennai	01.02.12 & 02.02.12
33		E-Health : ICT Towards healthcare delivery		
34		Social TV : Virtual Classrooms for Education		
35		Challenge Lecture Smart – grids for India: Can Solar Energy become Dominant power source	IIT, Hyderabad	06.02.12
36		The Current Indian Telecom Tangle - Telecom Sector as a Driver for Economic Growth.	Indian Institute of Management IDEA Telecom Centre of Excellence (IITCOE), Ahmedabad	24.02.12
37	Distributed Solar PV Systems: State Of Technology, Economics, Low Hanging Fruit And Way Forward	Central Lecture Theatre, IIT Madras	14.03.12	
38	Mobile Money: Can it transform India? Convenience, Governance, Financial Inclusion	The Mobile ecosystem: Opportunities for Mobile Money in India, Aegis Graham Bell Jury Award 2012, Convergence India 2012, New Delhi	23.03.12	
39	Bijoy Krishna Das	Silicon Photonics – The Future	Dehradun	10.06.11
40		50 years of LASER Promises & Challenges	Department of Physics, Prabhat Kumar College, Contai	08.01.12

41		Silicon Photonics without CMOS Technology	Annual Photonics Workshop, "Recent Trends in Photonics", CUSAT, Kochi	27.02.12 & 28.02.12
42	Shanthi Pavan Y	IEEE Solid State Circuits Society Distinguished Lecture : Power Reduction in Mixed-Signal Circuits using Feed forward Techniques	IIT Madras	09.12.11
43			IISc Bangalore	10.12.11
44			IIT Delhi	12.12.11
45	S. Aniruddhan	Research Talk	NIT Silchar	02.11.11 to 04.11.11
46		IEP on RFIC and System Design (SMDP2 in VLSI)	IIT Delhi	16.01.12 to 17.01.12
47	A.N. Rajagopalan	Ready, (un)steady, shoot	National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics, Hubli	17.12.11
48		Motion blur: Some new insights	Induction ceremony in Hyderabad for Fellows of the INAE	23.12.11 to 24.12.11
49	Balaji Srinivasan	Instrumenting a Technology – DART	FOP 11, New Delhi	03.12.11
50		Power Line Monitoring Using Distributed Anti-Stokes Raman Thermometry	IGCAR, Kalpakkam	23.02.12
51	S. Karmalkar	Current-Voltage Characteristics of Nanowire Junctions	16 th IWPSD, IIT Kanpur	19.12.11 to 22.12.11
52	Shanti Bhattacharya	Spectral Domain Optical Coherence Tomography: Algorithms and Applications	EPFL, Switzerland	26.10.11
53		Photonics Research at IIT Madras	ISED 2011, Workshop for Engineering Students	21.12.11
54	Krishna Jagannathan	Queue length asymptotics under heavy-tailed traffic: Why CSMA is more robust than max-weight scheduling	ICTS Workshop on Network Science in Electrical Engineering and Computer Science, IISc Bangalore	13.01.12
55	Arun D Mahindrakar	Robust stabilization of a class of underactuated mechanical systems using time-scaling and Lyapunov redesign	Winter School on Dynamics and Control, Systems and Control Engineering, IIT Bombay	16.01.12 to 18.01.12
56		Control activities at the Dynamics and Control Laboratory, Electrical Engineering IIT Madras		
57	Enakshi Bhattacharya	Towards a silicon based diagnostic chip	SENNET 2012, VIT, Vellore	20.01.12
58		Biosensor activity at IIT Madras	Indo French Symposium on Sensor Technologies and Systems, IIT Delhi	02.03.12
59		A silicon MEMS Triglyceride sensor, Symposium on Recent Trends in Health Care Science and Technology (Mar 5-6 2012)	BESU, Howrah	05.03.12 to 06.03.12
60	Deepa Venkitesh	All Optical Signal Processing Functionalities	SSN College of Engineering, Chennai	09.02.12
61	Radha Krishna Ganti	Random Spatial Models for Heterogeneous Cellular Networks	SRM University, Kattankulathur	02.02.12
62	R. David Koilpillai	Workshop Cord 2012	IIT Hyderabad	24.02.12 to 26.02.12
63	Ramkrishna Pasumarthy	Potential Research Collaboration	SKCET, Coimbatore	02.03.12

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1.	A.N. Rajagopalan	Germany	15.04.11 to 15.07.11	Assignment of renewed research stay as Humboldt Research Fellow by the Alexander von Humboldt Foundation	--
2.				Research stay as Humboldt Research Fellow	--
3.	Nandita Das Gupta	University of Southampton	22.05.11 to 28.05.11	Discussion for Research Collaboration	--
4.	Ashok Jhunjhunwala	Singapore	26.05.11 to 27.05.11	To attend the Special Audit Committee Meeting of Polaris software Lab Ltd.,	--
5.		Denmark	22.06.11 to 25.06.11	To attend and deliver keynote address for the 3 rd International Workshop on Infrastructures in Health care : Global health	
6.		Trondheim, Norway	04.10.11 to 05.10.11	Analog Devices and keynote speech on "ICT Empowered Grid" in the "India 2011"	
7.	Nitin Chandrachoodan	London U.K.	31.05.11 to 01.06.11	To attend IUATC Research Workshop	IUATC (DST project)
8.	K. Giridhar	United Kingdom	31.05.11 to 01.06.11	To attend IUATC Research Workshop	IUATC (DST project)
9.			02.06.11 to 04.06.11	Research discussion with collaborations at Univ. of Southampton	---
10.	K. Sridharan	Singapore	05.06.11 to 05.07.11	Research collaboration on Tan Chin Tuan Fellowship	Nanyang Technological University, Singapore
11.	Balaji Srinivasan	Canada	12.06.11 to 15.06.11	To present paper at Optical Sensors Conference	--
12.	Enakshi Bhattacharya	Malaysia	16.06.11 to 18.06.11	Discussions towards collaboration between the Teknologi University and IIT Madras	UTM, Malaysia
13.	R. David Koilpillai	Hong Kong	25.06.11 to 29.06.11	To attend workshop – as part of the International Students Inc National Conference 2011	--
14.	Andrew Thangaraj	St. Petersburg, Russia	31.07.11 to 05.08.11	To attend IEEE International Symposium on Information Theory (ISIT 2011)	CPDA & Project funds
15.		Paraty, Brazil	16.10.11 to 20.10.11	IEEE Information Theory Workshop 2011	
16.		Houston, USA	08.12.11 to 09.12.11	IEEE GLOBECOM 2011 Physical Layer Security Workshop	
17.	Arun Pachai Kannu	St. Petersburg, Russia	31.07.11 to 05.08.11	To attend IEEE International Symposium on Information Theory (ISIT 2011)	--
18.	Arun D Mahindrakar	Milan, Italy	28.08.11 to 02.09.11	To present paper at IFAC 18 th World Congress	--
19.	Bharath Bhikkaji	Milan, Italy	28.08.11 to 02.09.11	To present paper at IFAC 18 th World Congress	--
20.	V. Jagadeesh Kumar	Aachen, Germany	08.08.11 to 07.10.11	DAAD Fellow at RWTH Aachen University	--
21.	Shanti Bhattacharya	Neuchatel, Switzerland	24.10.11 to 31.10.11	Microsystems for Space Technologies Laboratory (LMTS) at Swiss Federal Institute of Technology (EPFL)	--

22.		Wuhan, China	10.11.11 to 11.11.11	To visit University	--
23.	Anil Prabhakar	United Kingdom	11.09.11 to 15.09.11	Indo-EU DYNAMAG annual project	DST
24.			16.09.11 to 19.09.11	Indo-Euro project work	
25.		Boston, USA	8.10.11 to 10.10.11	Young Investigator's Meeting : Bio-Engineering and Bio-Medical Instrumentation	
26.	Deepa Venkitesh	Wuhan, China	10.11.11 to 11.11.11	To visit University	--
27.	Krishna Vasudevan	USA	11.11.11 to 18.11.11	To visit Rockwell and attend Automation Fair 2011 and their R&D Labs	--
28.	Y.Shanthi Pavan	Reo de Janeiro - Brazil	15.05.11 to 18.05.11	To present paper at International Symposium on Circuits and Systems (ISCAS 2011)	--
29.		San Francisco, USA	08.10.11 to 11.10.11	Paper Selection Meeting of ISSCC	
30.		Penang, Malaysia	21.11.11 to 25.11.11	To conduct a short course through CCE on High speed Transceivers for Dreamcatcher Asia	--
31.		San Francisco, USA	19.02.12 to 23.02.12	To attend International Solid State Circuits Conference	--
32.	Devendra Jalihal	Nagano, Japan	05.03.12 to 09.03.12	WIDE Conference and followed by the DISANET Project	--
33.	S. Umesh	Prague, Czechoslovakia	22.05.11 to 27.05.11	36th International Conference on Acoustics, Speech and Signal Processing	-
34.		Florence, Italy	27.08.11 to 30.08.11	Interspeech-2011	--
35.		Kyoto, Japan	25.03.12 to 30.03.12	ICASSP-2012	--

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
ii. Awards:					
1	K. Sridharan	Tan Chin Tuan Fellowship	Nanyang Technological University	Research in Embedded Systems	June 2011
2	Andrew Thangaraj	INAE Young Engineer Award	INAE	Young Engineer Award	September 2011
3	Ashok Jhunjunwala	Dronacharya	The IndUS TiE Chennai Entrepreneur Awards	Award recognizes the leadership that he has provided in creating entrepreneurs, mentoring and guiding them through the journey and thereby creating a positive impact on society	November 2011
4		Top Innovator of Top 11 Innovators Challenge	Rockfeller Foundation & mHealth Alliance	For innovative contributions using mobile technology in improving health systems and outcomes in remote areas	December 2011
5	Bhaskar Ramamurthi	Technovation Award	India Semiconductor Association (ISA)	TechnoVisionary Category	December 2011

6		TCOE Award of Excellence	TCoE in association with DoT, COAI & FICCI	R & D organizations doing excellent work in telecommunication for the year 2011	December 2011
7	Nandita Dasgupta	Dr. S.K. Agarwal Memorial Best Poster Award IWPSD 2011	Dr. S.K. Agarwal Memorial Best Poster Award IWPSD 2011	Electrical and reliability characteristics of oxide grown by High Pressure Oxidation of SiC in nitric acid vapor with different gas ambient	December 2011
8	Enakshi Bhattacharya		Dr. S.K. Agarwal Memorial Best Poster Award IWPSD 2011	A Digital Microfluidics Platform for Biosensors	December 2011
9	Anjan Chakravorty		Dr. S.K. Agarwal Memorial Best Poster Award IWPSD 2011	Applicability of Partition Charge Based Approach for Modeling Non-Quasi-Static Effects in SiGe HBTs	December 2011
10	K. Shanti Swarup & Manoj K Maharana	Best Paper Award	Journal of The Institute of Engineers (India), Corps of Electrical and Mechanical Engineers Prize	"Directed Acyclic Graph Based Corrective Control Strategies for Alleviation of Line Overloads during Contingencies"	2010-2011
11	Praveen Raja and Gaurav Raina	Best Paper Award	International Conference on Communication Systems and Networks, Bangalore	Delay and loss-based transport protocols: buffer-sizing and stability	January 2012
12	A.N. Rajagopalan	DAE-SRC Outstanding Investigator Award - Fellowship of 20,000/-	DAE-SRC	DAE-SRC Outstanding Investigator	February 2012
13	Arun D. Mahindrakar B. Kalyan Kumar S.N. Raghunandan (Roll No.EE04B117)	Best Paper Award	ACODS 2012, IISc. Bangalore	Paper entitled "State constrained stabilization of Nonlinear System : Application to a system with Synchronous Generator and SVC"	February 2012
14	Ramkrishna Pasumarthy	Best Paper of the Session	ACODS 2012, IISc Bangalore	Paper entitled "Simulation of a Boiler Model in a Cloud Environment"	February 2012
15	Nitin Chandrachoodan B. Aandanarayanan D. Enbasekar Satish Kannan	Tom Engibous Prize	Texas Instruments India, Bangalore	TI Analog Design Contest, 2010	--

Fellowships of Academies and Professional Societies:

Sl. No.	Name of Faculty	Year of admission (Fellowship)
INAE:		
1.	Y. Shanthi Pavan	2011

Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Period	Journal Name
1	B. Srikrishna	Member of Editorial Board	Since July 2009	IEEE Transactions on Wireless Communications
2	Y. Shanthi Pavan	Deputy Editor in Chief	01.01.12 to 01.01.14	IEEE Transactions on Circuits and Systems : Regular Papers
3	A.N. Rajagopalan	Associate Editor to the Editorial Board	01.03.12 to 31.03.15	IEEE Transactions on Image Processing, a premier publication of the IEEE Signal Processing Society

Faculty who served on Technical Program Committees (TPC) of Conferences

Sl.No.	Name of Faculty	Conferences & Place	Month/Year
1.	Krishna Jagannathan	IFIP Performance 2011, Amsterdam	October 2011

4.8.4 Research and Consultancy:

Sponsored Research Projects:

Sl.No.	Title	Period	Funding Agency	Amount (₹ In lakhs)	Co-ordinators
1	Centre for Nano-electromechanical Systems (NEMS) and Nanophotonics	5 years	DIT	49,46.50	Enakshi Bhattacharya Nandita DasGupta
2	Simulation and performance of Gigabit capable passive optical network (G-Pon) – II	14 months	DRDO	9.96	R. Manivasakan
3	Sustainable Communication Infrastructure (Information Network for Natural Disaster Mitigation and Recovery (DISANET)	01.07.11 to 30.06.16	Japan International Co-operation Agency	486	David Koilpillai
4	Design and Fabrication of a Low cost bioptic electronic focus telescope for subjects with low vision	15.07.11 to 14.07.12	Socially Relevant Projects	1.41	Shanti Bhattacharya
5	Design and Fabrication of diffractive optics using electron beam and focused ion beam systems.	Three years (2013)	DST	27	
6	Design and fabrication of diffractive and optical MEMS	Two years (2012)	NPMASS	130.96	
7	Optical MEMS scanner for Optical Coherence Tomography: development and reliability	Two years (2012)	DST (Indo - Swiss collaboration)	27	
8	Preparation of monograph and publishing the book on Wave Energy project	24.04.10 to 31.08.11	National Institute of Ocean Technology	2.50	V. Jayashankar
9	Mobile Eye Surgical Units	1 year (21.09.11 to 20.09.12)	Socially Relevant Projects (Class of 1975)	10	Mohanasankar S, V. Jagadeesh Kumar, V. Jayashankar
10	Design and fabrication of AlGaIn/GaN misemtd and field plated hemt for RF power amplifier applications	3 yrs (20.10.11 to 19.10.14)	DST	38	Nandita DasGupta

11	Network resource allocation in the presence of strategic users	3 yrs	DST	16 (Total value 32 lakhs)	Srikrishna Bhashyam
12	Modeling, Analysis, Design and implementation of 2kW battery discharge regulator	2.5 yrs (11.10.11 to 10.04.14)	ISRO	49	Lakshmi Narasamma
13	Compressive sensing framework for heterogeneous cellular networks	3 years (from 15.11.11)	New Faculty Seed Grant	5	Arun Pachai Kannu
14	Fiber bragg grating-based sensors in polymer optical fibers for biomedical applications	2 years	DST (Indo - Ireland)	6.01	Balaji Srinivasan, Anil Prabhakar, IITM Gerald Farrell, Dublin Institute of Technology, Ireland
15	Diagnostic study on partial discharge activity in cryogenic insulation structure by multisensor system	01.02.12 to 31.01.14	Central Power Research Institute	46	R. Sarathi K. Sethupathi (PH) R. Sundararajan CPRI, Bangalore
16	Flow Analyzer	10.01.12 to 09.01.15	Dept. of Biotechnology, GOI (BIPP)	13.50 (Total value 158.11)	Anil Prabhakar Taslimarif Saiyed, Director and COO, C-CAMP, Bangalore
17	Cutting edge research in front line areas at Department of physics	01.08.11 to 31.07.13	Alumni Association	300	Ananth Krishnan
18	DBT-IITM Centre for Biodesign and Healthcare Technology Innovation	09.01.12 to 08.05.12	Department of Biotechnology, GoI	42	Dr. Mohansanakar S, Dr. V Jagadeesh Kumar

Industrial Consultancy projects:

Sl. No.	Name of faculty	Title	Industry	Amount (₹ in lakhs)
1	R. Sarathi	Calibration Testing for High Voltage	System Control, Ascott Electricals etc.	1

Research Publications of the faculty members & research scholars:

- Total No. of papers published in Refereed National Journals: - Nil
- Total No. of papers published in Refereed International Journals - 54
- Total No. of papers presented in National Conferences - 14
- Total No. of papers presented in International conferences - 65

a) In Refereed National Journals: Nil

b) In Refereed International Journals:

Sl. No	Faculty Name	Title	Published	Co-authors	Month/Year
1	E. Bhattacharya S. Bhattacharya	Design and Fabrication of a Micro-mirror for Low Resolution Spectroscopy	IEEE Sensors, J. Vol. 11, No. 4, pp. 1019-1025	K.A.G. Prakash, S. Dhabai	April 2011
2	Shanti Bhattacharya	Integrated Optical and MEMS based Design Process for a Variable Optical Attenuator	<i>Opt. And Lasers in Engg.</i> , 49, 848-854 (2011)	Deepak K Agrawal	July 2011

3	Krishna Jagannathan	On the Role of Queue Length Information in Network Control, IEEE Transactions on Information Theory	Volume: 57, Issue: 9	E. Modiano, L. Zheng	September 2011
4	Krishna Jagannathan	A State Action Frequency Approach to Throughput Maximization over Uncertain Wireless Channels	To appear, Internet Mathematics	I. Menache, E. Modiano, S. Mannor	-
5	S. Krishna	Teaching Calculation of Inductance of Power Transmission Lines	International Journal of Electrical Engineering Education, Vol. 48, No. 4, pp. 434-443	--	October 2011
6	K. Sridharan	Low Complexity Design of Ripple Carry and Brent-Kung Adders in QCA	IEEE Transaction on Nano-technology (DOI (identifier) 10.1109/TNANO.2011.2158006)	Vikramkumar Pudi	May 2011
7		Efficient design of a hybrid adder in quantum dot cellular automata	IEEE Transactions on very large scale integration (VLSI) systems, Vol.19, No.9, pp. 1535 – 1548	V. Pudi	September 2011
8		Mobile Robot Navigation through a hardware efficient implementation for control law based construction of generalized Voronoi Diagram	IEEE/ASME Transactions on Mechatronics, Vol.16, No.6, pp. 1083-1095	Leena Vachhani, Arun D Mahendrakar K. Sridharan	December 2011
9		Low Complexity Design of Ripple Carry and Brent-Kung Adders in QCA	IEEE Transactions on Nanotechnology, Vol. 11, No. 1, pp. 105-119	Vikramkumar Pudi	January 2012
10	Nandita DasGupta	A codoping route to realize low resistive and stable p-type conduction in (Li-Ni) : ZnO thin films grown by pulsed laser deposition	ACS Applied Material & Interfaces	E. Senthil Kumar, Jyotormoy Chatterjee, N. Rama, MS Ramachandra Rao	June 2011
11		Modeling of SOI-LDMOS Transistor including impact, ionization, snapback and self-heating	IEEE Transactions on Electron Devices, Vol. 58, No. 11, pp. 4035 - 4041	U. Radhakrishnan, A. DasGupta, and A. Chakravorty	November 2011
12	Ashok Jhunjunwala	Next generation wireless networks and applications	Special Issue Editor, ICTACT Journal on Communication Technology, Vol. 02, Issue 02	--	June 2011
13		Agriculture disease mitigation system	ICTACT Journal on Communication Technology, Vol.02, Issue 02	Sion Hannuna, N Anantrasirichai, Swarna Subramanian, Suma Prashant & C Nishan Canagarajah	June 2011

14		IT in Emerging Markets, Connecting the Next Billion Empowering Rural India	IT Professional, Social Networking & Collaboration, IEEE Computer Society, July / Aug 2011, pp: 53-55	Janani Rangarajan	October 2011
15		IT in Emerging Markets, Connecting the Next Billion Empowering Rural India	IT Professional, Social Networking & Collaboration, IEEE Computer Society, July/ August 2011, pp. 53-55	Janani Rangarajan	November 2011
16		The Use of Mobile Phone as a Tool for Capturing Patient Data in Southern Rural Tamil Nadu	India, Journal of Health Informatics in Developing Countries, accepted 14 th October, 2011, Vol. 5, Issue 2.	M. Ganesan, Suma Prashant, Vincy Pushpa Mary, N. Janakiraman & Nuwan Waidyanatha	December 2011
17	K. Shanthi Swarup	Contingency Constrained Optimal Meter Placement for Power System Observability using Bio geography Based Optimization	International Journal of Machine learning and Computing, Vol.1, No.1, pp.86-93	Jamuna K	April 2011
18		Biogeography based optimization for optimal meter placement for security constrained state estimation	Journal of Swarm and Evolutionary Computation, Vol.1, Issue 2, pp. 89-96		July 2011
19		Optimal Placement of PMU and SCADA Measurements for Security Constrained State Estimation	International Journal Electric Power and Energy Systems, Elsevier Publishers, Vol. 33, No. 10, , pp.1658-1665		December 2011
20		Network Decomposition using Evolutionary Algorithms in Power Systems	International Journal of Machine learning and Computing, Vol.1,No.1, pp 86-93	G Angeline Ezhilarasi	April 2011
21		Classification and Assessment of Power System Security Using Multiclass SVM	IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews, Vol. 1, No. 5, pp 753-758	S. Kalyani	September 2011
22		Voltage stability – Case study of saddle node bifurcation with stochastic load dynamic”, International Journal of Electrical Power & Energy Systems (IJPES-Elsevier),	Volume 33, Issue 10, Pages 1384-1388	R.Chendur Kumaran, T.G. Venkatesh	October 2011
23		Optimal Placement of PMU and SCADA Measurements for Security Constrained State Estimation	International Journal Electric Power and Energy Systems, Elsevier Publishers, Vol.33, No.10, pp. 1658 – 1665	Jamuna K	December 2011

24	S. Bhattacharya, Anil Prabhakar	All-fiber interferometry: Design and analysis	Applied Optics, Vol. 50, Issue 22, pp. 4450-4456 (2011)	Abhijit A. Kulkarni	July 2011
25	Y. Shanthi Pavan	Active-RC Filters using the Gm-Assisted OTA- RC Technique	IEEE Journal of Solid State Circuits	Siva Viswanathan, Prabhu Sankar	July 2011
26	B. Srikrishna	A convex optimization framework for almost budget balanced allocation of a divisible good	IEEE Transactions on automation Science and Engineering, Vo.8, No.3, pp.520-531	A.K. Chorppath, R. Sundaresan	July 2011
27		A Decode and Forward Protocol for Two-Stage Gaussian Relay Networks	IEEE Transactions on Communications , Vol. 60, No. 1, pp. 68-73	Bama Muthuramalingam, Andrew Thangaraj	January 2012
28	Balaji Srinivasan	Experimental investigation of link between growth and decay of fiber bragg gratings	Applied Optics	V.J. Vishnuprasad, Rajesh Joseph, S. Asokan, Nirmal K Viswanathan	July 2011
29	Gaurav Raina	Drop tail and RED queue management with small buffers: Stability and Hopf Bifurcation	ICTACT Journal on Communication Technology, Vol.2, Issue 2, pp. 339-344	Ganesh Patil, Sally McClean	July 2011
30	Anil Prabhakar	Enhanced spin transfer torque effect for transverse domain walls in cylindrical nanowires	Phys. Rev. B 84, 094409 (2011).	Matteo Franchin, Andreas Knittel, Maximilian Albert, Dmitri S. Chernyshenko, Thomas Fischbacher	Septembe r 2011
31	Radha Krishna Ganti	A tractable approach to coverage and rate in cellular networks	IEEE Trans. on Communications, 59(11):3122-3134	J. G. Andrews, F. Baccelli	November 2011
32		Analytical evaluation of fractional frequency reuse for OFDMA cellular networks	IEEE Trans. on Wireless Communications, 10(12):4294-4305	D. Novlan, J. G. Andrews	December 2011
33	Andrew Thangaraj	Strong Secrecy on the Binary Erasure Wiretap Channel Using Large- Girth LDPC Codes	IEEE Transactions on Information Forensics and Security, vol.6, No.3, pp.585-594	Arunkumar Subramanian,, Matthieu Bloch and Steven W. McLaughlin	Septembe r 2011
34		A Decode and Forward Protocol for Two-Stage Gaussian Relay Networks	IEEE Transactions on Communications, Vol. 60, No. 1, pp. 68-73	Bama Muthuramalingam, Srikrishna Bhasyam	January 2012
35	P. A. Janakiraman	Self-Tuned Feed- Forward Compensation for Harmonic Reduction in Single-Phase Low- Voltage Inverters	IEEE Transactions on Industrial Electronics, Vol.58, No.10	L. Padmavathi	October 2011
36		Phase locking scheme based on look-up-table- assisted sliding discrete Fourier transform for low-frequency power and acoustic signals	by IET Circuits Devices Syst., 2011, Vol. 5, Issue. 6, pp. 494-504	P. Sumathi	December 2011
37	E. Bhattacharya	Nanoporous silicon membrane for biomolecular separation	International Journal of Nanoscience, Vol. 10, No. 4 and 5, pp 793- 796	H.V. Balachandra Achar	November 2011

38		Potentiometric estimation of blood analytes triglycerides and urea: comparison with clinical data and estimation of urea in milk using an electrolyte-insulator-semiconductor-capacitor (EISCAP)	Sensors and Actuators B: Chemical , Vol. 160, Issue 1, pp 1439-1443	R. Preetha, K. Rani, M.S.S. Veeramani, R.E. Fernandez, H. Vemulachedu, M. Sugan, A. Chadha	December 2011
39	Anjan Chakravorty	Modeling of SOI-LDMOS Transistor including impact	IEEE Transactions on Electron Devices, Vol. 58, No. 11, pp. 4035 - 4041	U. Radhakrishnan, A. DasGupta, and N. DasGupta	November 2011
40	Amitava DasGupta	Modeling of SOI-LDMOS Transistor including impact	IEEE Transactions on Electron Devices, Vol. 58, No. 11, pp. 4035 - 4041	U. Radhakrishnan, N. DasGupta and A. Chakravorty	November 2011
41	Bijoy Krishna Das	Dispersion-Free SOI Interleaver for DWDM Applications	IEEE/OSA Journal of Light wave Technology, vol. 30, issue 1, pp. 140 - 146, 2012.	G.R. Bhatt, R. Sharma, U. Karthik	November 2011
42	A. Chadha	Potentiometric estimation of blood analytes triglycerides and urea: comparison with clinical data and estimation of urea in milk using an electrolyte-insulator-semiconductor-capacitor (EISCAP)	Sensors and Actuators B: Chemical , Vol. 160, Issue 1, pp 1439-1443	R. Preetha, K. Rani, M.S.S. Veeramani, R.E. Fernandez, H. Vemulachedu, M. Sugan, E. Bhattacharya	December 2011
43	R.K.Ganti	MIMO interference alignment in random access networks	Proc., IEEE Asilomar, Pacific Grove, CA	B. Nosrat-Makouei, J.G. Andrews, R. W. Heath	November 2011
44		A tractable approach to coverage and rate in cellular networks	IEEE Trans. on Communications, No. 11, 3122 - 3134	J. G. Andrews, F. Baccelli	December 2011
45	Arun D Mahendrakar	Mobile Robot Navigation through a hardware efficient implementation for control law based construction of generalized Voronoi Diagram	IEEE/ASME Transactions on Mechatronics, Vol.16, No.6, pp. 1083-1095	Leena Vachhani, and K. Sridharan	December 2011
46	A.N.Rajagopalan	'Natural matting for degraded pictures	IEEE Transactions on Image Processing, Vol. 20, pp. 3647-3653	Sahana Prabhu	December 2011
47	T.G. Venkatesh	Voltage stability – Case study of saddle node bifurcation with stochastic load dynamic”, International Journal of Electrical Power & Energy Systems (IJEPE-Elsevier),	Volume 33, Issue 10, pp 1384-1388	R. Chendur Kumaran, K.Shanti Swarup	October 2011
48	R.Aravind	Improved least squares channel estimation for OFDM	IET Signal Processing, Vol.6, No.1, pp. 45-53	J. Oliver and K.M.M. Prabhu	February 2012
49	K.M.M. Prabhu			J. Oliver and R. Aravind	
50	A.P. Kannu	On communications over unknown sparse frequency selective fading channels	IEEE Trans. on Information Theory, Vol 57, No. 10, pp 6619-6632	P. Schniter	October 2011

51	R. Pasumarthy	Stability Analysis of Interconnected Hamiltonian Systems under Time Delays	IET Control Theory and Applications, Vol. 6, Issue 4, pp 570- 577	C-Y Kao	March 2012
52	K.M.M. Prabhu	Perfect Reconstruction of Uniform Samples from K-th Order Nonuniform Samples	Signal Processing, Vol. 91, pp. 2677-2684	V. Harish Piet Sommen	November 2011
53	Anjan Chakravorty	Regional approach to model charges and capacitances of intrinsic carbon nanotube field effect transistors.	Journal of Computational Electronics, DOI 10.1007/s10825-012-0391-1,	Nune V. Sudheer	February 2012
54	S.Umesh	Noise and Speaker Compensation in Lob FB domain	International Conf. on Acoustic Speech and Signal Processing- ICASSP 2012, Japan,	Vikas J Raghavendra B Luz Carmen	March 2012

c) In Proceedings of National Conferences:

Sl. No.	Faculty Name	Title	Published	Co-authors	Month
1	Anil Prabhakar, Shanti Bhattacharya	Study of Sub-Wavelength Gratings to understand their Polarization Behaviour	COMSOL Conference 2011	Gayathri M S	November
2	S. Krishna	Determination of Individual Generator Participation in the Swing Modes	Centenary Conference - Electrical Engineering, 15 – 17, December 2011, IISc., Bangalore	T.G. Giri Kumar	December
3	K.S. Swarup	Dynamic Demand Response and Control in Smart Grid	INDICON 2011, 17 th December 2011	Devika Jay	December
4		Modeling IEC 61850 based Substation Automation System	INDICON 2011, 17 th December 2011, BITS Hyderabad Campus	Yashwant, K	
5	Andrew Thangaraj	Public-Private Separation in Linear Network-Coded Simultaneous Multicast and Unicast	National Conference on Communications 2012, IIT Kharagpur, India, February 4, 2012.	Amarnath Alapati , Avinash Krishna kumar	February
6		A Dirty Paper Coding Scheme for the Multiple Input Multiple Output Broadcast Channel	National Conference on Communications 2012, IIT Kharagpur, India, February 4, 2012	Srikrishna Bhashyam, Balakrishna S	February
7		Jamming to Foil an Eavesdropper	National Conference on Communications 2012, IIT Kharagpur, India, February 5, 2012	Navin Kashyap, Yogesh, Sankarasubramani am	February
8	Srikrishna Bhashyam	A Dirty Paper Coding Scheme for the Multiple Input Multiple Output Broadcast Channel	National Conference on Communications 2012, IIT Kharagpur, India, February 4, 2012	Balakrishna S and Andrew Thangaraj	February
9		Optimal MTM Spectral Estimation Based Detection for Cognitive Radio in HDTV	National Conference on Communications, Kharagpur, February 4, 2012	R. D. Koilpillai, M. K. Jataprolu	February

10	R. D. Koilpillai	Optimal MTM Spectral Estimation Based Detection for Cognitive Radio in HDTV	National Conference on Communications, Kharagpur, February 4, 2012	M. K. Jataprolu, Srikrishna Bhashyam	February
11	H. Ramachandran	. Comparison of Semiclassical and Quantum Descriptions of saturated Erbium Doped Fibre Amplifiers (EDFA)	presented at the National Conference on Communication 2012, IIT Kharagpur, India, February 4, 2012	Karthikeyan, A.R	February
12	Arun D. Mahindrakar	Control and Stability Analysis of a Walking Knee-less Biped with Torso	15th National Conference on Machines and Mechanisms December 1, 2012	Abdul Jaleel, Tripuraneni Varun	December
13	R. Manivasakan	On the process of Jitter Buffer in TDMoIP	NCC 2012, February 3-5, 2012	S. Usha Rani	February
14	Gaurav Raina	Stabilization of a Tri-rotor UAV	ACODS 2012, March 7, 2012	Anil Kulhare, Arindam Chowdhury	March

d) In Proceedings of International Conferences:

SI. No	Faculty Name	Title	Published	Co-authors	Month
1	Krishna Jagannathan	A State Action Frequency Approach to Throughput Maximization over Uncertain Wireless Channels	IEEE INFOCOM, April 2011 (Mini Conference), Shanghai, PRC	I. Menache, E. Modiano, S. Mannor	April
2		Queue Length Asymptotics for Generalized Max-Weight Scheduling in the presence of Heavy-Tailed Traffic	IEEE INFOCOM, April 2011, Shanghai, PRC	M. Markakis, E. Modiano, J.N. Tsitsikis	
3		Non-cooperative Spectrum Access -- The Dedicated vs. Free Spectrum Choice	ACM MobiHoc, Paris, France, May 2011	I. Menache, E. Modiano, G. Zussman	May
4		On Scheduling Algorithms Robust to Heavy-Tailed Traffic	Information Theory and Applications Workshop, San Diego, CA, February 2012 (Invited)	L. Jiang, E. Modiano	February
5	S. Umesh	Use of VTL-wise models in feature-mapping framework to achieve performance of multiple-background models in speaker verification	ICASSP – 2011	Achintya Sarkar	May
6		Sub-Band level Histogram Equalization	Interspeech – 2011	Vikas Joshi, Raghavendra Bilgi, Luz Garcia, Carmen Benitez	August
7		Efficient Speaker and Noise Normalization			
8		Eigen-Voice Based Anchor Modeling System for Speaker Identification Using MLLR Super-Vector		Achintya Sarkar	
9		Computationally Efficient Speaker Identification using Fast-MLLR based Anchor Modelling	ICASSP- 2012	Achintya Sarkar, J. F. Bonastre	March

10		Noise and Speaker in Log Filter Bank Domain		Vikas Joshi, Raghavendra Bilgi, Luz Garcia, Carmen Benitez	
11		Robust Speech Recognition Through Selection of Speaker and Environment Transform		Raghavendra Bilgi, Vikas Joshi, Luz Garcia, Carmen Benitez	
12	V. Jayashankar	Design of a hundred GWh wave energy plant	World Renewable Energy Conference Linkoping, Sweden	K Mala Kedarnath Jayaraj Joseph	May
13	K. Sridharan	Efficient VLSI architectures for the hadamard transform based on offset-binary coding and ROM decomposition	Proceedings of 2011 IEEE Computer Society Annual Symposium on VLSI (ISVLSI 2011)	B. Sandeep Kumar, Vikram Kumar Pudi	July
14	K.M.M. Prabhu	Efficient reconstruction of non-uniform samples from bunched nonuniform samples	Proc. of the 8th International Conference on Informatics in Control, Automation and Robotics- 2011, Noordwijkerhout, The Netherlands, pp. 350-356, July 28-31, 2011	V. Harish, P. Sommen	July
15		Quasicyclic MDS Codes for Distributed Storage with Efficient Exact Repair	IEEE Information Theory Workshop 2011, Paraty, Brazil	Chinnadurai Sankar	October
16	Andrew Thangaraj	On the Tree width of Reed-Muller and MDS Codes	Proc. IEEE International Symposium on Information Theory 2011, St. Petersburg, Russia.	Navin Kashyap	--
17		Average rate achievable in k-tier downlink heterogeneous cellular networks	Proc., Allerton Conf. on Comm., Control, and Computing, October 2011	H. S. Dhillon, F. Baccelli J. G. Andrews	October
18	Radha Krishna Ganti	Secrecy transmission capacity of decentralized wireless networks	Proc., Allerton Conf. on Comm., Control, and Computing, Oct. 2011	X. Zhou J. G. Andrews A. Hjørungnes	
19		Mimo interference alignment in random access networks	Proc., IEEE Asilomar, Pacific Grove, CA, November 2011	B. Nosrat-Makouei, J.G. Andrews R. W. Heath	November
20	Manivasakan R	Analysis of Jitter Control Algorithms in QoS Networks	AH-ICI 2011 Conference, 4 - 6th of November 2011, Kathmandu, Nepal	Jagadish S	November
21	Shanti Battacharya	Space variant de-convolution for optical coherence tomography	Asian Conference on Photonics - ACP 2011, November 2011, Shanghai, China	R Prashanth	November
22		Measurement of dispersion in a highly nonlinear fiber using four wave mixing	SPIE Proceedings, November 2011	Aravind P.A	
23	Deepa Venkitesh	Investigation of stimulated Brillouin scattering spectra of an optical fiber with use of a frequency modulated laser	--	Mohammad Asif Shaik, Vemula Venkat Achuth, and Balaji Srinivasan,	November

24	Balaji Srinivasan	Investigation of stimulated Brillouin scattering spectra of an optical fiber with use of a frequency modulated laser	--	Mohammad Asif Shaik, Vemula Venkat Achuth, and Deepa Venkitesh	November
25	Krishna Vasudevan	A Novel Inverter Scheme for Photovoltaic Applications with Reduced DC Link Capacitor	IEEE TENCON, November 2011, Bali, Indonesia	--	November
26	V.Jagadeesh Kumar	Tunnelling Magneto-Resistor based Angle Transducer	IEEE 5 th International Conf. on Sensing Tech. (ICST2011), Nov. – Dec. 2011, Massey University, Palmerston North, New Zealand	--	November
27		A Capacitive Array Sensing based Training System for Ophthalmic Anaesthesia	IEEE 5 th International Conference on Sensing Technology (ICST2011), November-December 2011, Massey University, Palmerston North, New Zealand	--	November
28		A Simple Multiple Loop Sensor Configuration for Vehicle Detection in an Un-disciplined Traffic	IEEE 5 th International Conference on Sensing Technology (ICST2011), November – December 2011, Massey University, Palmerston North, New Zealand	--	November
29	Anjan Chakravorty	Modeling High-Frequency Noise in SiGe HBTs Using Delayed Minority Charge	Proc. IEEE BCTM, pp. 183–186, October 2011	K. Kumar	October
30		Applicability of Partition Charge Based Approach for Modeling Non-Quasi-Static Effects in SiGe HBTs	Abstracts of XVI International Workshop on the Physics of Semiconductor Devices, No. MS-P.07, pp. 117, December 2011	N. Augustine, K. Kumar	December
31	K.M.M. Prabhu	Filtered Error LMS-Based Algorithm for Active Control of Nonlinear Noise Processes	Proc. TENCON 2011, pp. 1256-1260, Nov. 21- 24, 2011, Bali, Indonesia	P. Vikram Kumar	November
32	Andrew Thangaraj	Known Plaintext Attack on the Binary Symmetric Wiretap Channel	IEEE Globecom 2011, 9 th December 2011	Rajaraman V	December
33	Enakshi Battacharya	Digital Microfluidics platform for Biosensors	Proc. IWPSD 2011, Kanpur, India , 18 th December 2011	P. Kumar, R Nagarajan	December
34		MEMS Test Structure for Accurate Measurement of Knudsen's forces	Proc. IWPSD 2011, Kanpur, 18 th December 2011	V. Sista	December
35		A miniaturized potentiometric pH sensor with thin film electrode for bio-sensing	Sixth ISSS International Conference on Smart Materials, Structures and Systems (ISSS 2012), January 4, 2012	M.S. Veeramani, N. P. Ratchagar, P. Shyam, and A. Chadha	January

36		Digital Microfluidics and its Integration with a Fluidic Microreacto	Sixth ISSS International Conference on Smart Materials, Structures and Systems (ISSS 2012), January 4, 2012	P. Kumar	January
37		A Wide Range MEMS Vacuum Gauge Based on Knudsen's Forces	COMSOL Conference, November 4-5, 2011, Bangalore	V.Sista	November
38		Fabrication and characterization of silicon nanoporous membranes, Porous Semiconductors Science and Technology	PSST 2012, Malaga, Spain, March 25-30, 2012	HVB Achar	March
39	K.S. Swarup	Dynamic Security Assessment and Classification using Support Vector Machines	Proceedings of the EE Centenary Conference, IISc, Bangalore, pp. 520-525, December 15-17, 2011	S. Kalyani	December
40		Frequency Restoration using Dynamic Demand Control under Smart Grid environment	International Conference on Innovative Smart Grid Technologies (ISGT) - India, 3 rd December 2011	Devika Jay	
41		Frequency restoration using dynamic demand control under smart grid environment	Proceedings of 2011 IEEE PES International Conference on Innovative Smart Grid Technologies (ISGT) – India, Paper No.117	Devika Jay	
42	R.K.Ganti	Coverage in two-tier cellular networks with fractional frequency reuse	in Proc., IEEE Globecom, December 7, 2011	T. Novlan, , and J. G. Andrews	December
43		A new model for coverage with fractional frequency reuse in OFDMA cellular networks",	in Proc., IEEE Globecom, December 7, 2011	T. Novlan, J. G. Andrews, and A. Ghosh	December
44	A. Prabhakar	Asymmetric detuning in active mode locked fibre lasers	Frontiers of Photonics, New Delhi, December 3-5, 2011	S. Thiruthakkathevan, D. Jayavel	December
45	Bijoy Krishna Das	Research Advances in SOI Based Waveguide Sensors	IConTOP - Trends in Optics and Photonics II, Kolkatta, India, 7-9 Dec, 2011 (Invited)	S. Chandran and U. Karthik	December
46		Silicon Photonics in SOI Platform: Problems with Waveguide dispersion and Birefringence Effects	FOP 11 - Frontiers in Optics and Photonics, XXXVI OSI Symposium, New Delhi, India, 3-5 Dec, 2011 (Invited)	Sujith C., G.R. Bhatt, U.Karthik and R. Sharma	December
47		Design and fabrication of integrated optical 1x8 power splitter in SOI substrate using large cross-section single-mode waveguides	Proc. SPIE , Vol. 8173, 81730C (2011)	I.S. Krubhakar, R. Narendran	December

48		Fabrication of ridge waveguide in X-cut LiNbO ₃ for nonlinear optic applications	Proc. SPIE 8173, 81730W (2011)	S. Pal	December
49		Demonstration of ITU channel interleaver in SOI with large cross section single mode waveguides	Proc. SPIE 8069, 806904 (2011)	G.R. Bhatt	December
50	Gaurav Raina	A study of the SMIB model with delayed feedback	International Conference on Power and Energy Systems 2011, December 22 – 24, 2011, IIT Madras, Chennai	Arindam Chowdhury	December
51		Delay and loss-based transport protocols: buffer-sizing and stability	International Conference on Communication Systems and Networks, Bangalore, Jan 5-7, 2012	Praveen Raja	January
52	Arun Pachai Kannu	Uplink initial ranging for 802.16m systems	7th Intl Conf. on Wireless Comm. and Sensor Networks, Panna, India, Jan 5, 2012	R. Tumburu	January
53		Downlink cell search for 802.16m systems	7th Intl Conf on Wireless Comm. and Sensor Networks, Jan 2012	R. Tumburu	January
54		Detecting and tracking abrupt changes in wireless multipath channels	Intl. Conf. COMSNETS, Bangalore, India, January 31, 2012	V. Sashidharan	January
55	A. Chadha	A miniaturized potentiometric pH sensor with thin film electrode for bio-sensing	Sixth ISSS Internatl. Conference on Smart Materials, Structures and Systems (ISSS 2012), January 4, 2012	M.S. Veeramani, N. P. Ratchagar, P. Shyam, Enakshi Bhattacharya	January
56	Nitin Chandrachoodan	GPU Implementation of a Programmable Turbo Decoder for Software Defined Radio Applications	International Conference on VLSI Design, January 8, 2012	Dhiraj Reddy Nallapa Yoge	January
57	K.M.M Prabhu	A New LMS-based Adaptive Interference Canceller for ECG Power Line Removal	International Conference on Biomedical Engineering (ICoBE), Penang, Malaysia, February 27-28, 2012.	H.N. Bharat	February
58	Arun D. Mahindrakar B. Kalyan Kumar	State Constrained Stabilization of Nonlinear System: Application to a System with Synchronous Generator and SVC	2nd International Conference on Advances in Control and Optimization of Dynamical CDOS12), February 17, 2012	S. N. Raghunanadan and B. Kalyan Kumar	February

59	Y. Shanti Pavan	A 15mW 3.6 Giga sample per second continuous time delta sigma ADC with 36 MHZ bandwidth and 83dB dynamic range in 90nm CMOS	IEEE International Solid State Circuits Conference, February 21, 2012	Pradeep Shettigar	February
60	R. Pasumarthy	When is a Spatially Discretized Hamiltonian System good enough for Control	2nd International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS), February 16-18, 2012, IISc Bangalore, India.	N.M. Singh	February
61		Simulation of a Boiler Model in a Cloud Environment	2nd International Conference on Control and Optimization of Dynamical Systems (ACODS), February 16-18, 2012, IISc., Bangalore, India	P.S. Saikrishna, P. Raman	February
62		Nonholonomic formulation of Hamiltonian systems via quasi coordinates	IEEE International Systems Conference, 19 - 21 March 2012, Vancouver, Canada	N.M Singh, F, Kazi, A Kamath	March
63		Stability Analysis of Interconnected Hamiltonian Systems under Time Delays	IET Control Theory and Applications, Volume 6, Issue 4, pp 570- 577, March 30, 2012	C-Y Kao	March
64	S. Umesh	Noise and Speaker Compensation in Lob FB domain	International Conf. on Acoustic Speech and Signal Processing- ICASSP 2012, Japan, Kyoto, March 25-30, 2012	Vikas J Raghavendra B Luz Carmen	March
65	Shanti Bhattacharya	Multi-layer porous silicon diffraction gratings fabricated using standard microelectronic processing techniques	Porous Semiconductors Science and Technology - 2012, Malaga, Spain, March 2012	M. Lai, Gayathri S., Y. Liu, G. Parish, A. Keating	March

Distinguished Visitors to the Department:

S.No.	Visitors' Name & Designation	Affiliation	Purpose of Visit	Month & Date
1	Dr. Antonio Rubio	Department of Telematics and Communication, University of Garanada, Spain	As a part of Indo-Spain Research Collaboration Project	01.02.11 to 06.02.11
2	Dr. Luz Garcia Martinez			01.02.11 to 08.02.11
3	Dr. Carmen Benitez			01.02.11 to 15.02.11
4	Dr. C.P. Ravikumar Mr. Jacob Borgeson	Texas Instruments, USA	To discuss MSP 430 Education Programme	19.04.11
5	Dr. Kumar Appaiah	Texas University	Seminar Talk	15.06.11
6	Prof. Nanda Nandagopal	Dean External, University of South Australia	To explore collaborations	13.06.11
7	Prof. A. Keating,	University of W. Australia	Seminar and collaboration	09.07.11
8	Prof. Mini S Thomas,	Jamia Millia Islamia (JMI) , New Delhi	Seminar to students on "SCADA and Power System automation"	27.07.11

9	Prof. Maekawa, Director, Bio Nano Electronics Research Centre	Toyo University, Japan	To initiate discussion for collaboration efforts with Faculty members	10.08.11
10	Prof. D. Sakthi kumar, Deputy director, Bio Nano Electronics Research Centre			
11	Prof. Brian McGaw Dean of Faculty of Science	La Trobe University, Australia	To look at many opportunities across the area of Science, Technology and Engineering where they could collaborate	06.09.11
12	Mr. Nandi Lakshmanan Senior International Office			
13	Prof. Terry Spithill, HOD of Agricultural Sciences			
14	Prof. Jack Singh Director – Centre for Technology Infusion & Research Professor			
15	Mr. Eric Rondolat Executive Vice-President	Schneider Electric, France	Delivered a talk on “Invention to innovation	21.09.11
16	Prof. Alan Chambers	University of Southampton, UK	To see the facilities and to meet the faculty members	30.09.11
17	Prof. Kotaro Kataoka	Keio University, Tokyo, Japan	Talk on “Japanese Experience of Earthquake Disaster Management”	27.10.11
18	Prof. Vijay K Bhargava, IEEE Communication Society President- Elect	University of British Columbia, Canada	Lecture on “Green Cellular Networks: A survey, some Research issues and challenges”	01.11.11
19	Dr.K.Thulasiraman, Professor and Hitachi Chair in Computer Science	University of Oklahama, USA	Meeting with HOD and Faculty of Communication/ Signal Processing/VLSI	12.12.11
20	Dr. Ying Dar Lin, Professor in Computer Science & Telecommunication Networking area	National Chiao Tung University, Taiwan		
21	Prof. M.M. Sharma Chairman, BoG	Mumbai	Activities of the Photonics Group	13.12.11
22	Prof. Dr. –Ing. Horst Hahn Distinguished Honorary Professor of IIT Madras Director, Institute of Nanotechnology	Research Centre Karlsruhe Institute of Technology & Professor, Darmstadt University of Technology	Talk on “Tailored and tuneable properties of nanostructures”	15.12.11
23	Prof. Joachim Holtz, Emeritus Professor	University of Wuppertal, Germany	To give seminar talk and interact with faculty	04.01.12
24	Prof. Vladimir Blazek Professor	Technical University of Aachen, Germany	To give a lecture on “Non invasive non contact methods for monitoring vital signals of neonatal”	05.01.12 to 15.01.12
25	Dr Moez Draief Lecturer	Imperial College London, UK	To give a seminar talk and interact with faculty	14.01.12 to 18.01.12
26	Prof. Francois Bacelli , Research Professor	Ecole Normale Superieure, France		
27	Prof. Herbert Shea, Professor	EPFL – LMTS Neuchatel Switzerland	To give a seminar on “Artificial muscles on a chip”	16.01.12
28	Prof. Subhas Mukopathay Professor	Massey University, New Zealand	To give a lectures on "Sensors and Signal Conditioning:" "Technology for senior citizens living alone"	25.01.12
29	Dr. Kamineni P. Rao, Associate Head & Associate Professor	Dept. of Mechanical & Biomedical Engineering, City University of Hong Kong	To explore establishing student exchange programme with our institution.	31.01.12

30	i) Dr. Leveugle Thierry (ST R&T Vice President) ii) Dr. Macret Jean-Luc (ST R&T Coordinator) iii) Dr. Oudea Coumar (ST Head of Operations for R&T International Partnerships) iv) Dr. Peres Patrick (ST Expert)	Astrium ST R&T, France	Interaction with faculty members	16.02.12
31	Prof. Syed Islam Condition Monitoring of Transformers, Wind Energy Conversion, Renewable Energy Systems, and Power Systems	Australian Technology Network, Australia	Interaction with faculty members	21.02.12
32	Prof. Prasad Yarlagadda Prof. in Smart Systems Sci & Engg.	Queensland Univ. of Technology	Interaction with faculty members	21.02.12
33	Prof. Yongchae Jeong Vice Dean, College of Engg.,	Chonbuk National University, Korea		27.02.12
34	Prof. Myung-Seob Khil Organic Materials & Fiber Engg.			
35	Prof. Eran Rabani - Vice President, Research, Prof. Moshe Kol Prof. Gil Markovich Prof. Tova Milo Prof. Noam Eliaz Prof. Dan Halperin	Tel Aviv University	Interaction with faculty members	01.03.12
36	Professor. Eduardo F. Camacho	Department of Automatica & Systems Engineering, University of Seville, Spain	To give Seminar on "Control of Solar Power Plants"	07.03.12

Staff

Designation	Name of Staff Members
Administrative	
Junior Superintendent	Ranganathan P
Senior Assistant	Fathima S M Kundalambal R S Tamil Selvi K
Senior Attendant	Jayakumar K Thangamani V P
Attendant	Elangovan K V Sridhar T
Junior Attendant	Sivakumar W
Technical	
Senior Technical Superintendent	Abdul Jaleel A Malarvizhi M Sathyabama M Sumathy R Usha Rani N
Technical Superintendent	Anand P Devaki N Janaki M Jayachandran R Latha S Murugan P Selvam K C Sobana S Umaithanupillai B

Junior Technical Superintendent	Mohanachandran M R (Retd. on Nov. 2011) Padmavathi T Palanivelu R (Retd. on Sep. 2011) Rajendran C
Technical Assistant	Kothandaraman K
Senior Technician	Athinarayanan B Chandrasekaran D S Chandrasekaran R Vedhachalam S
Junior Technician	Jayavel D Prakash J Saranath P

4.8.5 Other Activities of the Department/Centre:

Sl.No.	Name	Activities
1	Faculty, Students and Staff	Electrical Nite at OAT
2	Dr.Renuka Jindal	IEEE Distinguished Lecturer in IEEE EDS Mini-Colloquia
3	Dr Guido Groeseneken, IMEC Belgium	IEEE Distinguished Lecturer in IEEE EDS Mini-Colloquia
4	Dr. M.K. Radhakrishnan, Chief Technical Consultant-NanoRel	IEEE Distinguished Lecturer in IEEE EDS Mini-Colloquia
5	Professor Eduardo, University of Seville Spain	Lecture Delivered in Electrical Department, ESB 244 on " Control OF Solar Energy Plants"
6	Dr.Ashok Jhunjunwala	Aricle Published in Paper: "Think Beyond Telecom as Money spinner Spectrum auction should be based on multiple parameters, not just the price, as this will help proliferation of broadband facilities, maximizing social welfare" published in "The Economic Times Mumbai; Section: Viewpoint; Page: 15, March 26, 2012"

4.8.6 International collaboration achievements by the Department:

a) Student visit

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
Abroad					
1	R. Prashanth	EE09S058	Asia Communications and Photonics Conference - 2011	13.11.11 to 16.11.11 Shanghai, China	IIT Madras & Alumni Association
2	H.N. Bharath	EE08S029	International Conference on Biomedical Engineering	27.02.12 & 28.02.12, Penang, Malaysia	IIT Madras
3	H.V. Balachandra Achar	EE07D017	Porous Semiconductors - Science and Technology Conference, PSST-2012	25.03.12 to 30.03.12 Malaga, Spain	IIT Madras & Alumni Association
4	Raghavendra Bilgi	EE10S009	International Conference on Acoustic, Speech, and Signal Processing, ICASSP 2012	25.03.12 to 30.03.12, Kyoto, Japan	IIT Madras
5	Vikas Joshi	EE10S001			

b) Major infrastructure development made in the Department

- Microelectronics and MEMS Simulation laboratory was created

4.9 DEPARTMENT OF ENGINEERING DESIGN

4.9.1 Introduction:

The Department of Engineering Design was established in IIT Madras as its 16th Department with a focus on interdisciplinary teaching and research. The Department launched the novel dual degree programme in Engineering Design with a view to providing the much needed leadership in this area. The first of its kind in the country, the programme constitutes a B.Tech specialisation in Engineering Design and M.Tech specialization in Automotive Engineering with a strong thrust on the modern practices of design.

Engineering design involves the development of a concept and a form to meet a function. The designer has to be well versed rooted in the fundamentals of engineering and possess interdisciplinary skill sets to create cutting edge products within a competitive business environment. The design has to be aesthetically appealing yet robust; long lasting, yet inexpensive; and incorporate light-weight material, yet be sensitive to environmental concerns. This broad-based programme combines all the above aspects of design along with managerial acumen.

4.9.2 Academic Programmes:

New Courses introduced:

Sl. No.	Course No.	Title
1.	ED 5311	Medical Device Innovation
2.	ED 5313	Biomedical Signal and Image Processing
3.	ED 5314	Design, Analysis and Control of Robot Manipulators
4.	ED 5315	Introduction to Field and Service Robotics
5.	ED 3151	Industrial Automation and Robotics

New lab(s) established:

The following laboratories were established:

1. Medical Device Dissection Laboratory
2. Surgical device Laboratory

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
Dual Degree	54	57	45	43	25	224
M.S.	15	8	5	3	-	31
Ph.D.	12	9	4	6	4	35
Total	81	74	54	52	29	290

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
Abroad:					
1.	Saravanakumar S	ED 08D003	IASTED International Conference on Robotics	Nov 07- 09, 2011, Pittsburgh, USA.	IIT Madras
2.	Lakshmi M	ED07S004	International conference on Computer, Communication, Control and Automation, 3CA 2011	November 19-20, 2011 Zhuhai, China,	Own funding

3.	K. Divya	ED09S007	Conference on Lasers and Electro Optics (CLEO 2011) (Oral Presentation)	1-6 May 2011, Baltimore Convention Center, Baltimore, Maryland, USA.	IIT Madras, Center for International Cooperation in Science (CICS, Chennai), Office of Alumni (IIT Madras)
4.	V. Sathieshkumar	ED10D006	11th International Conference on Laser Ablation (COLA 2011) (Poster Presentation)	14-18 November, 2011, Playa Del Carmen, Mexico	IIT Madras, Office of Alumni (IIT Madras)
5.	A. V. Vishwanath	ED09S008	SIAM Geometric Design / ACM Symposim on Solid and Physical Modeling	Orlando, USA, October 2011	IIT Madras
India:					
1	S Saravanakumar, Ph.D. Research scholar	ED08D003	3D Modeling and Virtual Simulator for a Flat-fish Shaped Autonomous Underwater Vehicle	2nd International Conference on Simulation, Modelling and Analysis, COSMA 2011, held at Coimbatore from 17-19 December, 2011	IIT Madras
2	Neelakanthu K	ED 08S008	International conference on Mathematical Modelling and Applications to Industrial Problems.	March 28-31, 2011 Calicut, India	Project fund
3	Satheesh J	ED11D006	International conference on Mathematical Modelling and Applications to Industrial Problems.	March 28-31, 2011 Calicut, India	Project fund
4	G. Amutha	ED09S003	Investigations on crystallization and ablation characteristics in annealing of amorphous silicon films with nano- and pico-second pulsed Nd ³⁺ :YAG laser (oral presentation)	2nd International Conference on Trends in Optics and Photonics (IConTop 2011), 7-9 December, 2011, University of Calcutta, Kolkata, India	IIT Madras
5	Venkataramesh Bhimasingu	ED10S008	Pulsed Laser Deposition of SiC Thin Films on Crystalline-Si and Glass Substrates (oral presentation)	2nd International Conference on Trends in Optics and Photonics (IConTop 2011), 7-9 December, 2011, University of Calcutta, Kolkata, India	IIT Madras
6	Sathiesh Kumar	ED10D006	Optical emission spectroscopy technique for studying lightning discharge characteristics on glass fiber reinforced plastic (oral presentation)	2nd International Conference on Trends in Optics and Photonics (IConTop 2011), 7-9 December, 2011, University of Calcutta, Kolkata, India	IIT Madras
7	K. Sulochana	ED09D007	Simultaneous Sensing of Ammonia and Water Vapor Using Single Super Luminescent Diode for Emission Monitoring (oral presentation)	2nd International Conference on Trends in Optics and Photonics (IConTop 2011), 7-9 December, 2011, University of Calcutta, Kolkata, India	IIT Madras

8	Jobin K. Antony	ED08D002	Investigation on LIBS plasma expansion of lunar simulant under high vacuum conditions (Oral Presentation)	International Conference on Contemporary Trends in Optics and Optoelectronics 17-19 January, 2011, Thiruvananthapuram, India Organized by Indian Institute of Space Science & Technology (IIST)	IIT Madras
9	Jobin K. Antony	ED08D002	Elemental analysis using dual-wavelength laser induced breakdown spectroscopic technique (Oral Presentation)	Global Conference and Exhibition 2012 on Flow Measurement and Technology (Flotek.g), 18-20 January, 2012, Fluid Control Research Institute, Palakkad, Kerala, India	IIT Madras

Names of students/scholars who won outside prizes and awards:

Sl.No	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1.	Mr Umesh N, MS scholar and Mr John Jose Pattery, Project Associate	ED10S007	GE- IITM research Expo Innovation award for student research project 2011 (<u>Second Prize</u>)	GE India Ltd.
2.	Arun R. Srivatsan, 5th. year DD student	ED07B003	Third prize	2011 ASME Student Mechanism and Robot Design Competition" held at the "2011 ASME International Design and Technical Conferences (IDETC)" in Washington, DC from August 28-31, 2011 for his entry: "Madras Parallel Manipulator (MaPaMan)".
3.	John Jose Pattery, Project Associate		First prize	Student Design Competition held during the NaCOMM 2011 conference held at IIT Madras
4.	Jobin K. Antony, Ph.D. research scholar	ED08D002	"Best Technical Paper" award (Academics) for his paper entitled " Elemental analysis using dual-wavelength laser induced breakdown spectroscopic technique"	Global Conference and Exhibition 2012 on Flow Measurement and Technology organized by Fluid Power Research Institute, Palakkad, Kerala, held during 18-20 January, 2012
5.	Mr Aditya Soni (Project associate)		On the spot judges award	National Conference on Machines and Mechanisms (NaCoMM 2011)
6.	S. Bharath Ram and A. V. Vishwanath	ED10D007 ED09S008	2nd prize	Autodesk Inventor Design Competition

Name of Students/Scholars who won Institute Convocation/Institute Day Prize:

Sl.No.	Name of the Student/Scholar	Roll No.	Name of Prizes	Name of Donor
1.	Arun Srivatsan R	ED07B003	Institute Merit Prize	IIT Madras

4.9.3 Faculty and their activities:

Faculty:

Name and Qualifications	Major area of specialization (only 3 areas)
Professor:	
Nilesh J Vasa [Head]	Optomechatronics, Remote Sensing, Laser Based Sensing, MEMS
R.Krishna Kumar	Nonlinear Finite Elements, Vehicle Dynamics and Tyre Mechanics
Associate Professor:	
T Asokan	Robotics, Mechatronics, Control, Electro Hydraulic Servo Systems
Venkatesh Balasubramanian	Human factors and Ergonomics, Biomedical Devices Development, Rehabilitation Engineering, Injury and Sports Biomechanics, Perceptual Psychophysics and Technology Management
Sankara J Subramanian	Digital Image Correlation, Nano-indentation, Mechanics of Materials, Finite Element Analysis.
Srikanth Vedantam	Design with novel materials, mechanical behaviour of materials, wetting, microstructure evolution
Assistant Professor:	
C S Shankar Ram	Model Based Control and Diagnostics, Automotive Systems, Vehicle Dynamics, Analysis of Transportation Systems
Sandipan Bandyopadhyay	Robotics, Kinematics, Dynamics of Multibody Systems, Design, Symbolic Computation
M.Ramanathan	Geometric & Solid Modelling, CAD, Computer Vision, Computational Geometry, Computer Graphics, Computational Biology, Shape search
G.Saravana Kumar	CAD, Computational Geometry, Reverse Engineering, Shape Optimization, Biomechanical Modeling, Biomedical Imaging and Reconstruction, Biomimetic Prosthetic and Scaffold Design, Layered Manufacturing and Soft Computing
Kavitha Arunachalam	Biomedical instrumentation, Radio frequency and microwave antenna design , Hyperthermia physics, Non destructive material evaluation, Digital signal and image processing
Palaniappan Ramu	Optimization, Application of statistical and probabilistic techniques for engineering design under uncertainties, Risk/Reliability based engineering design, Surrogate based modeling and analysis
Balkrishna C Rao	Sustainable manufacturing, Sustainable design, Nano-manufacturing, Manufacturing for Bio-medical applications , Simulation of Manufacturing Processes

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1.	Dr Sandipan Bandyopadhyay (Chairman) and Dr.G.Saravana Kumar (Co-chairman)	15th National Conference on Machines and Mechanisms at IIT Madras, Chennai, India	November 30 - December 02, 2011
2.	Dr T Asokan	Int. Nat. workshop on Autonomous Ground Robots	5-10 December, 2012
3.	Dr T Asokan	Workshop on Industrial Hydraulics	16-18, August 2012
4.	Dr T.Asokan	International Workshop on Autonomous Ground Vehicles (sponsored by CVRDE, Chennai)	Dec. 5-10, IIT Madras Research Park
5.	Dr Venkatesh Balasubramanian	International Conference on Ergonomics and Human Factors	December 15-17, 2011

Workshop:			
1.	Dr.G.Saravana Kumar	Problem Space Visualisation - Creative Design Methods" Principal faculty members: Dr. Ajanta Sen, Director, Solar Project, Mumbai, India & Prof. Ravi Poovaiah, Industrial Design Centre (IDC), IIT Bombay, Mumbai, India served as external experts	12 th March 2011
2.	Dr.G.Saravana Kumar and Dr.Palaniappan Ramu	One day workshop on "Engineering Optimization" to provide a broad overview of optimization as applicable for engineering design to the mechanical engineering executives of Piping Centre Division, BHEL-Chennai	25 th April 2011
Short term Course:			
1.	Dr.T.Asokan	Continuing Education Program on "Industrial Hydraulics"	Sponsored by M/s Ashok Leyland, 16-18 August, 2011, IIT Madras
2.	Dr.G.Saravana Kumar Dr.M.Ramanathan	Computer Aided Design	AICTE/QIP Sept 12-16, 2011 Engg Design department, IIT Madras
3.	Dr C S Shankar Ram & Dr V Lelitha Devi (CE dept)	Recent Trends in Intelligent Transportation Systems	AICTE/ QIP Sept 19-24, 2011 Civil Engg. Department IIT Madras

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1.	T.Asokan	Robotic Technologies for Medical Applications- Indian Scenario	National workshop on "Robotics in Endoscopy", Asian Institute of Gastroenterology, Hyderabad,	2-3 August 2011
Conference:				
1.	M.Ramanathan	Matching of shapes bound by freeform curves	Computer Aided Design 2011, Taiwan, Taipei,	27th to 30th June 2011
2.	T.Asokan	Waypoint Guidance based planar Path following and Obstacle avoidance of Autonomous Underwater vehicle	8th International Conference on Informatics in Control, Automation and Robotics, Noorwidjkerhout, Netherlands	28-31 Aug. 2011
3.	Sankara J Subramanian	Strain evolution in lap shear testing of SnCu solder joints	Society of Experimental Mechanics Conference on Integrating Simulation and Experimentation for Validation, Edinburgh, Scotland	Sept. 9, 2011
4.	Saravana Kumar, G.	5th International Conference on Advanced Research in Virtual and Rapid Prototyping (VRAP)	Polytechnic Institute of Leiria, Portugal	September 28 - October 01, 2011
5.	M. Ramanathan	Concave and alpha hulls of a set of freeform planar closed curves	SIAM Geometric Design / ACM Symposium on Solid and Physical Modeling, Florida,	October 2011

6.	T.Asokan	An Improved Algorithm for constrained task allocation in cooperative multirobot task allocation	2011 FTRA conference on Intelligent Robotics and Automation (IRoA 2011), Gwangju, South Korea.	20 th to 22 nd October 2011 He also chaired a session on "Robotics" on 21 st October 2011.
7.	N. J. Vasa	Detecting salt deposition on wind turbine blades using laser induced breakdown spectroscopic technique	11th International Conference on Laser Ablation Mexico,	14-18 November, 2011
8.	N. J. Vasa	Dual-wavelength laser induced breakdown spectroscopic (LIBS) technique for emission enhancement	11th International Conference on Laser Ablation Mexico	14-18 November, 2011
9.	Saravana Kumar, G. and Palaniappan Ramu	15 th National Conference on Machines and Mechanisms (NaCoMM)	IIT Madras, Chennai, India	November 30 - December 02, 2011
10.	Saravana Kumar, G.	11th International Conference on Hybrid Intelligent Systems (HIS)	Universiti Teknikal Malaysia, Melaka, Malaysia	December 05 - 08, 2011.
11	Sandipan Bandyopadhyay	The Mathematics and Engineering of Parallel Manipulators	Department of Mechanical Engineering, IISc	March 02, 2012
12	Sandipan Bandyopadhyay	Case-studies in the Design of Socially Relevant Products	Centre for Product Design and Manufacture, IISc	March 05, 2012

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1.	Dr.G.Saravana Kumar	Engineering Design Process: Functional & Conceptual Design	Dept. of Instrumentation and Control Engineering NIT, Trichy	2nd March 2011
2.	Dr.T.Asokan	Autonomous Vehicles and Robotics	DRDO at R&D Establishment (Engineers), Pune	28th to 29th April 2011
3.	Dr.T.Asokan	Key note lecture on "Design Innovations for Knowledge economy"	ISTE seminar held at SSN college of Engineering, Chennai	19 th June 2011
4.	Nilesh J. Vasa , one of Jury members for selection of Excellence Awards for Innovation and Creative Automation		4th International Exhibition on Manufacturing Technologies, Automotive Engineering Show 2011, which was held at Chennai Trade Center, Chennai	11 th June 2011
5.	Dr T Asokan		IEEE Technology Time Machine conference on "Technologies for Beyond 2020" held in Hong Kong	1st to 3rd June 2011
6.	Dr.G.Saravana Kumar	Intelligent Design and Use of Materials for Energy Efficient Automotive Systems	Faculty Development Program on "Intelligent Computing to Clean Energy" organised by IEEE Madras Section	November 2011

7.	Prof Nilesh J Vasa	Annealing of Amorphous Silicon Films for Photovoltaic Applications Using Nd ³⁺ :YAG Laser with Different Pulse Widths	International Conference on Advanced Materials and Processing (ICAMP 2011), R. M. K. Engineering College, Kavaraipettai, Gummudipoondi, Chennai, India	19-20 December, 2011
8.	Dr Sankara J Subramanian	'Evaluation of Mechanical Properties of Solder using Lap Shear Tests and the Virtual Fields Method'	UGC Networking Resource Center for Materials at the Indian Institute of Science	31st January 2012
9.	Dr.T.Asokan	Optimised Trajectory controller for an AUV-Manipulator System	Int. Conf. on Advances in Control and Optimization in Dynamical Systems (ACODS), IISc., Bangalore,	16th Feb. 2012
10.	Dr.T.Asokan	Underwater Robotics: Opportunities and Challenges	Bharath University, Chennai,	15th Feb. 2012
11.	Dr.T.Asokan	Robotic Technologies for Medical applications, Invited presentation, Symposium on Robotics in endoscopy.	Asian Institute of Gastroenterology, Hyderabad	3, July 2011
12.	Dr.T.Asokan	Futuristic robot technologies	Thiagarajar College of Engineering, Madurai	29 th June 2011.
13.	Dr T Asokan	Robotics in Manufacturing: Challenges in Indian industry	NIT Calicut,	23 rd June 2011.
14.	Dr.T.Asokan	Design Innovations and Role of academic Institutions	SSN college of Engineering, Chennai	18 th June 2011
15.	Dr.T.Asokan	Field and service robotics: Challenges ahead	Rajeswari Engineering College, Chennai	18 th April 2011
16.	Dr.T.Asokan	Design Innovations and Knowledge Economy	Saveetha Engineering College, Chennai	25 March 2011
17.	Dr.T.Asokan	Robotics, Past, Present, and the Future	Periyar Maniammai University, Thanjavur	22 nd March 2011
18.	Dr.T.Asokan	Autonomous robotic systems: Design and development	Kongu Engineering College, Erode	25 th Feb. 2011
19.	Dr.T.Asokan	Robots of the future: An insight to developmental challenges,	MGR University, Chennai	4 th Feb. 2011.
20.	Dr G.Saravana Kumar	Reverse Engineering and Rapid Prototyping	National Seminar on "Integration of Reverse Engineering & Rapid Prototyping" held at Siddhartha Engineering College, Vijayawada,	16 th March 2012
21.	Dr Nilesh J Vasa Dr Ananth Krishnan (EE)	Plasmonic devices and laser assisted texturing for photovoltaic applications"	National Workshop on Plasmonic and Nano-structured Solar Cells, Centre of Excellence for Green Energy and Sensor Systems, Bengal Engineering and Science University, Shibpur, Kolkata,	March 17, 2012
22.	Dr M Ramanathan	Design Innovation through geometry in Engineering applications	LeMeridien, Chennai (invited by Autodesk and ICT academy Tamilnadu	4th Jan 2012
23.	Dr M Ramanathan	Thinking in 3D	NITTTTR Chennai	12 th March 2012

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1.	Nilesh J Vasa	Erlangen University, Germany	1 September, 2011 – 17 September 2011	Research Collaboration	DAAD-STAR Fellowship
2.	Asokan T	South Korea	20-22 Oct. 2011.	Conference, IROA 2011	CPDA

3.	Asokan T	Netherlands	July 28-31, 2011	ICINCO conference	CPDA
4.	Asokan T	Hong Kong	31 May to 4 th June 2011	IEEE Technology Time Machine - Technologies for beyond 2020- Int. Nat. Conference	CPDA

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
Awards:					
1.	Dr.C.S.Shankar Ram	Young Faculty Recognition Award	IIT Madras	Outstanding Research activity	July 2011

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1.	Asokan Thondiyath A. (2012),	An Improved algorithm for constrained multi robot task allocation in cooperative robot tasks, Lecture Notes in Electrical Engineering (One chapter)	Volume 107 LNEE, 2012, Pages 455-466 (Springer, DOI: 10.1007/978-94-007-2598-0_48)	Thareswari Nagarajan, Ph.D. scholar
2.	Saravana Kumar, G.	Prediction of Tensile and Deep Drawing Behaviour of Aluminium Tailor-Welded Blanks, In: Recent Trends in Processing and Degradation of Aluminium Alloys (One chapter)	InTech, Croatia, 2012. (ISBN: 978-953-307-734-5)	Ganesh Narayanan, R. faculty at IIT Guwahati
3.	Sandipan Bandyopadhyay	Service Robots and Robotics: Design and Application – Edited by Marco Ceccarelli (One chapter, "Lagrangian Dynamics of Manipulators")	IGI Global DOI: 10.4018/978-1-4666-0291-5. ISBN13: 9781466602915	Sandipan Bandyopadhyay

4.9.4 Design and Development Activities:

Brief and specific details of Process/Instruments/Equipment/ Software designed and developed:

New facilities added or major equipment procured:

Sl.No	Name of Equipment	Value (Rs. in lakhs)
1.	Nd ³⁺ :YAG Laser (Minilite II , 50 mJ at 1064 nm, 10 ns) (Continuum, USA) (DST Research Project)	13
2.	Active automotive suspension control system for Control Systems Laboratory	14
3.	Heart Lung Machine for Biomedical Design Laboratory	6

Patents:

Patents filed:

Sl. No.	Name of faculty	Topic of patent
1.	Aditya Soni, Ramanathan Muthuganapathy and Sandipan Bandyopadhyay	An improved design for the manually operated tricycle for the physically challenged

4.9.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1.	Investigation on the feasibility of measuring average sodium mist concentration using microwaves	24 months	IGCAR	Rs.30,38,000/-	Dr.Kavitha Arunachalam, Dr C V Krishnamurthy, PH Dr Krishnan Balasubramanian, ME
2.	Effectiveness of the (S)ELANA (Suture less Excimer Laser Assisted Non-occlusive Anastomosis) in small vessels	4 years	DST	Rs.51 lakhs	Dr R Krishna Kumar
3.	Phase field study of polycrystalline grain growth in presence of second phase particles"	3 years	BRNS	Rs. 11,57,300/-	Srikanth Vedantam
4.	IIT Madras Student Satellite	Oct 2011 to March 2013	IIT Madras	Rs.5 lakhs	Dr Sandipan Bandyopadhyay (Co-coordinator)
5.	Development of theory of fractal rational splines and applications in computer aided geometric design	3 years – Oct '11 To Oct '14	DST	Rs.15,07,800/-	Dr. A K B Chand and Dr G Saravana Kumar
6.	Visionary Leaders in Manufacturing	2007-15	Joint IITM, IITK and IIMC program under National Manufacturing Competitiveness Council (NMCC)	Rs.60 lakhs per year	Prof T. T. Narendran and Dr. Venkatesh Balasubramanian
7.	Design and development of station keeping strategy for flat-fish AUV	Upto August 2011	NSTL, DRDO	Rs.9 lakhs	Dr T Asokan
8.	Low cost flexible Automation	Upto July 2011	TIFAC(DST)	Rs.94 lakhs	Dr T Asokan Singaperumal M
9.	Design and development of a tele-surgical robot trainer	2012-2015	DST	50.46 lakhs	Asokan T
10.	Technology Development of Proportional Solenoid valve for space application	2008-2012	ISRO	13.37 lakhs	Asokan T
11.	Investigation of the Creation of a nano-crystalline titanium Ti-6Al-4V Alloy with Enhanced Mechanical Properties	Ending in Feb 2012	ARDB	Rs.19.8 lakhs	Dr Balkrishna C Rao
12.	Measurement of elemental species for space-exploration by using laser-induced breakdown spectroscopy technique	2008 March - 2011 March (3 Years)	ISRO / IIT Madras	Rs. 19.53 Lakhs	Dr Nilesh J. Vasa, Dr M. Singaperumal

13.	Study on development of MEMS based RF-ion mobility spectrometer for chemical pollutants	2009-2011 February (2 years)	DRDE	Rs. 9.84 Lakhs	Dr Nilesh J. Vasa, M. Dr Singaperumal, Vivek Agarwal (IITB)
14.	Pollution performance of wind turbine blades adopting laser induced breakdown spectroscopy	2011 April - 2013 April (2 Years)	DST (EECE)	Rs. 53.4 Lakhs	Dr Nilesh J. Vasa, Dr R. Sarathi
15.	Fatigue based reliable designs	2 years	IC&SR- IIT Madras	20.75(Lakhs - Common machine)+ 2.25Lakhs	Dr Palaniappan Ramu
16.	HuMotor - Human-powered motor, with applications in materials handling	2010-11	SIP – IIT Madras	Rs.70,000	Dr Sandipan Bandyopadhyay (PI) and Dr G. Saravana Kumar
17.	Design, fabrication, and control of a three-degrees-of-freedom planar parallel manipulator	2008-11	NFRG – IIT Madras	Rs.5 lakhs	Sandipan Bandyopadhyay
18.	Page Flipper	2010-11	SIP – IIT Madras	Rs.50,000	Dr Sandipan Bandyopadhyay (PI) and G. Saravana Kumar
19.	Modular tricycle for mobility disabled	5 months March '11 to Aug '11	RuTAG	Rs.1 lakh	Ramanathan M. (PI) and Sandipan Bandyopadhyay
20.	Design and analysis of ejection system for towed flexible cylinder	2009-12	NPOL	Rs.3040800	Prasad BVSSS (PI), Sanyasi Raju, Dhiman Chatterjee, Sandipan Bandyopadhyay
21.	Model based analysis of electropneumatic brake systems	2009– 2012	Science and Engineering Research Council, Department of Science and Technology	Rs.13.2 lakhs	Dr C S Shankar Ram (Principal Investigator)
22.	Bus arrival time prediction under Indian traffic conditions	2010-12	IITM sub-project of a project funded by Ministry of Urban Development	Rs.10 lakhs	Dr C S Shankar Ram (Principal Investigator) Co-Principal Investigator (PI: Dr. V. Lelitha Devi)
23.	Evaluation of traffic data collection techniques for Indian conditions	2010-13	IITM sub-project of a project funded by Ministry of Urban Development	Rs.15 lakhs	Dr C S Shankar Ram (Principal Investigator) Co-Principal Investigator (PI: Dr. V. Lelitha Devi)
24.	Infrastructure development of 3D Imaging and Additive Manufacturing Lab	One year	Autodesk India P Ltd	Rs. 10.10	Dr G Saravana Kumar

Industrial Consultancy projects: (on going & new)

Sl.No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1.	Dr G Saravana Kumar	3D Scanning of Head Restraint & CAD comparison	Tata Johnson Controls Pvt. Ltd., Chengalpattu	Rs.9000/-
2.	Dr G Saravana Kumar	Model & Prototype Development of Dress Cover Part	Caterpillar India Pvt. Ltd., Chennai.	Rs. 25000 -/-

3.	Dr G Saravana Kumar	Model & Prototype Development of Pasta Maker	Adroit CAD Solutions Pvt Ltd., Chennai	Rs. 32,296/-
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RBIC projects: (on going & new)

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1.	Prof R Krishna Kumar	Tyre and Vehicle Mechanics (Raghupathi Singhanian Centre for Excellence for Tyre and Vehicle Mechanics)	J.K.Tyres	1.5 crores
2.	Prof R Krishna Kumar	Trivitron Innovation Centre	Trivitron Industries	1.5 crores
3.	M. Ramanathan & Ashish Gupta (GM)	Solving distance queries through exact computations	General Motors Technical Centre India Pvt Ltd.	Rs 12,85,271
4.	Dr Venkatesh Balasubramanian	Innovative New Products Development and Process Improvement	M/s Sundaram Brake Linings Ltd,	Rs.33.09 lakhs
5.	Dr M Ramanathan	Research Gift for CAD-related infrastructure development	Autodesk India Pvt. Ltd.,	Rs.9 lakhs
6.	Dr M Ramanathan Dr Sandipan Bandyopadhyay	Modular Tricycle for Mobility Disabled	RuTag	Rs. 1 lakh
7.	Asokan T	Development of Station keeping algorithm for flat-fish AUV	NSTL, Vishakhapatnam	8.96 lakhs

Retainer Consultancy:

Sl.No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1.	Dr Venkatesh Balasubramanian	Operational Strategies for Implementing Lean Ergonomics using RBGRS	M/s Spicer India Limited, Pune	Rs.9,92,700

Research Publications of the faculty members & research scholars:

- Total No. of papers published in Refereed National Journals - 1
- Total No. of papers published in Refereed International Journals - 25
- Total No. of papers presented in National Conferences - 10
- Total No. of papers presented in International conferences: - 25

a) In Refereed National Journals:

Sl.No.	Name of the faculty	Title of the paper	Name of the Journal
1.	Asokan T	Adaptive fuzzy control of unmanned underwater vehicles	Journal of Geo-Marine Sciences, Vol. 40(2).

b) In Refereed International Journals:

Sl.No.	Name of the faculty	Title of the paper	Name of the Journal
1.	Abhishek T. Dhumal, R. Ganesh Narayanan and G. Saravana Kumar	Simulation Based Expert System to Predict the Tensile Behavior of Tailor Welded Blanks	Special issue of Int. J. of Advanced Manufacturing Systems, Vol. 13, Issue 1, 2011. pp. 159-171
2.	Manecius Selvakumar, Jaimurugan, Udhayakumar, Asokan T. (2011)	Station Keeping Control Algorithm for ROVs: Simulation Studies	Int. J. on Recent Trends in Engineering & Technology, Vol. 5, No. 02. (DOI: 01.IJRTET.05.02.131)

3.	Venkatesh Balasubramanian, Ashwani Dutta and Shobhit Rai	Analysis of muscle fatigue in helicopter pilots	Applied Ergonomics 42 (2011) 913-918
4.	Dinesh B. Sonawane, Kaushal Narayan, Venkata Sanyasi Rao and Shankar C. Subramanian	Model based analysis of the mechanical subsystem of the air brake system	International Journal of Automotive Technology, Vol. 12, No. 5, pp. 697–704, 2011
5.	Divya Kannan, N. J. Vasa,	Application of a super-luminescent diode coupled with an interference filter for mixed gas sensing	Physics Procedia, Vol. 19, 2011, pp. 329-335
6.	I. A. Palani, N. J. Vasa, M. Singaperumal, T. Okada	Nd ³⁺ :YAG Laser Assisted Doping and simultaneous texturization of amorphous Si film for tandem photovoltaic cell	Optics and Precision Engineering, Volume: 19, No. 9, pp. 2263-2270 (2011)
7.	Susanta Kumar Dey, Ganesh Narayanan R., and Saravana Kumar G	Prediction of tensile behavior of DP 590 Steel Tailor Welded Blanks by ANN	Advanced Materials Research Vols. 383-390 (2012) pp 1019-1026.
8.	S. Vasantha Kumar, Lelitha Vanajakshi and Shankar C. Subramanian	Location-based data for estimated traffic on urban arterial in heterogeneous traffic conditions	Transportation Research Record: Journal of the Transportation Research Board, No. 2239, Transportation Research Board of the National Academies, Washington. D. C., pp. 16-22, 2011.
9.	Santhakumar Mohan, and Asokan Thondiyath (2011)	A nonlinear tracking control scheme for an underactuated autonomous underwater robotic vehicle	Int. Nat. Journal of Ocean Systems Engineering 1(3), (2011) 120-135. (DOI 10.5574/IJOSE /2011.1.3.120)
10.	Santhakumar M., Asokan T., (2011)	Investigations on the dynamic station keeping of an underactuated autonomous underwater robot	International Journal of Simulation Modelling 10 (2011) 3, 145-157. (DOI 10.2507/IJSIMM10(3)4.185)
11.	Periasamy T, Asokan T, Singaperumal M. (2011),	Investigations on the Dynamic Coupling in AUV- Manipulator System and the Manipulator Trajectory Errors Using Bond Graph Method,	International Journal of Systems Science, DOI: 10.1080 / 00207721. 2010.543488
12.	P. Karthikeyan, Ch. Siva Chaitanya, N. Jagga Raju and Shankar C. Subramanian	Modelling an electropneumatic brake system for commercial vehicles	IET Electrical Systems in Transportation, Vol.1, Iss. 1, pp. 41–48, 2011.
13.	S. Bharath Ram and M. Ramanathan	Shortest path in a simply-connected domain having curved boundary	Computer-Aided Design, 43(8), 2011, pp. 923-933
14.	M. Ramanathan	Matching of shapes bound by freeform curves	Computer-Aided Design and Applications, Volume 9, Number 2, 2012, pp. 133-146
15.	P. Sundarraman (MS, External), S. K. Saha, N. J. Vasa, R. Baskaran, V. Sunilkumar and K. Raghavendra (Bosch Ltd.)	Modeling And Analysis Of A Fuel-injection Pump Used In Diesel Engines	International Journal Of Automotive Technology, Vol. 13, No. 2, Pp. 193–203 (2012) (Impact Factor: 0.51)
16.	N. J. Vasa	Advances in Optical Techniques for Trace Gas Sensing in Environmental Monitoring (Review paper)	Journal of Flow Engineering and Technology(JFET), Volume 1, No. 1, pp. 1-8 (2012) (online)
17.	Susanta Kumar Dey, Ganesh Narayanan R., Saravana Kumar G	Computing the tensile behaviour of tailor welded blanks made of dual-phase steel by neural network-based expert system	International Journal of Computer Integrated Manufacturing. Vol. 25, No. 2, 2012, pp. 158-176

18.	Abhishek T. Dhumal, Ganesh Narayanan R., Saravana Kumar G	Simulation based expert system to predict the tensile and deep drawing behavior of tailor welded blanks	International Journal of Modelling, Identification and Control. Vol. 15, No. 3, 2012, pp. 164-172.
19.	Yu Yuan, Kung-Shan Cheng, Oana I. Craciunescu, Paul R. Stauffer, Paolo F. Maccarini, Kavitha Arunachalam, Zeljko Vujaskovic, Mark W. Dewhirst, Shiva K. Das	Utility of treatment planning for thermochemotherapy treatment of nonmuscle invasive bladder carcinoma	Medical Phys. 2012 March; 39(3): 1170–1181
20.	Wyatt C, Soher BJ, Arunachalam K, Macfall J.	Comprehensive analysis of the Cramer-Rao bounds for magnetic resonance temperature change measurement in fat-water voxels using multi-echo imaging	MAGMA. 2012 Feb; 25(1):49-61.
21.	Snow BW, Arunachalam K, DeLuca V, Maccarini PF, Klemetsen Ø, Birkelund Y, Pysker TJ, and Stauffer PR	Non-invasive vesicoureteral reflux detection: heating risk studies for a new device	J Pediatr Urol. 2011 Dec;7(6):624-30
22.	K. Arunachalam, P. Maccarini, V. De Luca, P. Tognolatti, F. Bardati, B. Snow, P. Stauffer	Detection of Vesicoureteral Reflux using Microwave Radiometry – System Characterization with Tissue Phantoms	IEEE Transactions on Biomedical Engineering, 58(6); pp. 1629 - 1636, 2011.
23.	K. Arunachalam, P. Maccarini, V. De Luca, P. Tognolatti, F. Bardati, B. Snow, P. Stauffer	Detection of Vesicoureteral Reflux using Microwave Radiometry – System Characterization with Tissue Phantoms	IEEE Trans Biomed Eng. 2011 Jun;58(6):1629-36. Epub 2011 Jan 20.
24.	K. Arunachalam, L. Udpa, S. Udpa	Statistical Analysis of Array Probe Eddy Current Data from Steam Generator Tubes	Studies in Applied Electromagnetics and Mechanics, Volume 36, pp. 159-166, 2012.
25.	P.R. Stauffer; P.F. Maccarini; K. Arunachalam; V. DeLuca; S. Salah; A. Boico; O. Klemetsen; Y. Birkelund; S.K. Jacobsen; F. Bardati; P. Tognolotti; B. Snow	Microwave radiometry for non-invasive detection of vesicoureteral reflux (VUR) following bladder warming	Energy-based Treatment of Tissue and Assessment VI, edited by T.P. Ryan, Proceedings of SPIE, Vol. 7901 2011

c) In Proceedings of National Conferences:

SI.No.	Name of the faculty	Title of the paper	Institution	Period
1.	Manish Kadam, Manu Gupta, P.V. Sivaprasad, G. Saravana Kumar and Olle Wijk	Modelling and finite element analysis of stress distribution in total hip replacement using different material combinations	World-Class Technology in Materials and Manufacturing (M&MT 2011) Conference, Pune	March 8-10, 2011
2.	Chowdary, P.V., Saravana Kumar, G. and Palaniappan Ramu,	Reliability Based Robust Multi-objective Optimal Synthesis of Linkage Mechanisms Considering Tolerances	15th National Conference on Machines and Mechanisms (NaCoMM), IIT Madras,	November 30 - December 02, 2011
3.	Aditya Soni, Ramanathan Muthuganapathy, Sandipan Bandyopadhyay	Adjustable Hand-cranked Tricycle for Mobility Disabled	15th National Conference on Machines and Mechanisms (NaCoMM)	November 2011
4.	Kayatri Kalyanasundaram, and Kavitha Arunachalam	A LOW COST BROADBAND PROBE FOR ELECTRIC FIELD MEASUREMENT	NDE2011, National Seminar & Exhibition on Non - Destructive Evaluation	December 6-10, 2011, Chennai, India

5.	Kavitha Arunachalam, Geetha C, Lalita Udpa and Satish Udpa	Signal Processing Algorithms for Automated Analysis of Array Probe Eddy Current Data from Steam Generator Tubes,	NDE2011, National Seminar & Exhibition on Non - Destructive Evaluation	December 6-10, 2011, Chennai, India
6.	K. Arunachalam, V. DeLuca, P. Maccarini, P. Stauffer, B. Snow	Microwave Radiometry for Noninvasive Thermal Monitoring of Deep Tissues"	International Workshop on Biomedical Sciences and Technologies	Anna University, Chennai, 2nd-4th March 2011.
7.	Aditya Soni, Ramanathan Muthuganapathy and Sandipan Bandyopadhyay	Adjustable Hand-cranked Tricycle for Mobility Disabled	15th National Conference on Machines and Mechanisms (NaCoMM), IIT Madras, Chennai, India	November 30 - December 02, 2011
8.	Abhishek Agarwal, Chaman Nasa and Sandipan Bandyopadhyay	Dual-loop Control for Backlash Correction in Trajectory-tracking of a Planar 3-RRR Manipulator	15th National Conference on Machines and Mechanisms (NaCoMM), IIT Madras, Chennai, India	November 30 - December 02, 2011
9.	Arjun Nagarajan, Sandipan Bandyopadhyay	A Framework for Analysis and Dynamic Visualisation of Mechanisms	15th National Conference on Machines and Mechanisms (NaCoMM), IIT Madras, Chennai, India	November 30 - December 02, 2011
10.	Sadiq Mohamed Anwar, Sandipan Bandyopadhyay	Trajectory-tracking Control of Semi-Regular Stewart Platform Manipulator	15th National Conference on Machines and Mechanisms (NaCoMM), IIT Madras, Chennai, India	November 30 - December 02, 2011

d) In Proceedings of International Conferences:

Sl.No.	Name of the faculty	Title of the paper	Name of the journal/ place of conference	Period
1.	Divya Kannan (MS Research Scholar), N. J. Vasa	Mixed gas sensing system based on Super-luminescent diode coupled with a Fabry-Perot etalon	Conference on Lasers and Electro Optics, CLEO2011, Baltimore, USA	May 1-5, 2011
2.	Prof R.Krishna Kumar	Flow simulation in an axial flow pump and a diaphragm pump used as LVAD	ASBTE 2011 Newzealand	27th to 29th April 2011
3.	R. Asha Anand, Lelitha Vanajakshi and Shankar C. Subramanian	Traffic density estimation using data fusion	Proceedings of the 2011 IEEE Intelligent Vehicles Symposium, Baden-Baden, Germany, pp. 31-36	June 2011
4.	S. Vasantha Kumar, Lelitha Vanajakshi and Shankar C. Subramanian	A model based approach to predict stream travel time using public transit as probes	Proceedings of the 2011 IEEE Intelligent Vehicles Symposium, Baden-Baden, Germany, pp 101-106	June 2011
5.	Ameena S. Padiath, Lelitha Vanajakshi and Shankar C. Subramanian	Spatial traffic state estimation using location based traffic data under heterogeneous conditions	Proceedings of the 91st Transportation Research Board Annual Meeting, Washington, D. C., USA	January 2012
6.	Saravana Kumar, G.	Patient specific parametric geometric modelling of cementless hip prosthesis	Proceedings of 5th International Conference on Advanced Research in Virtual and Rapid Prototyping (VRAP), Polytechnic Institute of Leiria, Portugal	September 28 - October 01, 2011

7.	Saravana Kumar, G.	Hybrid Intelligent Systems for Pneumatic Sequential Circuit Design	In proceedings of 11th International Conference on Hybrid Intelligent Systems (HIS)Universiti Teknikal Malaysia, Melaka, Malaysia	December 05 - 08, 2011.
8.	Jésica Sánchez Mazón, Kavitha Arunachalam, Ryan McMahon, Beverly Steffey, Paul R. Stauffer, Junzo Chino, Oana I. Craciunescu	Dosimetric analysis of a thermobrachytherapy applicator in the context of a positioning reproducibility study	World congress on brachytherapy 2012	10-12 May, 2012, Barcelona, Spain
9.	Paul R. Stauffer, Paolo F. Maccarini, Sara Salahi, Kavitha Arunachalam and Brent W. Snow,	Microwave Radiometry For Non-Invasive Detection of Vesicoureteral Reflux (VUR),	The 2012 USNC-URSI National Radio Science Meeting	4-7 January in Boulder, CO.
10.	K. Arunachalam, L. Udpa, S. Udpa	Probabilistic analysis of eddy current data from steam generator tube inspection	16th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE-2011)	IIT Madras India, March 10-12, 2011.
11.	Snow BW, Arunachalam K, De Luca V, Klemetsen Ø, Birkelund Y, Stuaffer PR AND Mccaccrini PF	Noninvasive Grade V Vesicoureteral Reflux Detection: An Animal Study	22nd Congress of the European Society for Paediatric Urology, Copenhagen,	Denmark April 27-30, 2011
12.	Paul Stauffer, Paolo Maccarini, Kavitha Arunachalam, Valeria De Luca, Sara Salahi, Alina Boico, Oystein Klemetsen, Yngve Birkelund, Svein Jacobsen, Fernando Bardati, Piero Tognolatti, Brent Snow	Radiometric Monitoring of Kidneys During Bladder Warming for Non-Invasive Detection of Vesicoureteral Reflux (VUR),	28th Annual Meeting of the Society for Thermal Medicine,	New Orleans, LA, April 29, 2011
13.	Jaime Schlorff, Paul Stauffer, Paolo Maccarini, Edward Markewitz, Oana Craciunescu, Kavitha Arunachalam, Titania Juang, Zeljko Vujaskovic, Andrew Milligan	Progress on the Thermo Brachytherapy Surface Applicator (TBSA)	28th Annual Meeting of the Society for Thermal Medicine	New Orleans, LA, April 29, 2011
14.	Paolo Maccarini, Paul Stauffer, Sara Salahi, Alina Boico, Øinstein Klemetsen, Yngve Birkelund, Valeria De Luca, Kavitha Arunachalam, Brent Snow	A Novel Ultrasensitive Microwave Radiometer for Noninvasive Subsurface Temperature Measurements	28th Annual Meeting of the Society for Thermal Medicine	New Orleans, LA, April 29, 2011
15.	T.Asokan	3D Modeling and Virtual Simulator for a Flat-fish Shaped Autonomous Underwater Vehicle	Amrita Viswa Vidyalyaya, Coimbatore.	17-19 th Dec 2011
16.	T.Asokan	Path planning of Autonomous Underwater Vehicle in 3D space for smooth transition at way points	IASTED International Conference, Pittsburgh, USA	Nov 07- 09, 2011
17.	T.Asokan	An Improved TDMA Scheduling Algorithm for Swarms of AUVs using Electromagnetic Communication	3CA conference, China	November 19-20

18.	T.Asokan	An Improved algorithm for constrained multirobot task allocation in cooperative robot tasks,	IRoA 2011, Gwangju, South Korea	20-22 Oct.; 2012
19.	T.Asokan	Modelling of uncertainties due to actuator saturation for anti-windup robust flight control system,	International conference on Mathematical Modelling and Applications to Industrial Problems (MMIP 2011)	March 28-31, 2012
20.	T.Asokan	Parametric sensitivity analysis of robot dynamic models developed from experimental data for optimal dynamic performance: A case study using SCARA robot arm,	International conference on Mathematical Modelling and Applications to Industrial Problems (MMIP 2011)	March 28-31, 2012
21.	T.Asokan	Waypoint Guidance based planar Path following and Obstacle avoidance of Autonomous Underwater vehicle,	8 th Int. Nat. Conference on Informatics in Control, Automation and Robotics	July 28-31, 2012
22.	Sathiesh Kumar, Nilesh Vasa and R. Sarathi	Optical emission spectroscopy technique for studying lightning discharge characteristics on glass fiber reinforced plastic	2nd International Conference on Trends in Optics and Photonics (IConTop 2011) (ISBN: 978-81-908188-1-0)	7-9 December, 2011, University of Calcutta, Kolkata, India
23.	K. Sulochana, K. Divya, and N. J. Vasa	Simultaneous Sensing of Ammonia and Water Vapor Using Single Super Luminescent Diode for Emission Monitoring	2nd International Conference on Trends in Optics and Photonics (IConTop 2011) (ISBN: 978-81-908188-1-0)	7-9 December, 2011, University of Calcutta, Kolkata, India
24.	Venkataramesh Bhimasingu and Nilesh J. Vasa	Pulsed Laser Deposition of SiC Thin Films on Crystalline-Si and Glass Substrates	2nd International Conference on Trends in Optics and Photonics (IConTop 2011) (ISBN: 978-81-908188-1-0)	7-9 December, 2011, University of Calcutta, Kolkata, India
25.	G. Amutha, Iyamperumal Anand Palani, Nilesh Vasa and M. Kumaravel	Investigations on crystallization and ablation characteristics in annealing of amorphous silicon films with nano- and pico-second pulsed Nd ³⁺ :YAG laser	2nd International Conference on Trends in Optics and Photonics (IConTop 2011) (ISBN: 978-81-908188-1-0)	7-9 December, 2011, University of Calcutta, Kolkata, India

Distinguished Visitors to the Department:

Sl.No.	Name of the visitor and Designation	Date of visit	Purpose of visit
1.	Dr Ravi Vaidyanathan, Senior Lecturer, Imperial College London	5 th August 2011	Bio-Mechatronics and Design: How systems engineering can enable translational Research” for the graduate students.
2.	Mr Keith Blanketh, Director, M/s Quanser Inc, Canada	8 th September 2011	delivered a lecture on "Robots in Medicine
3.	Mr Vijay Simha, Chief Strategy Officer, BPL Ltd. (Health Care Division)	23 rd September 2011	delivered an invited talk on “Operations perspective for healthcare in emerging economies

4.	Dr. Anirban Dutta, visiting Scientist, Klinische Neurophysiologie, Germany	12 th October 2011	Delivered a lecture on Title: Myoelectric human-machine interfaces for controlling neuroprosthetic/orthotic devices
5.	Stanford-India biodesign team, led by Mr Chinmay Deodhar (our ex dual-degree student)	10 th October 2011	Conducted a workshop on bio-design for the dual-degree students.
6.	Mr Dawn Danby, Sr. Sustainable Design Program Manager and Paige Rodgers, of Sustainability in Education Marketing Manager	19 th October 2011	They presented a talk and then had interaction with faculty on possible projects
7.	Ms. Simone Eichmann (Ph.D. research scholar)	6 January – 27 February 2012	DAAD - IIT Madras STAR Fellowship Program The title of her Project is "Development of a measurement technique for a local fuel ratio in a gas phase by stimulated Raman gain scattering".
8.	Prof. Paul R. Stauffer Department of Radiation Oncology Duke University Medical Center Durham, NC USA	2 nd February 2012	Microwave Technology in Thermal Medicine
9.	Prof. Lynn Parker Professor and Associate Head, Department of Electrical Engineering and Computer Science at the University of Tennessee, Knoxville	6 th February 2012	General Information Quality-Based Approach for Satisfaction of Sensor Constraints in Tightly-Coupled Multi-Robot Tasks
10.	Prof. Thomas Seeger, Affiliation: Siegen University and Erlangen University visited the department between February 13-24, 2012 (DAAD-IITM STAR Fellowship)	13-24 February, 2012	Combustion diagnostics by linear and non-linear Raman techniques
11.	Prof. Schramm Dieter (Professor and Dean of the Faculty of Engineering Sciences) from University of Duisburg-Essen, Germany	19 th March 2012	Cooperation between Science and Industry in Engineering in Germany

4.9.6 Other Activities of the Department/Centre:

- Biomedical Design Program students visited Department of Neurology, JIPMER (Jawaharlal Institute of Postgraduate Medical Education and Research) Hospital, Puducherry on 12/10/2011. The visit involved discussion on Neuroimaging systems and visit to various laboratories. (Total number of participants: 26)
- M.S., PhD scholars and final year dual degree students were taken on an industrial visit to SDSC, Sriharikota on 18th January 2012.
- "Autodesk Inventor Student Design Competition" a national level competition was conducted under the aegis of IIT Madras and sponsored by Autodesk India Ltd. on 16/November/2011 at IIT Madras by Dr. M Ramanathan and Dr. G Saravana Kumar.
- Dr.M.Ramanathan was invited as Chief Guest at Savitha Engineering College for the inauguration of the conference 'Emerging trends in Design and Manufacturing' on 28th March 2012.
- Dr M Ramanathan was given the Judges Award (along with Dr. Sandipan Bandyopadhyay and Aditya Soni) at NaCoMM 2011 for the paper on 'Adjustable Hand-cranked Tricycle for Mobility Disabled'

Dr M Ramanathan won the 'On the spot judges award' in National Conference on Machines and Mechanisms (NaCoMM 2011)

International collaboration achievements by the Department

Faculty visit:

Sl.No.	Name of the Faculty Member	Purpose of Visit	Date & Venue
1	Nilesh J. Vasa	DAAD-IITM STAR Fellowship, Joint research at Erlangen University	1-17 September, 2011, Erlangen University, Germany

Student visit:

Sl.No.	Name of the Student Member	Purpose of Visit	Date & Venue
1	K .Sulochana	DAAD-IITM STAR Fellowship, Joint research at Erlangen University	1 September -15 November, 2011, Erlangen University, Germany

Activities initiated

Major infrastructure development made in the Department

Setting up Biomedical Design Laboratories for the Dual Degree Program in Biomedical Design.

4.10 DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

4.10.1 Introduction:

The Department of Humanities and Social Sciences (HSS) is one of the earliest departments established at IITM. The Department is multi-disciplinary in nature and has reputed faculty from diverse disciplines such as Development Studies, Economics, English Language and Literature, Environmental Studies, History, International Relations, Gender Studies, German Studies, Philosophy, and Urban Studies.

The five year integrated MA programme launched by the Department in the academic year 2006-07, The second batch of MA students who joined the program in 2007 will complete their degree in July 2012.

4.10.2 Academic Programmes:

Five year integrated MA programme introduced in July 2006. The programme has been modified with new curriculum having two streams (ie. Development Studies , English studis) from July 2011.

New Elective Courses introduced:

Course No.	Title of Course
HS1130	Spanish I
HS1131	Spanish II
HS3022	Conflict, Reconstruction and Human Security
HS4572	Chinese Language II
HS4573	Literature and Social Change in China
HS7531	Sovereignty State and Nationalism in Global Politics.

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & other	Total
MA	41	44	39	29	30	183
Ph.D.	6	7	6	3	12	34
Total	47	51	45	32	42	217

Names of Faculty/Students/Scholars who attended Conferences/Workshops/Seminars and Symposia Abroad/in India:

Faculty	Country Visited	Duration	Purpose
Jyotirmaya Tripathy	Denmark & Germany	2 nd to 10 th April 2011	As a visiting Scholar at the Department of History and Area Studies, Aarhus University, Denmark and India Study Centre, Hochschule Bremen.
Sreekumar N	Indian Institute of Advanced Study (IIAS) Shimla	1 st May 2011 to 31 st May 2011	Academic Assignment
Sudhir Chella Rajan	UK, RWTH Aachen, Germany and Hochschule Bremen, Germany	18 th May 2011 to 11 th June 2011	To revise India Studies curriculum at Hochschule Bremen, meetings for Indo-German Centre for Sustainability (IGCS) and visit to Potsdam Institute for Climate Impact research and Social Science Research Centre, Berlin.
Jyotirmaya Tripathy Sudarsan P	Sciences Po, Paris University of Leiden, Netherlands and European Union Parliament, Brussels, Belgium	19 th May 2011 to 15 th June 2011	A brief visit in connection with the on going European Union Project.
John Bosco Lourdusamy	UK	25/05/11 to 12/06/11	Visiting fellow in the Institute of Advanced Study, The Univesity of Warwick, UK
John Bosco Lourdusamy	UK	13/06/11 to 11/07/11	Visiting fellow in the The Trinity College, Cambridge, UK
Jyotirmaya Tripathy	UK	1st and 2nd of October 2011	School of Oriental and African Studies and Goldsmiths College, London
Jyotirmaya Tripathy	UK	3rd and 5th of October 2011.	University of Sussex as Research Fellow

Jyotirmaya Tripathy	UK	9th and 11th of October 2011	University of Florence. Lectured on "Indian Contemporary"
John MS	India	9 th October 2011	Fifth Ravindra Varma Memorial Lecture Institute of Gandhian Studies, Wardha, Maharashtra,
Sudhir Chella Rajan	India	17 th Oct 2011	BITS Pilani Roundtable on Humanities Curriculum New Delhi
Sudhir Chella Rajan	Moscow, Russia	30 November, 2011	Preparing for the BRICS Summit, 2012: High Level Expert Consultation
Sreekumar N	Vishnu Mohan Foundation	8 th January 2012	Deliver a talk on "The Political Gita: Tilak and Gandhi on Swaraj"
Sreekumar N	University of Kerala	21 st January 2012	To participate in the Faculty of Arts Meeting
Milind Brahme	University of Kerala	21 st January 2012	To participate in the Faculty of Arts Meeting
Swarnalatha R	Adikavi Nannaya University	13th -15th February 2012	Resource person and plenary speaker for the international conference cum workshop on Cross Cultural Communication: India and the U.S.

4.10.3 Faculty and their activities:

Faculty:

Name and Qualifications	Major area of specialization
Sudhir Chella Rajan Ph.D. [Head]	Environment, Energy and Climate Policy, Political Theory, Development.
V. R. Muraleedharan, Ph.D. (IIT Madras)	Health Care Economics, Public Policy, History of Healthcare in South India
Shreesh Chaudhary, Ph.D. (CIEFL Hyderabad)	Theoretical Linguistics, ELT & Need based courses in English
Evangeline Manickam, Ph.D. (Madras University)	American Literature, English/ French
Malathy Duraisamy. Ph.D. (Madras University)	Applied Economics, Labour Economics, Economics of Social Sector, Science and Technology
Aysha Iqbal Viswamohan Ph.D. (Vikram University)	American Studies, World Drama, and Intercultural Communication.
Binitha V.Thampi Ph D. [ISEC, Bangalore]	Development Studies
Devaki Reddy, Ph.D. (JNU, New Delhi)	English, Sociolinguistics, ELT
John Bosco Lourdusamy, D.Phil. (Oxford University)	History of Science, Science, Technology and Society
Jyotirmaya Tripathy, Ph.D (IIT,Kharagpur)	Literary Theory, American Studies, Cultural Studies
Kalpana K Ph D [MIDS]	History-Economics
Milind Brahme, Ph.D. (JNU, New Delhi)	German Studies, Comparative Literature and Modern Marathi Literature
Mohan S, M.A. (Madras University)	English, Science Fiction, Technical Report Writing, Indian Writing in English
Prema Rajagopalan, Ph.D. (IIT Kanpur)	Sociology of Science and Technology, Development, Women in Science and Technology

Sabuj Kumar Mandal Ph D (ISEC, University of Mysore)	Economics
Santhosh R (ISEC, University of Mysore)	Sociology
Satya Sundar Sethy Ph D [Central University of Hyderabad]	Philosophy
Shireen Mirza Ph D (School of Oriental & African Studies , UK)	Sociology
Sonika Gupta Ph D (JNU NewDelhi)	Chinese Foreign Policy and Politics, International Relations Theory, Human Security, Nuclearization of South Asia
Sreekumar N, Ph.D. (Univ. of Hyderabad.)	Philosophy of Language, Hermeneutics, Indian Philosophy
Srilata K, Ph.D. (Univ. of Hyderabad)	African Literature, Cultural Studies, Creative Writing
Subash S Ph D (IIT Bombay)	Economics
Sudarsan Padmanabhan Ph D (Univ. of South Florida)	Social and Political Philosophy, Indian Philosophy and culture
Suresh Babu M, Ph.D (JNU, New Delhi)	Industrial Economics, Applied Macro Economics
Swarnalatha R, Ph.D (Madras University)	Eco Philosophy, American Literature
Tabraz S S, Ph D (JNU New Delhi)	International Relations Theory, Isreal-Palestinian Conflict
Umakant Dash, Ph.D. (IIT Kanpur)	Energy Economics; Health Care Economics
Upasna Sharma Ph D (IIT Bombay)	Environment Studies
Zlotea Mugurel Dan Ph D (University of Bucharest)	Chinese Studies

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Faculty	Programme	Venue and Date
Sudarsan Padmanabhan Jyotirmaya Tripathy Sonika Gupta	II international Seminar on the theme of "Politics in the Global Age: Critical Reflections on Sovereignty, Citizenship, Territory and Nationalism".	ICSR Auditorium 6-10 th June 2011
Binitha V Thampi	"Empowering Women Leaders at the Local Level : Translating Descriptive representation to Substantive Representation Through ICTs	Trivandrum 29 th July 2011
Binitha V Thampi Milind Brahme Sreekumar N	Open sesame International Documentary & Short Film Festival <i>On Development, Culture and Human Rights</i> Jointly organised by MARUPAKKAM & Department of HSS	CLT IIT Madras August 27-28,2011
Sudarsan Padmanabhan	"Right to Education and Uniform School System in Tamilnadu – A iscussion" organised by Centre for Comparative European Union Studies & Department of HSS	HSS IIT Madras 19 th August 2011
V R Muraledharan	Public Private Partnership in Health Care	IC & SR 15 th September 2011

V R Muraleedharan	"Health System that Deliver" funded by London School of Hygiene and Tropical Medicine	Hotel Severa Chennai 19-23 September 2011
Sudhir Chella Rajan and Others	AI Gore Sustainable Technology Venture Competition™, India,	Chennai 22-25 September 2011
Binitha V Thampi	Workshop for Women elected Presidents of Local Governments from the District of Kannur, Kerala	Kannur, Kerala 29th October 2011
Sudarsan P	Indian-EU Study Centre Programme	New Delhi 21-24 November 2011
Sudarsan P Sonika Gupta	The second CCEUS International Conference on "Politics in the Global Age"	IIT Madras 12-14 December 2011.
Sudarsan P Sonika Gupta	Workshop on "Cyber Security"	IIT Madras 2 nd December 2012

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl.No	Faculty / Scholar	Programme / Title of the Paper	Conference, Venue & Date
1.	S C Chaudhary	"East India Company, <i>Baboo</i> English & the Rise of Indian English"	Second Symposium on East India Company and Language City University of Hong Kong, China 6 th to 10 th April 2011
2.	Binitha V Thampi	International workshop on "connections between gender, ICTs and Women Citizenship"	Delhi 26 th to 28 th April 2011
3.	Sudhir Chella Rajan	"Vested or public interest? The case of India," Global Corruption Report: Climate Change, Transparency International, Earthscan Publishers	April 2011
4.	V R Muraleedharan	International Workshop on Welfare and well being in Modern South Asia	University of Aarhus, Denmark 27/06/11 to 01/07/11
5.	Prema Rajagopalan	International Conference on 'The Distinctiveness of Cities'	Darmstadt, Germany 15/06/11 to 17/06/11
6.	Umakant Dash Muraleedharan VR	"How Equitable is Employee's State Insurance Scheme in India: A case Study of Tamil Nadu"	8 th IHEA World Congress on Health Economics held at Toronto 10-13 th July 2011
7.	Devaki Reddy S	'Subjectivity in Evaluation: An Experiment in Peer Evaluation'	9 th Asia TEFL Conference, Seoul, Korea, 27-29 July 2011
8.	Sudhir Chella Rajan	Paper on climate ethics at Annual Conference of the American Political Science Association	Seattle, USA 30 th Aug 2011 to 5 th Sep 2011
9.	Devaki Reddy S	16 th World Congress of Applied Linguistics	Beijing, China August 23-28, 2011
10.	V R Muraleedharan	Global Health 2011 Policy for Sustainable and Effective Health Care	London UK 29-30 September 2011
11.	Sudhir Chella Rajan	Annual Conference of the American Political Association	Seattle USA 1-5 September 2011
12.	Milind Brahme	Understanding Kitsch : Reading Media Critically	Centre of German Studies at JNU, New Delhi, 26 - 28 September 2011.
13.	Binitha V Thampi	Second Asia-Pacific Conference on Women in Politics and Governance titled "Amplifying the Voices of Women in Politics"	Dili, East Taimor. 29th September to 1st October 2011
14.	Sudarsan P	Indian-EU Study Centre Programme	New Delhi 21-24 November 2011

15.	Sudhir Chella Rajan	"Second National Climate Change Research Conference", with IIT Delhi and Centre for Science and Environment,	New Delhi, 5-6 November, 2011
16.	Muraleedharan VR Vaishnavi S D Chitra Grace	"Analysis of the extent and cost of caesarean section deliveries in Kerala and Tamil Nadu, India: Evidence from DLHS-3 survey"	International Conference on Health Systems Reform in Asian Countries, held at Hongkong 9-12 December 2011
17.	Muraleedharan VR Girija Vaidyanathan	"Factors influencing use of health care and choice of public provider in a less developed district in Tamil Nadu, India"	International Conference on Health Systems Reform in Asian Countries, held at Hongkong 9-12 December 2011
18.	Muraleedharan VR Vaishnavi S D Chitra Grace	"Inequity in provision of maternal health care services in better performing states of India"	International Conference on Health Systems Reform in Asian Countries, held at Hongkong 9-12 December 2011
19.	Sudhir Chella Rajan	"Who are the People of the World?"	The second CCEUS International Conference on "Politics in the Global Age" IIT Madras
20.	Sudarsan P	"Imagining India – The Interplay of the Cosmopolitan and the Vernacular"	The second CCEUS International Conference on "Politics in the Global Age" , IIT Madras
21.	Sonika Gupta	"Cosmopolitanism :Modern to Modular?"	The second CCEUS International Conference on "Politics in the Global Age" , IIT Madras
22.	Sonika Gupta	National Institute of Advanced Studies Conference on "Rise of China: Indian Perspective"	NIAS, Bangalore from 20-21 December
23.	Sreekumar N	"Medicine, Wellbeing and Ethics".	YRG CARE Bioethics Symposium, Chennai January 6, 2012

4.10.4 Research and Consultancy

Sponsored Research Projects:

Project Number	Start Date	Close Date	Project Cost	Title	Co-Ordinator Name
RB1011HSS003C LIMSUDH	09/01/10	30/09/2012	2328000	Collaborative Process To Determine Long-term Energy Pathways	Sudhir Chella Raja
RB1011HSS004M HRDMILL	10/01/10	30/09/2012	2000000	Monitoring Of Ssa Implementation In 13 Districts Of Tamilnadu	Milind Brahme
RB1112EDD002H SSERKRI	06/02/11	06/01/14	15000000	Raghupathi Singhanian Centre Of Excellence For Tyre And Vehicle Mechanics Phase Iii	Krishnakumar R
RB1112HSS001L ONDVRMU	08/01/11	31/12/2016	5597267	Resilient And Responsive Health Systems	Muraleedharan V R
RB1112HSS002W ELOJBLO	03/01/12	28/02/2015	8066640	Medical Ideas, Tools, Ethics And Pluralism In South India	Jhon Bosco Lourdusamy
RB1213HSS001R ENUSUDH	04/01/12	31/12/2012	990000	A Sustainable Energy Vision For India	Sudhir Chella Rajan
RC0910EDD576H SSERKRI	07/01/09	30/06/2012	1544200	Retainer Consultancy Services	Krishnakumar R

Project Number	Start Date	Close Date	Project Cost	Title	Co-Ordinator Name
HSS0910027IMRF SUDH	13/01/2010	01/12/15	2500000	Indo-german Centre For Sustainability	Sudhir Chella Rajan
HSS1011031INSA NSRE	12/09/10	31/03/2013	69701	A Study Of The History Of The Traditional Ayurveda Parambarya Vaisyas In Kerala And Their Unique...	Sreekumar N

HSS1011518NFSC SATA	29/09/2010	28/09/2013	500000	Truth Conditional Semantics Vs Meaning Holism....	Dr.. Satya Sundar Sethy
HSS1011519NFSC KKAL	29/09/2010	28/09/2013	500000	Expploring Pro-poor Practice Women And Microfinance In India	Dr K.Kalpana
HSS1112032IITMS ONI	10/03/11	10/02/12	500000	China Studies Centre	Sonika Gupta
HSS1112033IITMH ODX	11/08/11	02/07/13	2955000	Effects Of Soil Organic Carbon Redistribution Upon Green House...	Sudhir Chella Rajan
HSS1112034ICSS MSUR	03/01/12	31/08/2013	594495	Human Capital Innovations And Firm Performance In Unorganized Manufacturing Industries	Suresh Babu M
HSS1112555NFSC BINI	08/11/11	08/10/14	500000	Digital Communities And The Politics Of Cyber Activism	Binitha V Thampi
HSS1112564NFSC RSAN	12/01/11	30/11/2014	500000	Voluntarism Charity And Religin A Study On The Palliative Care Movemne In Kerala	Santhosh R
HSS1112565NFSC SSUA	13/12/2011	12/12/14	500000	Impact Of New Patpenpt Regime On The Technology And Trade Behaviour Of Indian Pharmaceutical Indust	Subash S
HSS1112566NFSC SABU	16/01/2012	15/01/2015	500000	Impact Of Environmental Regulation On The Performace Of Indian Cement Firms	Sabuj Kumar Mandal
HSS1112574NFSC SHIR	21/03/2012	20/03/2015	490000	Circulating Ritual Geographies Islam, Community Aspirations And Urban Space In Mumbai City	Shireen Mirza

Research Publications:

National:

1. Aysha Viswamohan "Edith Wharton and the Imag(in)ed Europe" Contemporary Discourse. Vol 2, Issue 2, July 2011. (Mumbai)
2. Glyn Williams, Binitha V. Thampi, D. Narayana, Sailaja Nandigama & Dwaipayan Bhattacharyya (2011) : Performing Participatory Citizenship – Politics and Power in Kerala's Kudumbashree Programme, Journal of Development Studies.
3. John S Moolakkattu and S Mangi Singh, 2011 "Identity Formation and Peace Building in Northeast India: An Introduction", Gandhi Marg, Vol. 32, No. 4, pp. 457-473
4. John S Moolakkattu completed a manuscript entitled " Conflict Resolution: The State of the Field and Implications for Practice" for an edited volume to be brought out later this year by Institute of Asian Studies, Chennai and Centre for Gandhian Studies, Alphonso College, Palai
5. John S Moolakkattu 2011 " Primacy of State Building in Congo?", Peace Review, Vol.23, No.2, 2011.pp.154-160.
6. Jyotirmaya Tripathy, "Does Development Exist outside Representation?" Journal of Developing Societies. Vol. 27, No. 2, 2011. pp. 93-118.
7. Kalpana K, "Subverting Policy, Surviving Poverty: Women and SGSY in Rural Tamil Nadu", Economic and Political Weekly, Vol XLVI, No 43, October 22.
8. Sudhir Chella Rajan and Sujatha Byravan, "Developmental Benefits from a Low-Carbon Pathway," Economic and Political Weekly, 46, 15-18, 2011.
9. Sudhir Chella Rajan, "Poor little rich countries: another look at the 'resource curse'," Environmental Politics, 20, 617-632, 2011

International:

1. Aysha Viswamohan "English in Film Songs from India" English Today , Vol 27, no 4 (Dec 2011), Cambridge (UK)
2. Aysha Viswamohan "Interrogating Liberal Ideals: Arthur Miller's Clara and Vijay Tendulkar's Kanyadaan". Journal of Arts: Gengdam Alam, Issue 2, 2011, Universiti Malaysia Sabah.
3. Aysha Viswamohan "Home, Immigration, and Fractured Identities in Kiran Desai's The Inheritance of Loss," South Asian Review, Volume 32, Number 2, (Nov 2011), Pittsburgh.
4. S.Devaki Reddy 'The Internet in the ESL Classroom'. 2010. ELT Vistas, Vol-2, No.1, 19-29.
5. V.R. Muraleedharan and Umakant Dash ""Tamil Nadu Health Sector: 1970s - 2005" in "Good Health at Low Cost...25 years on: What makes a successful health system?" (Edited by Anne Mills, Dina Balabonova and Martin Mckee, 2011, published by the London School of Hygiene and Tropical Medicine).

4.10.5 Other Activities:

a) Academic Exchange Programme:

The following MA students are permitted to spend one semester, i.e. July-Nov 2011 to undergo courses in Hochschule Bremen, Germany under student-exchange programme

HS08H020 REKHA J
HS08H021 RIHAN NAJIB
HS08H023 SANDHYA BALAKRISHNAN

Oviya Govindan (HS09H025) was invited to attend the PERL 2nd International Conference and Student Essay Competition Berlin March 2012 to be held at Technical University, Berlin during March 19-20, 2012.

Avantika Kannan (HS08H007) represented our country as part of the "Indian Youth Delegation to China 2011" (as per the nomination by the department and IIT Madras) from 19th September to 30th September 2011. The visit aims to provide them a first hand understanding of the Chinese system of socio-political and industrial organization and also to interact and understand the culture of the Chinese people. They were taken to various industries, universities etc. and exposed to the best-practices adopted by China. This will also involve sessions on how China undertakes planning of its cities and economy. It promises to be an enriching learning experience.

b) Book Release:

Srilata's Book "Table for Four" (a novel published by Penguin, India) and "Arriving Shortly" (a collection of poems published by Writers Workshop, Kolkata) are launched on the 19th of August (Friday) at the British Council at 6.30 p.m.

Ms. Anu Joshy, III year MA student's book titled '*Of The Lesser Known*' was released on Saturday (24-9-11) by Anita Nair at the Indian Ruminations Literary Festival 2011 which was held at Trivandrum, Kerala. It is her second anthology of poems (the first one was *When My Heart Speaks*, 2008). It was published by Green Books India.

4.10.6 IITM China Studies Centre

EVENTS:

Date	Events
22 nd September 2011	A special lecture series on Nationalism, Terrorism and Identity in China by Dr Arabinda Acharya, Research Fellow at International Centre for Political Violence and Terrorism Research, S Rajaratnam School of International Studies, Nanyang Technological University, Singapore
25 August 2011	Panel discussion on Sino-Indian relations, The way forward, with speakers C V Ranganathan, Former Ambassador to China & N Ram, Editor-In-Chief, <i>The Hindu</i> .
November 21, 2011	Guest Lecture China and Climate Security at the Third Pole Speaker: Prof. Katherine Morton, Associate Dean Research, College of Asia and the Pacific, & Senior Fellow, Deptt. of International Relations, Australian National University
12-14 December 2011	ITM CSC hosted the second international conference of the CCEUS titled "Politics in the Global Age"
January 2012	Lecture by William J. Antholis (The Brookings Institution) on <i>Understanding Federalism and Foreign Policy in India and China</i> .

Special Lectures:

Sonika Gupta, Coordinator, IITM CSC spoke on *Internet and Political Democracy in China* at a panel discussion on "Inside China: Understanding Contemporary Issues and Challenges" organized by Institute of Peace and Conflict Studies, New Delhi.

Online Analysis:

- Urban Expansion or Real Urbanization: China's Challenges Ahead. Dr. Geeta Kochhar, JNU
- Unrest in Xinjiang: Underlying Issues and the Chinese Response 9 August 2011, Dr. Arabinda Acharya, NTU, Singapore
- China's 'Out of Area' Naval Deployments: Issues and Implications for India 28 July 2011, Prof W Lawrence S Prabhakar, MCC, Chennai
- Escalating Tactics: China's Stapled Visa Regime 28 July 2011, Dr. Sonika Gupta, HSS, IITM
- "Harmonizing" TV Programming, Dr. Mugur Zlotea, Visiting Faculty, CSC 24 Nov 2011
- "India-US-Japan Trilateral Meeting in Washington" RS Kalha, Former Secretary MEA, 27 Dec
- "Comparing two recent Environmental protests in China" R Veena, Research Scholar, CSC, 29 Dec
- Articles published on the IITM CSC website in January 2012:
- *Land Acquisition in China: Wukan Protest* (Geeta Kocchar, DNU)
- *India-China relations: Strategic Stability & Tactical Aggressiveness* (Gurmeet Kanwal, Centre for Land Warfare Studies, New Delhi)

4.11 DEPARTMENT OF MANAGEMENT STUDIES

4.11.1 Introduction

The Department of Management Studies (DOMS) was established in April 2004, with the faculty members drawn from the Department of Humanities and Social Sciences that offered the M. Tech (Industrial Management) programme until 2001. On 2nd February 2006, the DOMS moved to a new premises with all classrooms/laboratory infrastructure provided by the Institute to facilitate all-round developments in its teaching and research programmes, and industry-interface efforts and initiatives. Over the years, the work and contributions of the faculty and research scholars have been highly acclaimed in academic circles and peer groups. The sharply growing number of well-qualified applicants, with many having significant professional experience, both from the industry and academia, is a good indication of the academic reputation of the Department.

The MBA Programme commenced in July 2001, has earned a good reputation among all stakeholders. The summer and career placements offered to the students by globally and nationally reputed companies is strong evidence of the growing stature of the programme and the attention it is receiving.

The Department presently conducts one of the largest research programmes and possibly has the largest number of management research scholars in India. Its research programmes attract a very large number of applicants, including a high proportion of working professionals. The work of the research scholars is regularly published in reputed international and national journals, and is presented in prestigious international and national conferences. In the recent past, a few research scholars have received international awards for their doctoral theses. The research papers of several research scholars have consistently received 'best paper' awards, and are well cited in the literature.

The alumni of the Department continue to make significant contributions to the organizations and institutions they work for. Many among them have won prizes, awards, honours and promotions in their organizations even within their first year of work. They have also played a central role in making their organizations earn laurels from various quarters.

The full-time and visiting faculty members have excellent academic and professional backgrounds, and they collectively work for realizing the Department's vision "*to be a globally unique and most valuable source of knowledge, insight, creativity and expertise in management thought and practice*".

Over the years of its existence, the Department has thoroughly revised its MBA programme curriculum, expanded its research activities, re-launched the MS (Entrepreneurship) programme with a new structure, and worked for establishing long-term relationships with globally reputed Institutions and organizations. The sections below present an outline of the Department's work.

Some major areas of research at the department are:

- ❖ Production and Operations Management
- ❖ Finance
- ❖ Marketing
- ❖ Human Resource Management
- ❖ Information Systems
- ❖ Strategy
- ❖ Technology Management
- ❖ Project Management
- ❖ Quality Management
- ❖ Services Management
- ❖ Knowledge Management

4.11.2 Academic Programmes:

New Courses introduced:

Sl. No.	Course No.	Title
1	MS 7003	Multivariate Statistical Methods for Social Sciences Research
2	MS 7210	Topics in Decision Theory
3	MS 7520	Supply Chain Contracts
4	MS 7730	Negotiation Supply Systems
5	MS 7460	Corporate Social Responsibility and Managerial Ethics
6	MS 3610	Accounting and Finance for Engineers
7	MS 5472	Leadership Development
8	MS 5473	Organisational Development
9	MS 7510	Inventory Models in Supply Chain Management
10	MS 6710	Financial Risk Management
11	MS 6870	IT Services and Outsourcing
12	MS 5611	Strategic Financial Decision Making
13	MS 7630	Advances in Commodity Markets
14	MS 4100	Soft skills Development Workshop
15	MS 8060	Advances in Systems Thinking Research

Students on Roll:

Programme	I year	II Year	III Year	IV Year	V Year & later	Total
M.B.A.	52	69	-	-	-	121
MS (by Research) MS (Entrepreneurship)	13	16	10	5	-	44
Ph.D.	17	12	24	12	17	82
Total	82	97	34	17	17	247

Names of Students/Scholars who attended Conferences/Seminars and Symposia Abroad/ India:

Sl. No	Name of the Student/Scholar	Roll No	Name of the Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
Abroad:					
1.	Ms.Sumathi GN	MS07D007	15th International Symposium on Health Information Management Research	September 8-9, 2011 , Zurich	Institute
India:					
1.	Ms.Aishwarya R	MS09S004	3rd Excellence in Research and Education Conference 2011	May 16, 2011 IIM Indore	Institute
2.	Ms.Kalpana P	MS09D003	XV Annual International Conference of the Society of Operations Management (SOM) 2011	December 16, 2011 IIM Calcutta	Institute
3.	Ms.Shameem	MS10D020	Yale-Great Lakes 6th International Research Conference	December 28, 2011 - Great Lakes Institute of Management Chennai	Institute
4.	Mr.Rabindranath a Bhattacharya	MS10DO12	International Conferences on Advances in Supply Chain and Manufacturing Management	December 16 - 18, 2011 IIT Kharagpur	Institute
5.	Ms.Christy Angeline R	MS10S013	National Conference on Emerging Trends in Business NCETB 2012	February 21 – 22, 2012 - Christ University, Bangalore	Institute
6.	Anish S Menon	MS10S011	Athenaeum 2012	Feb 11-12, 2012BIM Trichy	Institute
7.	Anish S Menon	MS10S011	India Finance Conference,	IIMB, Dec21-23, 2011,Bangalore	Institute

Names of students/ scholars who won outside prizes and awards:

Sl.No	Name of the Student/Scholar	Roll no	Name of the Prize	Prize awarded by
1.	Ms.Aishwarya R	MS09S004	Overall Best Paper Award and 2nd prize with cash award of Rs10000 and Certificate of Appreciation	3rd Excellence in Research and Education Conference 2011 IIM Indore
2.	Ms.MoupiaNiyogi	MS10A036	Nissan Student Brand Manager Award	Nissan Motors Limited
3.	Dr.Gopalakrishnan K	Passed out	Highly Commended Award	Emerald Doctoral Research Awards 2011
4.	Dr.Priya Nair	Passed out	Highly Commended Award	Emerald Doctoral Research Awards 2011
5.	Ms.Kalpana P	MS09D003	Best Paper Award	XV Annual International Conference of the Society of Operations Management (SOM) 2011 IIM Calcutta

6.	Mr.Rabindranatha Bhattacharya	MS10DO12	Best Paper Award	International Conference on Advances in Supply Chain & Manufacturing Management 2011, IIT Kharagpur
7.	Ms.Shameem	MS10D020	First Prize	Yale- Great Lakes 6th International Research Conference Great Lakes Institute of Management 2011 Chennai
8.	Ms. Christy Angeline	MS10S013	Best Paper Award	National Conference on Emerging Trends in Business – NCETB 2012 Christ University, Bangalore
9..	Mr.RameshwarTure	MS09D022	Special Prize	Athenaeum 2012, VI International Management Research Conference organized by the Bharathidasan Institute of Management, Trichy
10.	Anish S Menon		Best Research Paper	Athenaeum 2012 , Feb 11-12, 2012BIM Trichy

Names of the Students/Scholars who won the Institute Convocation/Institute Day Prize:

SI.No	Name of the Student/Scholar	Roll No	Name of Prize
1.	Ms.Esha Gupta	MS10A020	V. Kumar Prize

4.11.3 Faculty and their activities:

Faculty:

Name and Qualifications	Major Area of Specialization
Professors:	
Ganesh L S B.E.(Hons.), M. Tech, Ph. D.	Systems Thinking and Applications, Project Management, Technology Management, Data and Decision Analysis, Forecasting
Jayachandran S M.A., MBA, Ph. D.	Marketing Management & Research, Advertisement and Publicity, Management of Finance / Personal / Marketing
Kamalanabhan T J M.A., M. Phil., Ph. D.	Organizational Behaviour, Human Resource Management and Training & Development.
Madhumathi R M. Com., Ph. D.	Financial Management and Accounting, Forex Research, Bank Management, Capital Market Studies
Narendran T T B.E., M.S., Ph. D.	Operations Management, Supply Chain management, Vehicle Routing Problems
Prakash Sai L B.E., PG Dipl.(CM&P), M. Tech, Ph D.	Strategic Management, IT Outsourcing and IT Strategic Planning Business Models, Technology Management, Contemporary Issues in Management
Rajendran C B.E.(Hons), M.E., Ph. D.	Operations Management, Production and Materials Management, Supply Chain Management, Scheduling.
Srinivasan G[HEAD] B.E.(Hons), M.S., Ph. D.	Fundamentals of Operations Research, Advanced Operations Research, Operations Management, Supply Chain Management, Manufacturing Systems Management, O. R. Applications, Services Operations Management
R.P. Sundarraj Ph.D.	Information Systems, Supply Chain Management, e-Business, Computational Optimization, Decision Support System.
Thenmozhi M M. Com., M. Phil, Ph. D.	Financial Management, Strategic Management Computational Finance
Vijayaraghavan P B.E., MBA Fellow -IIM Bangalore (TTK Chair Professor)	Strategic Marketing, Advertising & Sales Promotion, Brand Management, Industrial & Services Marketing

Associate Professors:	
Arun Kumar G M. Com., Ph. D.	Market Microstructure, IPOs, Mergers and Acquisitions, Joint Ventures and Multinational Business
Thillairajan A B.E., M.Sc Fellow IIM Bangalore	Financial Management, Advanced Corporate Finance, Venture Capital and Private Equity, Infrastructure and Project Finance
ASSISTANT PROFESSORS	
Amit R K M. Tech., Ph.D	Game Theory, Operations Research, Decision Theory, Natural Resources Management.
Arshinder Kaur M. Tech, Ph. D.	Operations Research, Supply Chain Management, Total Quality Management, Services Operations Management
Ganesh M P M.A., M. Phil, Ph. D.	Organizational Behaviour, Human Resources Management, Industrial Psychology
Krishna Prasanna P M. Com., Ph. D.	Financial Accounting, Fixed Income Securities, Financial Risk Management , Market Microstructure
Rahul R. Marathe B.E.,M.S., Ph.D.	Simulation, Industrial Engineering, TQM, Operations Research, Operations Management
Richa Agrawal MBA, Ph. D.	Customer Relationship Marketing, Consumer Behaviour & Insight Advantage
Rupashree Baral Ph. D.	Strategic Human Resources Management, Organizational Behaviour, Work-Life Balance, Employee Engagement, Diversity and Inclusiveness, Career Exit and Re-entry of Women
Saji K. Mathew Ph. D.	Management Information Systems, IT Strategy, Data Mining and Business Intelligence, IT Services & Outsourcing, Information Systems Development
Usha Mohan M. Sc., Ph. D.	Quantitative Models in Operations Management, Probability and Statistics
Lata Dyaram M.A, PhD	Diversity, Work Teams, Personal Effectiveness
V. Vijayalakshmi M.Sc, PhD	Positive organisational behaviour , social media and social design, neuro-linguistic programming

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Name of the Co-ordinators	Title	Period
Workshop:			
1.	Dr.Srinivasan G	Supply Chain Management (in association with CII Institute of Logistics)	28 - 30 April 2011 ICSR, IIT Madras
2.	Dr.Saji Mathew Dr.Amit R K	National Workshop on Research Methods	20 - 21 August 2011 DoMS, IITMadras
3.	Dr.RichaAgrawal Dr.Kamalanabhan T J	Workshop on Case Studies	19 -23 September 2011 DoMS, IIT Madras
4.	Dr.Thenmozhi M	Workshop on Fundamentals of Research in Engineering and Management (for senior executives of FLSmidth)	23 September - 1 October 2011 DoMS, IIT Madras
5.	Dr. Ganesh M P	Workshop on Leadership for selected IIT students	- 16/17/23/24 September2011 - 7/9/14/16 October 2011 DoMS, IIT Madras (2 Batches)
6.	Dr.Thenmozhi M Dr.Kamalanabhan T J	Fundamentals of Research (for executives of FLSmidth)	October 2011 DoMS, IIT Madras
7.	Dr. Ganesh L S and Dr. L. PrakashSai	Business and Competitive Intelligence	28 - 29 October 2011 DoMS, IIT Madras
8.	Dr. Ganesh M P Dr.RupashreeBaral Dr.Vijayalakshmi V	Nurturing the Inner You for Personal, Group and Organisational Excellence (for corporate executives)	25 - 26 November 2011 DoMS, IIT Madras
9.	Dr.Srinivasan G	Science and Engineering - a Journey (for students of Class 10 and 12 of Central and State Board Schools in Chennai)	17 - 18 February 2012 Central Lecture Theatre, IIT Madras

Short Term Course			
1.	Dr.Kamalanabhan T J	Supervisory Development Programme for L & T Executives	25 - 30 April 2011 DoMS, IIT Madras
2.	Dr.Saji Mathew Dr. Ganesh L S Dr. Ramesh	Executive Training Programme on ERP Implementation (for officers of United India Assurance Co Limited)	16 - 21 June 2011 DoMS, IIT Madras
3.	Dr.Srinivasan G & Dr Rahul R. Marathe	Executive Development Programme on Lean Manufacturing (for TAFE executives)	8 - 9 July 2011 DoMS, IIT Madras
4.	Dr. Rahul Marathe	Executive Development Programme on Modern Manufacturing Systems (for TAFE Engineers)	23 - 24 September 2011 DoMS, IIT Madras
5.	Dr. Rahul R. Marathe	"Modern manufacturing systems", TAFE Chennai	January 2012
6.	Dr.Kamalanabhan T J Dr.Thenmozhi M	Supervisory Development Programme for L & T Supervisors (Power, Transmission and IC sections)	27 February - 3 March 2012 DoMS, IIT Madras
7..	Dr.T.J.Kamalanabhan Dr. M. Thenmozhi	21 st Supervisory Development Programme for L & T Supervisors (Power, Transmission and IC sections)	26 -31 March 2012 DoMS, IIT Madras
8..	Dr.T.J. Kamalanabhan Dr. M. Thenmozhi	One week Management Training Programme for Head Masters of Secondary Schools under the Government of Tamilnadu	19 -23 March 2012 (Batch I) 26 -30 March 2012 (Batch II) DoMS, IIT Madras
9..	Dr .P. Krishna Prasanna	One day work shop on "Corporate Governance: Compliance requirements for Directors"	Dec,17,2011

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1.	Dr.LataDyaram Dr.RupashreeBaral	Faculty Development Programme in Teaching and Learning	Centre for Continuing Education, IIT Madras	7 - 9 December 2011
2.	Dr. P. Krishna Prasanna	Financial Risk Optimisation	IIM, Calcutta	14-17, March,2012
Seminar:				
1.	Dr.Saji K Mathew	Victoria Management School Seminar	Victoria Management School, New Zealand	9 December 2011
Conference (Paper Presented) :				
1.	Dr. Krishna Prasanna	2nd Finance and Corporate Governance Conference	La Trobe University, Melbourne, Australia	28 -29 April 2011
2.	Dr. R. Madhumathi	Society of Interdisciplinary Business Research (SIB) Conference	Society of Interdisciplinary Business Research ,Bangkok, Thailand	16 -18 June 2011
3.	Dr.M.P.Ganesh	Society of Interdisciplinary Business Research (SIB) Conference	Society of Interdisciplinary Business Research ,Bangkok, Thailand	16 -18 June 2011
4.	Dr.ArshinderKaur	19 th Triennial Conference of the International Federation of Operational Research Societies (IFORS)	International Federation of Operational Research Societies (IFORS), Melbourne, Australia	10 – 15 July 2011
5.	Dr. G. Arun Kumar	Sustainable Global Business in Emerging Economies-Multinationals from Asia-Pacific (at the 12 th International Conference of the Society for Global Business and Economic Development (SGBD))	School of Business, Montclair State University & Singapore Management University, Singapore	July 23-25, 2011
6.	Dr.ThillaiRajan A	5 th Annual Meta Analysis Economic Research Network (MAER-NET) Colloquium	Cambridge, UK	16 – 19 September 2011
7.	Dr.ArshinderKaur	Emerging Technologies in Food Processing Sector, FOODPRO 2011 Conference	Tamil Nadu Technology Development and Promotion Centre	22 October 2011

8.	Dr. T.J. Kamalanabhan	7 th International Conference on Business Management and Economics	Izmir, Turkey	6 -8 October 2011
9.	Dr. R. K. Amit	2 nd Annual International Conference at UECE - Lisbon Meetings on Game Theory and Applications	UECE- Lisbon Meetings, Lisbon, Portugal	3 – 5 November 2011
10.	Dr. T.J. Kamalanabhan	10 th International Conference of the Asia Chapter of the Academy of Human Resource Development	Academy of Human Resource Development, Kuala Lumpur, Malaysia	3 – 6 December 2011
11.	Dr.Saji K Mathew	Australia New Zealand Academy of Management (ANZAM-2011) conference	Australia New Zealand Academy of Management, Wellington, New Zealand	8 December 2011
12.	Dr.Srinivasan G	15 th International Conference of the Society of Operations Management	IIM Calcutta	16 - 18 December 2011
13.	Dr. R.K. Amit	15 th International Conference of the Society of Operations Management	IIM Calcutta	16 - 18 December 2011
14.	Dr.Thenmozhi M	International Conference on Emerging Markets	PSG College of Technology, Coimbatore	29 December 2011
15.	Dr. P. Krishna Prasanna	International Conference on Frontier Global issues and Challenges in Accounting and Finance	Research Development Association, Jaipur	Jan 05-06.2012

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1.	Dr. Ganesh L S	Towards a world of Dignity for all: The Triumph of the Creative Life	MS Swaminathan Research Foundation, Chennai	24 September 2011
2.	Dr.Thenmozhi M	Emerging Financial Markets	International Conference on Emerging Markets, PSG College of Technology, Coimbatore	29 December 2011
3.	Dr.Srinivasan G	Operations Research	Arunai Engineering College, Thiruvannamalai	7th January 2012
4.	Dr. Ganesh M P	Issues in Cross cultural Colloborations	University of Applied Science, North-Western Switzerland	7 th to 12 th November 2011
5.	Dr.P.KrishnaPrasanna	Mutual funds	MSME, Guindy	18 th Feb 2012
6.	Dr .P. Krishna Prasanna	Emerging trends in Banking	Pondicherry University, Karaikal Campus	24 th Mar 2012
7.	Dr.Arun Kumar G	“Convergence of Financial Reporting Standards” (at the Two day national conference on CFRS)	Sri Krishna Arts and science College. Coimbatore (autonomous and affiliated to Bharathiar University) - was invited as Chief Guest	3 rd February 2012

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding From
1.	Dr. Krishna Prasanna	Australia	28 – 29 April 2011	Paper presentation at 2nd Finance and Corporate Governance Conference	Institute
1.	Dr.Saji Mathew	Germany	May 9 - June 1 2011	To teach a course on INFORMATION SYSTEMS to masters student in Internet and Web Sciences of the University of Applied Sciences, Hof	Institute
2.	Dr.Saji Mathew	Germany	May 18 - June 7 2011	Teach a course on IT Outsourcing to MBA students of University of Passau	Institute

3.	Dr.Madhumathi R	Thailand	16 - 18 June 2011	Paper presentation at Society of Interdisciplinary Business Research (SIB) Conference	Institute
4.	Dr. Ganesh MP	Thailand	16 -18 June 2011	Paper presentation at Society of Interdisciplinary Business Research (SIB) Conference	Institute
5.	Dr.ArshinderKaur	Australia	10 – 15 July 2011	Paper presentation at the 19 th Triennial Conference of the International Federation of Operational Research Societies (IFORS)	Institute
6.	Dr.ThillaiRajan A	UK	16 – 19 September 2011	Paper presentation at the 5 th Annual Meta Analysis Economic Research Network (MAER-NET) Colloquium	Institute
7.	Dr.Kamalanaban T J	Turkey	6 – 8 October 2011	Paper presentation at the 7 th International Conference on Business Management and Economics	Institute
8.	Dr. R.K. Amit	Portugal	3 – 5 November 2011	Paper presentation at the 2 nd Annual International Conference at UECE - Lisbon Meetings on Game Theory and Applications	Institute
9.	Dr.Kamalanaban T J	Kuala Lumpur Malaysia	3 - 6 December 2011	Paper presentation at the 10 th International Conference of the Asia Chapter of the Academy of Human Resource Development	Institute
10	Dr.Saji Mathew	New Zealand	8 December 2011	Paper presentation at the Australia New Zealand Academy of Management (ANZAM-2011) Conference	Institute
11	Dr.Saji Mathew	New Zealand	9 December	Seminar invitation – Victoria Management School	Institute
12	Dr.Rajendran C	Germany	20 January - 1 February 2012	To explore research collaboration under DAAD project "A Passage to India"	Institute
13.	Dr. Ganesh MP	Spain	14 th to 16 th November 2011	Paper presentation in 4th International Conference of Education, Research and Innovation held in Madrid Spain	Institute
14.	Dr. M. Thenmozhi	USA	April 15, 2011	Delivered a Seminar talk at the Department of Business Administration, San Diego State University, San Diego on "Determinants of Corporate Cash Holdings : A Study Using U.S. Federal Reserve Flow of Funds Data"	Institute

Honours and Awards obtained:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of Award
Honours :					
1.	Dr. M. P. Ganesh	Outstanding Reviewer	Emerald Group of Publications UK	For contribution to the journal Team Performance Management	2010
Awards :					
1.	Dr. A. ThillaiRajan	Highly Commended Award	Literati Network Awards for Excellence	Paper on PPPs in Road Renovation and Maintenance - A Case Study of the East Coast Road India	2010
2.	Dr. A. ThillaiRajan	Highly Commended Award	Literati Network Award for Excellence	Paper on Merchant Power Plants in India: Risk Analysis Using Simulation	2010
3.	Dr.ThillaiRajan	Best Innovation in Pedagogy for 2011	The Management Teachers Consortium	Innovation in Pedagogy	2011

4.	Dr.ArshinderKaur	Best Paper Award	International Conference on Advances in Supply Chain and Manufacturing Management IIT Kharagpur	Paper on Close Loop Supply Chain with Factory Rejections	2011
5.	Dr. P. Krishna Prasanna	Best Paper Award	International Conference on Frontier Global issues and Challenges in Accounting and Finance, Jaipur	Paper on "Foreign institutional investment and liquidity of Stock market: Evidence from India"	2012
6.	Dr A ThillaiRajan	Highly Commended Award	Literati Network Award for Excellence for 2012	Paper on "Venture capital and private equity in India: an analysis of investments and exits"	2012
7.	Dr. Rahul R. Marathe	IBM Faculty Award	IBM Incorporated, USA	For the Best Researcher in the chosen field	2011
8.	Dr. M. Thenmozhi	Programme Track Chairperson and Committee Member	Management Science and Education Track, France http://www.icistm.org/Chairs)	International Conference on Information Systems, Technology and Management- ICISTM 2012	2012

Books, Monographs authored / co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/Co-author
Books:				
1.	T.T. Narendran	Composite Heuristics for a Class of Vehicle Routing Problems	LAP Lambert Academic Publishing	Dr. K. Ganesh
Monographs				
1.	A. ThillaiRajan	India Venture Capital and Private Equity Report 2011	=====	===
2.	R.P. Sundarraj	Electronic Procurement Systems in India: Importance and Impact on Supply Chain Operations," (with KomalKumari)	<i>Global Logistics (International Series in Operations Research & Management Science)</i> (ed.) J. Bookbinder, Springer Series, 2011	KomalKumari
Working Paper				
3.	Malhotra, M., Thenmozhi, M. and Arun Kumar, G.	Evidence on Changes in Time Varying Volatility around Bonus and Rights Issue Announcements	<i>Madras Stock Exchange (Uploaded on website of MSE http://www.mse.ac.in/publication.asp, http://www.mse.ac.in/pub/WORKING PAPER 2061.pdf)</i>	===

Fellowships of Academies and Professional Societies:

Sl. No.	Name of faculty	Name of the Academy/ Professional Society	Level	Year of admission
Fulbright Nehru Senior Research Fellowship in Business:				
1.	Dr. M. Thenmozhi	San Diego State University, USA	Visiting Professor	Jan-May 2011
ISTE/CSI & others:				
2.	Dr. M. Thenmozhi	Equity Derivatives Governing Council, Madras Stock Exchange	Member	14 June 2011

4.11.4 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (Rs. lacs)	Co-ordinators
1.	Design and development of a generic framework for Agro-Food supply chain (AFSC)	17/9/2010 to 16/9/2012	Department of Science and Technology	5.04	Dr .ArshinderKaur
2.	IBM Shared University Research Grant	24/1/2011 to 31/12/2012	IBM Corporation, USA	13.66	Dr Rahul Marathe, Co-investigator: Dr. Shankar Balachandran
3.	Social governance and sustainability: a cross cultural perspective	1/11/2011 To 30/6/2012	Shastri Indo-Canadian Institute	4.90	Dr LataDyaram
4.	Financing of entrepreneurial and SME companies in energy, environment and technology sectors in India	6/7/2011 to 5/1/2014	Nissan Research Support Program	7.26	Dr.ThillaiRajan A

Industrial Consultancy projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lacs)
1.	Dr Rahul RatnakarMarathe	Pattern identification and clustering of defects on IC silicon wafer	DFMSim Software India Pvt Ltd	1.07
2.	DR G. Srinivasan, Dr Satyanarayana K N	Combination analysis for identifying least cost combination for CMRL	Chennai Metro Rail Limited	0.66
3	Dr R. K. Amit Dr ArshinderKaur	Simulation of in-plant vehicle traffic and parking for Gujarat Fluoro Chemicals Limited	Trimble Mobility Solutions India Limited	2.16
4.	Dr T. J. Kamalanabhan Dr M. P. Ganesh	Organisation structuring for EDC-India Caterpillar	Caterpillar Engineering Design Centre India	4.50

RBIC projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lacs)
1.	Dr ThillaiRajan A Dr SudhirChellaRajan	Evidence of the impact of changes in the transparency of infrastructure procurement	Department for International Development	28.18
2.	Dr ThillaiRajan A Dr AshwinMahaligam	Does private involvement in delivery of water, information and communication technology and electricity services lead to improved access and quality services in developing countries	Australian Agency for International Development (AUSAID)	38.15
3.	Dr ThillaiRajan A	Case Study on IBM corporate service Corps	IBM India Private Limited	1.13
4.	Dr ArshinderKaur	Strategic sourcing of castings	CGN and Associates India Private Limited	3.42

Exchange programme with other Universities including Institutions/ Universities under MOU:

Number of students sent abroad: 6

Research Publications:

- | | | | |
|----|--|---|----|
| a. | Total No. of papers published in Refereed National Journals | - | 05 |
| b. | Total No. of papers published in Refereed International Journals | - | 23 |
| c. | Total No. of papers presented in National Conferences | - | 18 |
| d. | Total No. of papers presented in International conferences | - | 17 |

a. In Refereed National Journals:

Sl. No.	Name of the Faculty	Title of the paper	Name of the Journal
1.	Dr. M.P. Ganesh and Ms.Aishwarya R	Attrition Among Indian Hotel Executives - The Role Of Job Characteristics And Burnout	IIM Indore Management Journal
2.	Dr. T. J. Kamalanabhan	Predicting Unwillingness To Report Ethical Infractions Of Peers: A Moderated Mediation Approach	IIMB Management Review, Vol. 23, No. 2 2011 Pg 81 – 90
3.	Dr. L. S. Ganesh	Urban Housing In Developing Countries - A Holistic Perspective	Urban India - Vol. 31. No1 2011 pg. 123 -137
4.	Dr. T. J. Kamalanabhan	Employee Readiness To Change And Individual Intelligence: The Facilitating Role Of Process And Contextual Factors	International Journal Of Business Insights And Transformation - Vol. 4 . No2 2011 pg 85 – 91
5.	Dr.RupashreeBaral	Predictors of Work-Family Enrichment: Moderating Effect of Core Self-Evaluations	Journal of Indian Business Research, Vol. 3 No. 4 2011 pg.220 – 243

b. In Refereed International Journals:

Sl. No.	Name of the Faculty	Title of the paper	Name of the Journal
1.	Dr. L. S. Ganesh	Inter-individual Knowledge Transfer and Performance in Product Development	The Learning Journal Vol.18 No. 3 2011 Pg 224 -238
2.	Dr. T. J. Kamalanabhan Dr. P. Arun Prasad	Learning Enabled Human Resources Practices in Software Organisations in India	International Journal Of Strategic Change Management Vol. 3 No. 1-2, Pg 51 -75 2011
3.	Dr. T. J. Kamalanabhan Dr.LataDyaram	Impact of Heterogeneity on Software Development Teams	International Journal Of Business Innovation And Research Vol. 5 No 4 Pp271 – 290
4.	Dr.Rajendran C Ms.Madhushini	Branch and Bound Algorithms for Scheduling in an M-Machine Permutation Flow-shop with a Single Objective and with Multiple Objectives	European Journal Of Industrial Engineering Vol. 5 No 4 2011 Pg 361 - 387
5.	Dr. T. J. Kamalanabhan	The Future of Health Care: Students Perceptions, Education and Training in Ageing and Health in India	Asia - Pacific Journal Of Public Health Vol. XX(X) No 1 -9 2011
6.	Dr. L. S. Ganesh	The Diffusion on ATM Technology in Indian Banking	Journal Of Economic Studies Vol. 38 No 4 2011 Pg 483 - 500
7.	Dr. C. Rajendran	A Novel Particle Swarm Optimisation Algorithm for Continuous Function Optimization	International Journal Of Operational Research Vol. 13 No 1 2012
8.	Dr.C.Rajendran	A Genetic Algorithm for Solving the Fixed-charge Transportation Model: Two-stage Problem	Computers and Operations Research Vol 39 pg.2016 -2032 2012
9	NeeleshRangwani, P. Subramanian, N. Ramkumar, and T. T. Narendran	“Heuristic for a Single Period Single Product Closed Loop Supply Chain”	International Journal of Enterprise Network Management, Vol.3, pp. 311-324, 2011.
10	Ramkumar, N., P. Subramanian, T.T. Narendran, and K. Ganesh	"A genetic algorithm approach for solving a closed loop supply chain model: A case of battery recycling	<i>Applied Mathematical Modelling</i> , Vol.35, pp. 5921-5932, 2011.
11.	Dr.P.KrishnaPrasanna	Impact of corporate governance regulations on Indian stock market volatility and efficiency,	International Journal of Disclosure and Governance, advance online publication, 8 December 2011; : 10.1057/jdg.2011.28
12	Dr. R.P. Sundarraj (with Wilson Mok)	Models for Human Negotiation Elements: Validation, and Implications for Electronic Procurement,”	<i>IEEE Transactions of Engineering Management</i> , Vol. 58, No. 3, pp. 412-430, 2011.
13.	Dr. R.P. Sundarraj	“A multi-attribute approach to the modelling of human elements in electronic negotiation,”	<i>International Journal of Procurement Management</i> Vol. 4, No. 3, 2011

14.	Dr. R.P. Sundarraj (with Nick Manochehri)	"Application of an extended TAM model for online banking adoption: a study at a Gulf region university,"	<i>Information and Resource Management Journal</i> , Vol. 24, No. 1, pp. 1-13, 2011.
15.	Dr.RupashreeBaral	Examining the Moderating Influence of Gender on the relationships between Work-Family Antecedents and Work-Family Enrichment	<i>Gender in Management: an International Journal</i> Vol. 26 No 2 2011 pg.122-147
16.	Dr.RupashreeBaral	HR interventions for work-life balance: evidences from organisations in India	<i>International Journal of Business, Management and Social Sciences (IJBMS)</i> , Vol. 2 No 1 2011 pg.33-42
17.	Vidyashankar, G.S. and L. PrakashSai	"Benchmarking Indian States' Performance On Educational Development: A DEA Approach,"	<i>International Journal of Educational Management</i> , Vol.26, No.1, pp.99-130, 2012.
18.	Dr. G. Arun Kumar Murali, B. Reddy, and Chia-Hsing Huang	"Stability of Long-run Relationship: A study on Asian emerging and developed stock markets (Japan and US)"	<i>International Journal of Emerging Markets</i> , January 2012, Vol 7, Issue 1, Page 31-48
19.	Shijin S., G. Arun Kumar, and D. Acharya	"Dynamic Risk- Return relation with Human capital: A study on Indian markets"	<i>International Journal of Emerging Markets</i> , February 2012 Vol 7, Issue 2 Page 146-159
20.	Malhotra, M., Thenmozhi, M. and Arun Kumar, G	Evidence of Changes in Time Varying Volatility around Bonus and Rights Issue Announcements	<i>International Journal of Emerging Markets – Oct 2011</i>
21.	Nair, S. K and Thenmozhi. M	Adaptive Market Hypothesis: Evidence from Indian Bond Market	<i>International Journal of Arts & Sciences</i> , 4(12), pp. 27–40
22.	Kumar, M. and M. Thenmozhi	A Hybrid ARIMA-EGARCH and Artificial Neural Network Model in Stock Market Forecasting: Evidence for India and US	<i>International Journal of Business in Emerging Markets</i> , Vol. 4, No.2, 2012, pp.160-178.
23.	Nair, S. K and Thenmozhi. M	"Macroeconomic factors and conditional bond volatility: Evidence from emerging and developed bond markets"	<i>American Journal of Finance and Accounting</i> , Vol.2, No.4, 2012, pp.326-345.

c) **In Proceedings of National Conferences:**

Sl. No.	Name of Faculty	Title of the Paper	Institution	Period
1.	Sujay Prasad Srivastava and M.Thenmozhi	A Study of Market Efficiency of Stock Markets in Emerging and Developed Economies	Eighth AIMS International Conference on Management, Management Education in 2020: Issues, Challenges, and Opportunities, Indian Institute of Management, Ahmedabad	January 1-4, 2011
2.	Malhotra, M., Thenmozhi, M. and Arun Kumar, G.,	Evidence of Changes in Time Varying Volatility around Bonus and Rights Issue Announcements	International Conference on Practice and Research in Management 2011 (Dayalbagh Educational Institute (Deemed University), Agra,)	18–20 February, 2011
3.	S.K. Gopinath and Rahul R Marathe	Coordinating raw material discounts in a global supply chain for deteriorating items under price-dependent demand,"	2011 POMS Annual Conference, Reno, Nevada	May 2011
4.	Duggirala, M. and L. PrakashSai	"Impact of Peer-related Factors on Student-related Outcomes in Technology-Mediated Learning,"	IEEE International Conference on "Technology For Education" (ISBN 978-0-7695-4534-9), IITMadras, Chennai, India, pp.136-141	July 2011.
5.	Dr.RupashreeBaral Ms. Christy Angeline	Factors Affecting the User Acceptance of ERP and the Impact on the Individuals: A Conceptual Model	IIM Kozhikode	9-12 December 2011
6.	Dr ArshinderKaur Ms. P. Kalpana	Two Orderings with Correlated Demand in Single Period Supply Chain	IIM Calcutta	16 December 2011

7.	Dr. G. Srinivasan	Valuation of Players in IPL I2011	IIM Calcutta	16 – 18 December 2011
8.	Dr. G. Srinivasan	A Two Stage Stochastic Programming for Supplier Selection with Order Allocation	IIM Calcutta	16 – 18 December 2011
9.	Dr.ArshinderKaur Mr.Rabindranatha Bhattacharya	Close Loop Supply Chain with Factory Rejections	IIT Kharagpur	16 -18 December 2011
10.	Dr. R. K .Amit	Efficiency Analysis of Relational Contracts in Three Level Supply Chain	IIM Calcutta	16 – 18 December 2011
11.	Harold, Lawrence and Thenmozhi, M.	. “Development of a Measurement Instrument for Evaluating Information Technology Investment Success in Financial Services Sector”	<i>India Finance Conference, Indian Institute of Management, Bangalore, India</i>	<i>December 21-23, 2011</i>
12.	Kumar, Manish and Thenmozhi, M.	"Causal Effect of Volume on Stock Returns and Conditional Volatility in Developed and Emerging Markets"	<i>India Finance Conference, Indian Institute of Management, Bangalore, India</i>	<i>December 21-23, 2011</i>
13.	Misra, Nachiketa and Thenmozhi M	Price Leadership of Stock Futures and Spot Market: A Market Condition Based Analysis using Intraday Data	<i>India Finance Conference, Indian Institute of Management, Bangalore, India</i>	<i>December 21-23, 2011</i>
14.	Nair, S. K and Thenmozhi. M	“Effect of Macroeconomic Variables on Bond Index Return and Conditional Volatility: Evidence from Emerging and Developed markets”	<i>India Finance Conference, Indian Institute of Management, Bangalore, India</i>	<i>December 21-23, 2011</i>
15.	Dr. MP Ganesh Ms.Shameem	Emotional Labour and Its Outcomes in A Cross - Cultural Context: role of Organisational and Individual Characteristics	Great Lakes Institute of Management, Chennai	28 December 2011
16.	N. R. Mukundan and L.PrakashSai	“Perceived Information Security in the Indian IT Services Industry: An exploratory study of dimensions”,	International Conference on Information Technology, Systems and Management, Indian Institute of Management Kozhikode	December 2011.
17.	Arti D Kalro, Mathew A. Thomas and Rahul R Marathe	“Battle of equals: Effect of comparative advertising on brand image,”	The Great Lakes-NASMEI International Marketing Conference, Chennai	December 2011.
18.	Dr.RupashreeBaral Ms.Aishwarya L.R.	Comparison of Generational Competencies among Software Professionals- A Research Proposal	Christ University, Bangalore	21 -22 February 2012

d) **In Proceedings of International Conferences:**

Sl. No	Name of Faculty	Country Visited	Title of the paper	Institution/ conference	Period
1.	Nair, S. K and Thenmozhi. M	Las Vegas, USA	Adaptive Market Hypothesis: Evidence from Indian Bond Market	International Journal of Arts and Sciences National Conference for Academic Disciplines, University of Nevada, Las Vegas	March 7-10, 2011

2.	Malhotra, M. and Thenmozhi, M. and Arun Kumar G	Thailand	Factors Influencing Abnormal Returns around Bonus and Rights Issue Announcement	International Conference on Interdisciplinary Business and Economics Research, Society of Interdisciplinary Business Research (SIBR), Bangkok, Thailand,	16 -18 June 2011
3.	Dr. R. Madhumathi	Thailand	Earnings Quality, Corporate Governance and Firm Performance	Society Of Interdisciplinary Business Research Conference (SIB)	16 -18 June 2011
4.	Dr. M.P. Ganesh	Thailand	Climate in Software Development Team: Role of Task Interdependence and Procedural Justice	Society Of Interdisciplinary Business Research (SIB) Conference	16 -18 June 2011
5.	Dr.ArshinderKaur P. Kalpana	Australia	Dynamic Programming Model of Sharing Profits for Single Period Split Order Supply Chain	19th Triennial Conference Of The International Federation Of Operational Research Societies (IFORS)	10 -15 July 2011
6.	Dr.ArshinderKaur P. Padmapriya	Australia	Effect of Lead Time Information Sharing on the Performance of Retailer in a Supply Chain: A Simulation Study	19th Triennial Conference Of The International Federation Of Operational Research Societies (IFORS)	10 -15 July 2011
7.	Ms. G. N. Sumathi Research Scholar	Switzerland	Work Experience and Pro-social Behaviour	15th International Symposium On Health Information Management Research , (Organised By University Of Sheffield, University Hospital Zurich And University Of St. Gallen)	8 -9 September 2011
8.	Elango, J.R and M.Thenmozhi	Switzerland	Effect of Service Quality of Hospitals on Patient satisfaction: A study with specific reference to beneficiaries of Community Based Health Insurance Schemes in India	15th International Symposium On Health Information Management Research , (Organised By University Of Sheffield, University Hospital Zurich And University Of St. Gallen)	8 -9 September 2011
9.	Dr. A. Thillairajan	United kingdom	Evidence of Impact of Changes in the Transparency of Infrastructure Procurement and Delivery on Quality, Costs and Access	5th Annual Meta Analysis Economic Research Network (MAER-NET) Colloquium	16 - 19 September 2011
10.	Kumar, M. and M. Thenmozhi	Canada	"Forecasting Stock Index Returns using ARIMA-SVM, ARIMA-ANN, and ARIMA-Random Forest Hybrid Models",	Industrial-Academic Workshop on Optimization in Finance and Risk Management, Fields Institute, Toronto (accepted as Invited Speaker)	Oct 3-4, 2011
11.	Dr. T. J. Kamalanabhan	Turkey	Perceived Organisational Support and Job Performance among Medical Personnel : A Study in Indian Public Health Care Sector	7th International Conference On Business Management And Economics	6 – 8 October 2011

12	Dr. R. K. Amit	Portugal	Priority Functions in Recurrent Combinational Auctions in Game Theory and Applications	2nd Annual International Conference UECE-Lisbon Meeting On Game Theory And Applications	3 - 5 November 2011
13	Dr. T. J. Kamalanabhan	Malaysia	A Study on the Impact of Human Resource Practices on Organisational Citizenship Behaviour among Health Care Professionals	10th International Conference Of The Asia Chapter Of The Academy Of Human Resource Development	3 - 6 December 2011
14	Dr.Saji Mathew	New Zealand	Offshore IT Outsourcing between India and New Zealand	Australia New Zealand Academy Of Management ANZAM 2011	8 December 2011
15	Dr.Saji Mathew	New Zealand	Offshore IT Outsourcing between India and New Zealand	Victoria Management School Seminar	9 December 2011
16	Dr. R.P. Sundarraj (with K. Venkataraghavan)	Kozhikode	A selection framework for SaaS-based Enterprise Resource Planning applications,	<i>International Conference on Information Technology, Systems and Management</i> , IIM Kozhikode 2011.	Dec 2011
17	Narayanan, P.C. and Thenmozhi, M	New Orleans, LA, USA	Cross Border Acquisitions Involving Emerging Market Firms: Do Country Characteristics Matter?	2012 Midwest Finance Association Meeting, New Orleans, LA,	Feb 2012

Distinguished Visitors to the Department:

Sl. No.	Name of the visitor & Designation	Date of visit	Purpose of visit
1.	Mr.Gurunath CEO Pudhuaru KGFS	April 6, 2011	An invitation lecture on Inclusive Financial Systems
2.	Mr.ManivannanJanakiraman Project Manager, Morgan Stanley UK	April 22, 2011	Invited to present a lecture on Relevance Of Various Regulations On Indian Securities Market for MBA students
3.	Dr. Siddhartha Sen Gupta Head - Applied Decision Sciences R&D TCS	June 27 -29 2011	On invitation, gave lectures/case studies on Bridging Research And Industry-Technical Approach/ Methodology/ Research With Cases for Research scholars
4.	Dr.Bala Ram North Carolina State University at Greensboro ,USA	Aug 1 2011	Gave an invited lecture on Application Of Network Flows In Disaster Management to Research Scholars
5.	Dr.M.S.Ananth Former Director, IIT Madras	Aug 4, 2011	Gave an invited lecture on Reaching Our Potential to all our MBA students and research scholars
6.	Mr.AbhayGupte CEO, Logical India	Aug 7 2011	As part of MBA invitation lecture series gave a lecture on Achieving Managerial Excellence In The Current Decade to MBA students and Research Scholars
7.	Dr. Alex Eapen Programme Director, MIB, The University of Sydney Business School Australia	Sep 22, 2011	Gave a presentation of his research paper titled FDI Spillover Effects to all Research Scholars
8.	Mr. M.S. SundaraRajan Former Chairman and Managing Director, Indian Bank	Oct 13, 2011	An invited lecture on The Classic And The Contemporary: The Turnaround Of Indian Bank And The Credit Downgrade Of SBI to MBA students and Research Scholars
9.	Mr.AnandRajarman (IITM Alumnus) Senior Vice President, Walmart Global E-Commerce USA	Nov 11, 2011	An invited lecture on Anecdotes Of An Accidental Entrepreneur to MBA students and research scholars at ICSR auditorium

10.	Mr.PramadJandhyala Co-founder and Director , Latent View (a leading Chennai based analytics company)	Nov 11, 2011	Lecture on Financing Options For Entrepreneurs (As Part Of The Venture Capital And Private Equity) to MBA students and research scholars
11.	Mr.SrikanthTanikella Vice President-Operations, Hewlett Packard	Nov, 24, 2011	Gave an invited lecture on Business Process Outsourcing and Knowledge Process Outsourcing to MBA students and research scholars.
12.	Mr. Kenny Roger&Ms Kenny Kline Research Team - The Centre of Microfinance of IFMR	Nov, 24, 2011	Gave an invited lecture on Current Scenario of Microfinance to Finance & HR research scholars and faculty members
13.	Mr.AnuragVerma Doctoral student at Texas A&M university	13/1/2012	Gave a talk on Clique Relaxation Models in Network Analysis to the Research Scholars
14.	Dr.SrinageshGavirneni Cornell University, USA	23/1/2012	Gave an invited talk on Fee-For-Service Contracts in Pharmaceutical Distribution Supply Chains : Design, Analysis, and Management for Research Scholars and MBA students
15.	Mr.ThulasirajRavilla Director & Board Member, Arvind Eye Care System	Feb 2, 2012	On invitation, gave a talk on Globalizing the Arvind Way and AuroLab to the MBA students and Research Scholars
16.	Prof. V. Kumar Richard and Susan Lenny Distinguished Chair Professor in Marketing Director, Ph.D. Programme in Marketing - J. Mack Robinson College of Business, Georgia State University, Atlanta, USA	Feb 3, 2012	Interacted with faculty members for academic and research collaborative efforts between IITM and GSU.
17.	Mr.Jurgen Eder Managing Director, BMW India Pvt Ltd, Mahindra World City, Chengalpet, TN	Feb 6, 2012	Interacted with faculty members for training needs of their personnel through DoMS
18.	Prof.Lehner Dean of Business Administration, University of Passau	Feb 8, 2012	Interacted with faculty members and MBA students
19.	Mr. Kris Gopalakrishnan Co-Chairman, Infosys Technologies, Bangalore	Feb. 9, 2012	On invitation by MILS arranged by the DoMS, gave a talk on Reflections on My Turning Point – Personal, Professional, Social and Philanthropic to the MBA students and Research Scholars.
20.	Ms.ArthiMadhusudan Founder – Governance Counts, a Non-Government Organisation (NGO)	Feb. 16, 2012	On invitation by MILS arranged by the DoMS, gave a talk on Be the Change You Want to See to the MBA students and Research Scholars.
21.	Prof. Clausen&Ms. Carina Thaller University of Technology Dortmund, Germany	March 1, 2012	Interacted with HoD& faculty members for research and academic co-operation between two Institutions
22.	Prof. Rainer Leisten University of Duisburg-Essen	March 15, 2012	Delivered a lecture on 'Scheduling: Issues and Challenges' to the Research Scholars
23.	Prof. S. Santha Kumar Dept of Aerospace Engg, IIT Madras	March 15, 2012	Gave an invited lecture on the "Fighter Jet deal between the Indian Air Force and the Fresh Aviation Company Dassault" under the aegis of MBA Invitation Lecture Series organized by DoMS
24.	Mr.ManickRajendran Former VP, Deutsche Bank Alumnus-IIM Bangalore Consultant-Health Care	March 22, 2012	Gave an invited lecture on the "Application of Management Principles in Health Care" under the aegis of MBA Invitation Lecture Series organized by DoMS
25.	Dr. Y.V. Reddy , former Governor – Reserve Bank of India	March 29, 2012	Interacted with the faculty and MBA students on various issues on Indian Economy and Prospects

4.11.6 Other Activities:

1. 16 candidates have joined the department for the IITM Summer Internship programme in May 2011.
2. 69 MBA students, 7 MS (By Research) and 7 Ph.D. Scholars earned their degree at the Convocation held on 22nd July 2011.
3. Prof M. Thenmozhi was nominated to the Member of Board of Studies, MBA programme at the PSG Institute of Management, PSG College of Technology, Coimbatore
4. Prof. L.S. Ganesh, on invitation by the Hindustan University-Chennai, was the Chief Guest and delivered a lecture to the students, on the occasion of Teacher's Day on 5th Sept 2011.
5. The Business Festival **SAMANVAY '11** was successfully conducted between 10th & 11th Sept 2011 at the department with more 120 students participated in about 20 programmes. MD of Citibank inaugurated the programme and leading personalities from the industries also participated in the events planned.
6. Prof. L.S. Ganesh was invited to be the Chief Guest and addressed the audience at Bhaktavatsalam Vidyashram/ Bhaktavatsalam Memorial College for Women, Chennai on October 15, 2011
7. On invitation, Dr G Srinivasan, as a Member has attended the Management Accreditation & Evaluation Committee Meeting at Delhi on 2nd Dec 2011.
8. Dr G Srinivasan gave the presidential address in the inaugural function at the 15th International Conference of the Society of Operations Management held at IIM Calcutta during Dec 16-18, 2011.
9. Dr G Srinivasan gave a special address in the inaugural function for three Refresher Courses conducted by the UGC Academic Staff Training College, Pondicherry University on Dec 20, 2011.
10. Dr G Srinivasan, attended the meeting of the Heads of the Management Studies Departments of IITs at Mumbai on 16th January 2012, to discuss academic collaboration among the departments.
11. The Management Departments now use CAT instead of JMET for application to the MBA Programme. This year, IIT Madras has received about 3500 applications as against 2000 last year.
12. The GD/PI for MBA admissions are scheduled to happen during March/April 2012 at Delhi, Mumbai and Chennai.
13. Six MBA students were selected to complete the last Semester in the University of Passau and European Business School at Germany, under the 'Students Exchange Programme' based on the MOU entered into with these Universities with IIT Madras.
14. Dr. M.P. Ganesh contributing article series in the Magazine 'NanayamVikatan'.
15. Prof. L.S. Ganesh also gave a key note address on 'Productivity of Business Executives' in the National Conference organized by the Coimbatore Productivity Council on February 18, 2012.
16. An interesting debate on the "Union Budget 2012 – Stimulate or Stifle the Economy?" was organized by the department with eminent speakers from outside – Mr. V. Nagappan, Director of Madras Stock Exchange and Mr. Bobby Srinivasan, President of IFMR on March 29, 2012.
17. Prof. R.P. Sundarraj was invited to be the *Member of the* "Indian Railways Road Map for Innovation 2010-2020", a Committee set up by the Central Board for Railway Research, January 2012.
18. Prof. R.P. Sundarraj was invited to be the member CIO Strategy Summit, 2012.
19. Prof. R.P. Sundarraj was invited to be the Academic Member, Board of Studies, VIT Tech, Avadi.
20. Prof. M. Thenmozhi was invited to be the Chairperson for the Seminar and the Panel-cum-Interactive Session on "Overcoming hurdles/keeping progress in Management Research" by the Management of Crescent Business School, B.S. AbdurRahman University, Chennai on Jan 25, 2012.
21. Prof M. Thenmozhi was nominated to the Member of Board of Studies, MBA programme at the University of Kerala, Thiruvananthapuram.
22. Prof M. Thenmozhi was nominated to the Member of Board of Studies, MBA programme at Veltech University, Chennai.

4.12 DEPARTMENT OF MATHEMATICS

4.12.1 Introduction

The Department of Mathematics was established in 1959 along with the Institute. It offers M.Sc. programme in Mathematics, M. Tech. program in Industrial Mathematics and Scientific Computing [IMSC] and Ph.D. programme. In addition, the Department has taken the responsibility of teaching Mathematics courses to B.Tech., M. Tech. (other than IMSC), Dual Degree in ED, M.Sc. and Ph.D students of the Institute. The department has also signed a MoU for an Exchange Programme with TU Kaiserslautern under the DAAD Exchange Programme Network for 5 years beginning from 2009.

The major areas of research of the department are:

- | | |
|-------------------------------------|---|
| 1. Algebra and its applications | 17. Mathematical logic & Applications |
| 2. Applied Probability | 18. Mathematical Modeling |
| 3. Approximation Theory | 19. Mathematical Physics |
| 4. Computational Fluid Dynamics | 20. Nonlinear Analysis |
| 5. Continuum Mechanics | 21. Numerical Analysis |
| 6. Coding Theory | 22. Operations Research |
| 7. Complex Analysis | 23. Operator Theory |
| 8. Data Networks | 24. Queuing Theory |
| 9. Differential Equations | 25. Special Functions |
| 10. Inverse and Ill- Posed problems | 26. Statistical Quality Control |
| 11. Fluid Mechanics | 27. Stochastic Processes and their applications |
| 12. Functional Analysis | 28. Theoretical Computer Science |
| 13. Fuzzy Sets and Systems | 29. Wavelets and their applications |
| 14. Graph Theory and Combinatorics | 30. Algebraic Geometry |
| 15. Harmonic Analysis | 31. Fractal Geometry and its applications |
| 16. Inventory and Reliability | 32. Commutative Algebra |

4.12.2 Academic Programmes:

New Courses Introduced:

S.No.	Course No.	Title
1.	MA 6312	Mathematical Theory of Games
2.	MA 7011	Advanced Topics in Commutative Algebra
3.	MA 7012	Abstract Harmonic Analysis
4.	MA 7013	Fourier Analysis and Euclidean Spaces
5.	MA 7014	Riemann Surfaces and Algebraic Curves

Students on Roll:

Programme	I Year	II Year	III Year	IV Year	V Year & Others	Total
M.Sc.	43	46	3	-	-	92
M.Tech.	9	8	2	-	-	19
Ph.D.	15	8	8	8	4	43
Total	67	62	13	8	4	154

Names of Students/Scholars attended Conferences/Seminars and Symposia abroad/India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar/ Symposia	Venue and Date
Conference/Symposium:				
1.	Mr. G. Krishna Kumar	MA07D005	International Workshop on Operator Theory and Application-2011	Lisbon July 1-13, 2011
2.	Mr. Sankararaju Kosuru	MA07D004	International Conference on Nonlinear operators and Differential equations and applications in Babes-Bolyai	University of Cluj-Napoca, Romania July 5 -8, 2011

3.	Mr. G. Krishna Kumar	MA07D005	International Conference on Directions on Matrix Theory 2011	University of Coimbra, Portugal July 9-10, 2011
4.	Mr. Sankararaju Kosuru	MA07D004	International Conference on Multivalued Analysis and Topology	Varenna, Italy July 18-22, 2011
5.	Mr.G. Sanakararaju Kosuru	MA07D004	International Conference on Analysis and its Applications and Training programme on Nonlinear Analysis with applications to options	Aligarh Muslim University, Aligarh Nov. 16-21, 2011
6.	Mr. Chirala Satyanarayana	MA08D013	Recent Trends in PDE and applications	University of Hyderabad Mar. 17-20, 2012
7.	Mr. Sukhendra Ghosh	MA11D021	Recent Trends in PDE and applications	University of Hyderabad Mar. 17-20, 2012
8.	Mr. Tanmay Sarkar	MA09D006	Recent Trends in PDE and applications	University of Hyderabad Mar. 17-20, 2012
9.	Mr. Anjalaiah	MA09D010	Recent Trends in PDE and applications	University of Hyderabad Mar. 17-20, 2012
Workshop:				
1.	Mr. S. Rajesh	MA10D009	Functional Analysis and Harmonic Analysis	Kerala School of Mathematics, Kozhikode May 31-June 10, 2011
2.	Mr. D. Vekatesh	MA11D010	Functional Analysis and Harmonic Analysis	Kerala School of Mathematics, Kozhikode May 31-June 10, 2011
3.	Mr. Sushobhan Mazumdar	MA10D010	ATM workshop in Commutative Algebra	IIT Bombay June 29-July 14, 2011
4.	Ms. Saritha Viswanadhan	MA08D001	ATM workshop in Commutative Algebra	IIT Bombay July 1-12, 2011
5.	Mr. R. Balakrishnan	MA10D012	ATM workshop in Commutative Algebra	IIT Bombay July 1-12, 2011
6.	Mr. Sushobhan Mazumdar	MA10D010	ATM workshop in Lie Groups and Lie Algebras	HRI, Allahabad July 19-22, 2011
7.	Mr. Susobhan Mazumdar	MA10D010	Advanced Training in Mathematics schools	CMI Chennai Dec.13, 2011
8.	Mr. Ramanababu Kaligatla	MA08D012	AIS Mechanics (2011), School of Mathematics and Computer/Information Sciences	Univ. of Hyderabad Dec.5-24, 2011
9.	Mr. Saswata Adhikari	MA11D016	Twelfth Discussion meeting in Harmonic Analysis	ISI, Kolkata, Dec. 25-30, 2011
10.	Mr. J. Mahipal	MA10D005	School and Workshop on Co-compact embeddings, profile, decompositions and their applications to PDF at TIFR CAM centre, Bangalore	Jan 3 -12, 2012
11.	Mr. Susobhan Mazumdar	MA10D010	ATM Workshop in Computational Commutative Algebra and Algebraic Geometry	NIIT Neemrana, Rajasthan Jan. 13-30, 2012
12.	Mr. R. Balakrishnan	MA10D012	ATM Workshop in Computational Commutative Algebra and Algebraic Geometry	NIIT Neemrana, Rajasthan Jan. 13-30, 2012
Instructional School:				
1.	Mr. D. Venkatesh	MA11D008	AIS on Functional Analysis	ISI Kolkata July 1-25, 2011
2.	Mr. M. Rajesh Kannan	MA08D007	AIS on Functional Analysis	ISI Kolkata July 1-25, 2011
3.	Mr. S. Rajesh	MA10D009	AIS Workshop of Geometry on Numerical Linear Algebra	ISI Kolkata July 1-25, 2011
4.	Mr. M. Ravi Babu	MA11D001	ISI Kolkata	July 4-24, 2011

5.	Mr. Susobhan Mazumdar	MA10D010	Advanced Instructional school on Geometry and Topology	IIT Bombay Feb. 20-28, 2012
Summer/Winter School:				
1.	Ms. Ankita Sharma	MA10D002	2 nd Winter School on Control and Dynamic Systems	IIT Bombay Jan 13-22, 2012
2.	Mr. K. Ramana Babu	MA08D012	Advanced Instructional School on Mechanics	Univ. of Hyderabad Dec. 2011
Short Course: / Science Meet				
1.	Ms. Shani Jose	MA08D004	Women in Technology and Science Meet 2011	GE Global Research Bangalore Nov. 24-25, 2011
2.	Ms. Safina Devi	MA09D001	Women in Technology and Science Meet 2011	GE Global Research Bangalore Nov. 24-25, 2011
3.	Ms. Ankita Sharma	MA10D002	Women in Technology and Science Meet 2011	GE Global Research Bangalore Nov. 24-25, 2011
Research work/Lectures:				
1.	Mr. S. Rajesh	MA10D009	Lecture series in Geometry of Banach Spaces by Prof Godefroy	Pondichery University Jan 10-20, 2012
2.	Mr. Rajesh Kannan	MA08D007	Lecture series in Geometry of Banach Spaces by Prof Godefroy	Pondichery University Jan 10-20, 2012

Names of students/scholars who won outside prizes and awards:

SI.No	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1.	Mr. Chandra Shekar Nishad	MA10M001	DAAD Sandwich System for Masters' students for 2011-12	DAAD, Germany
2.	Mr. Shyam Bansal	MA10M009	DAAD Sandwich System for Masters' students for 2011-12	DAAD, Germany

Institute Day Prize

SI.No	Name of the Student/Scholar	Roll No.	Name of Prizes
1.	Chandra Shekar Nishad	MA10M001	Institute Merit Prize
2.	Arundhathi Krishnan	MA10C008	Institute Merit Prize
3.	Arundhathi Krishnan	MA10C008	LVKV Sarma Prize
4.	Chandra Shekar Nishad	MA10M001	LVKV Sarma Prize
5.	Arundhathi Krishnan	MA10C008	Swathi / Jayalakshmi Memorial Award

4.12.3 Faculty and their Activities

Faculty:

Name & Qualifications

Major area of specialization (only 3 areas)

Professors:

Arindama Singh, Ph.D. (IIT Kanpur)

Logic, Numerical Analysis

Choudum. S.A., Ph.D. (IIT Madras)

Discrete Mathematics, Combinatorics, Graph Theory

Kalpakkam S, Ph.D. (IIT Madras)

Applied Probability and Stochastic Processes, Operations Research

Kamath. S.G., Ph.D. (Delhi University)

Mathematical Physics

Kulkarni. S.H. **[Head]**, Ph.D. (IIT Bombay)

Functional Analysis and Numerical Analysis

Parthasarathy P.R, Ph.D. (Annamalai)	Applied Probability and Stochastic Models, Mathematical Ecology, Operations Research
Ponnusamy. S, Ph.D. (IIT Kanpur)	Complex Analysis, Function Spaces, Special functions and Conformal Geometry
Rama. R, Ph.D. (Anna University)	Formal Language & Automata Theory / Molecular computing
Sanyasiraju Y.V.S.S., Ph.D. (IIT Madras)	Computational Fluid Dynamics
Satyajit Roy, Ph.D. (IISc. Bangalore)	Convective Heat and Mass Transfer, Computational Fluid Dynamics
Subrahmanyam. P.V., Ph.D. (IIT Madras)	Non-linear Analysis- Fixed point Theory & Functional Equation, Fuzzy sets, Summability Theory
Sundar. S, Ph.D. (IIT Madras)	Computational Fluid Dynamics, Numerical Analysis for Partial Differential Equations, Mathematical Modeling
Thamban Nair M., Ph.D. (IIT Bombay)	Applicable Functional Analysis –Spectral Approximation, Operator Equations, Inverse and Ill-posed Equations
Usha R, Ph.D. (IIT Madras)	Fluid Dynamics
Veeramani. P, Ph.D. (IIT Bombay)	Fixed Point Theorems and their Applications to Problems in Optimization and Best Approximation, Fuzzy Set Theory
Vetrivel. V, Ph.D. (IIT Madras)	Non-Smooth Optimization, Fixed Point Theory, Complementarity problems
Associate Professors:	
Radha. R, Ph.D. (IMSC Chennai)	Harmonic Analysis, Wavelets, Time-Frequency Analysis
Sivakumar K.C, Ph.D. (IIT Madras)	Functional Analysis and Mathematical Programming
Srinivasa Rao Ch., Ph.D. (IISc. Bangalore)	Non-linear Differential Equations
Swaminathan.K, Ph.D. (Agra University)	Fluid Dynamics, Ship Hydrodynamics, Mathematical Problems related to Naval Architecture and Ocean Engineering
Assistant Professors:	
Amitava Mukherjee, Ph.D. (Univ. of Calcutta)	Statistical Inference, Statistical Quality Control, Geostatistics, Nonparametric Methods , Sequential Analysis
Arijit Dey	Algebraic Geometry
Balaji.R, Ph.D. (IIT Madras)	Linear Algebra and Optimization
Chand A.K. B., Ph.D. (IIT Kanpur)	Fractals, Approximation Theory and Wavelets
Jayanthan A.V., Ph.D. (IIT Bombay)	Commutative Algebra and Algebraic Combinatorics
Kalpna Mahalingam, Ph.D. (Univ. of South Florida, Tampa)	Theory of codes, DNA Computing, Combinatorics of words
Manam. S R , Ph.D. (IISc Bangalore)	Applied Mathematics
Shaiju A.J., Ph.D. (IISc Bangalore)	Game Theory, Systems and Control Theory
Shruti Dubey, Ph.D. (IIT Kanpur)	Nonlinear Analysis of Functional differential equations, Mathematical Study of Ferromagnetic systems

Sounaka Mishra, I.S.I. Kolkota	Discrete Mathematics, Approximation Algorithm , Combinatorial Optimization
Uma V, Ph.D. (IMSC Chennai)	Topology and Geometry of Toric Varieties and Related Spaces
Vasantha W.B., Ph.D. (RIASM Chennai)	Group Theory, Application of Algebra, Fuzzy Algebra and Linear Algebra
Venkata Balaji T.E., Ph.D. (CMI, Chennai)	Algebraic Geometry and Commutative Algebra

Visiting Faculty

P.N. Natarajan, Ph.D. (8.7.2011 to 7.8.2011)	Non Archimedean Analysis
N. Sivakumar, Ph.D. (3.01.2011 to 5.8.2011)	Approximation Theory
Sudarshan Tiwari, Ph.D. (03.10.2011 to 02.11.2011)	CFD

PDF (IITM) :

Dr. Ritesh Kumar Dubey (till March 2012)	CFD
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Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1.	Y.V.S.S.Sanyasiraju	National Symposium on Mathematical Methods and Applications	Dec. 22, 2011
Seminar:			
2.	T. E. Venkata Balaji	Talks and Interaction by Prof. Shreeram Abhyankar, Purdue University, USA	Jan. 3-5, 2012
Symposia:			
3.	T.E. Venkata Balaji	Riemann Surfaces and Algebraic Curves (35 lectures for M.S.c / B.Tech./Ph.D. students under NPTEL support)	Oct, Nov. 2011 and Jan to Mar. 2012
Short term Course:			
4.	Y.V.S.S.Sanyasiraju	A level 2 short term course on Computational Fluid Dynamics to College Teachers	May 17-31, 2011

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1.	S. Ponnusamy	Four lectures 1) On harmonic mappings 2) Invitation to univalent functions, etc.	Universiti Kebangsaan Malaysia, Malaysia.	June 4, 2011
2.	K.C. Sivakumar	Workshop for presentation o Directions in Matrix Theory 2011	Univ. of Coimbra, Portugal	July 9-10, 2011
3.	Ch. Srinivasa Rao	Workshop on Recent Trends in PDE and applications	University of Hyderabad	Mar. 18-19, 2012
4.	S. Sundar	International Workshop on Population Balance Equation	Fraunhofer Institute of Industrial Mathematics, Kaiserslautern, Germany	Sep.27 – 30, 2011
5.	S. Sundar	Mathematics for Mechanical and Electrical Engineers	PSG, Coimbatore	Mar. 2-3, 2012
6.	S. Sundar	Freie University Berlin- DAAD Alumni Workshop	IIC, New Delhi	Nov.12, 2011

7.	T.E. Venkata Balaji	Algebraic Geometry Workshop	IISER, Trivandrum	March 12, 2012
Seminar:				
1.	S.H. Kulkarni	Completeness and invertibility	NSS Hindu College, Kerala	March 26, 2011
2.	S. Ponnusamy	Series of Research lectures on Harmonic Mappings	Dept. of Maths., Universiti Sains Malaysia (Malaysia).	Jan-July, 2011
3.	S. Ponnusamy	Harmonic and quasiconformal mappings	University of Malaya, Malaysia.	May 2011
4.	S. Ponnusamy	Landau-Bloch Theorems and fully starlikeness of harmonic mappings	University of Helsinki, Finland.	Nov., 2011
5.	S. Ponnusamy	UGC Sponsored National seminar on Complex Analysis and Applications	BJM Govt. College, Chavara, Kerala	Feb. 15, 2012
6.	S. Ponnusamy	National Seminar on Recent developments in Complex Analysis and Related areas and JMS meet	University of Jammu	Feb. 24-25, 2012
7.	Y.V.S.S. Sanyasi Raju	National seminar on Recent advances in Mathematics and its applications	S.P. Mahila Viswavidyalayam, Tirupati	Mar. 2, 2012
8.	A.J.Shaiju	Evolutionary stability in 2 x 2 symmetric games	International conference on game theory, operations research and applications, ISI Chennai	5-7, Jan 2012
9.	A.J. Shaiju	National seminar on Analysis at Government College	Kasaragod, Kerala	Feb. 24, 2012
10.	Ch. Srinivasa Rao	National Seminar on Algebra & Analysis	Vijayawada	Feb. 28-29, 2012
11.	M. Thamban Nair	Regularization of ill-posed integral equations using Nustrom approximation	Sun Yat-sen University, Guangzhou, China	May 9, 2011
12.	M. Thamban Nair	On Morozou's discrepancy principle for nonlinear ill-posed equations	Sun Yat-sen University, Guangzhou, China	May13, 2011
13.	M.Thamban Nair	Quadrature based collocation methods for integral equations of the first kind at Institute of Geology and Geophysics	Chinese Academy of Sciences, Beijing, China	June 3, 2011
14.	M.Thamban Nair	Use of functional analysis in solving equations, - Symposium on Modern Analysis and Application	NSS Hindu College, Kerala	March 26, 2011
Symposia:				
15.	S. Sundar	Indo-UK Symposium on Recent Advances in Industrial and Applied Mathematics	IIT Bombay	Nov. 5-6, 2011
16.	M. Thamban Nair	Ill-Posedness and regularization of inverse problems – Indo UK symposium	IIT Bombay	Nov. 5-6, 2011
17.	M. Thamban Nair	An interplay between Numerical and Functional Analysis – Symposium on Foundations of Analysis	PSMO College, Thiruvorangadi Keral	Nov.23-24, 2011
18.	R.Usha	4 th International Symposium on Bifurcations and Instabilities in Fluid Dynamics (BIFD 2011)	Barcelona, Spain	July 18-21, 2011
Conference:				
1.	Amitava Mukherjee	International Statistics Conference 2011	Colombo, Sri Lanka	Dec. 28-30, 2011
2.	Arijit Dey	International Conference on Principal G-Bundles UCMAT	Madrid, Spain	Sep.12-16, 2011

3.	Arijit Dey	International Conference on Commutative Algebra and Algebraic Geometry (CAAG 2012)	Pondichery University	Mar. 5-9, 2012
4.	Arijit Dey	International conference on Complex Analytic Geometry	Tata Institute of Fundamental Research, Mumbai	Mar. 26-30, 2012
5.	A.K.B. Chand	Annual International conference on Computational Mathematics, Computational Geometry and Statistics	Singapore	Jan. 30-31, 2012
6.	P.R. Parthasarathy	Ramanugam Theta Functions and Birth and Death processes, Validictory address	IIT Madras	Dec. 22, 2011
7.	S. Ponnusamy	21 st Annual Conference of the Jammu Math. Soc. and a National Seminar on Analysis and its Applications	Department of Mathematics, University of Jammu.	Feb 25 – 27, 2011.
8.	Satyajit Roy	International Conference on Fluid Dynamics and its applications	BNMIT Bangaore	July 20-21, 2011
9.	A.J.Shaiju	Evolutionary stability in 2 x 2 symmetric games	International conference on game theory, operations research and applications, ISI Chennai	Jan. 5-7, 2012
10.	Shruti Dubey	Control and Stability of One Dimensional Ferromagnetic System	Indian Institute of Technology, Roorkee	Dec. 5 – 7, 2011
11.	K.C. Sivakumar	International Conference MATRIAD 2011	Tomar, Portugal	July 12-16, 2011
12.	K.C. Sivakumar	International Linear Algebra Society Conference ILAS	Germany T U Braunschweig	Aug.22-26, 2011
13.	P.V. Subrahmanyam	Summer Conference on General Topology and its applications	New York, U.S.A.	July 25-29, 2011
14.	S. Sundar	New Frontiers: Shifting trends in the global research landscape and impact on researchers' career patterns Research in Germany	New Delhi	Mar. 29-31, 2012
15.	K. Swaminathan	International workshop on Computational and Applied Mathematics (CAM)	University of KwaZulu-Natal, Pietermaritzburg, South Africa	Sep.26-30, 2011
16.	M. Thamban Nair	8 th International Congress of the ISAAC	Russia, Moscow	Aug.22-27, 2011
17.	M. Thamban Nair	How may? How large? – Understanding infinity, Inspire Programm	SSN College of Engg. Kalavakkam	Jan. 20, 2012
18.	M. Thamban Nair	8 th Congress of ISAAC	Friendship Univ. Moscow	Aug. 22-27, 2011
19.	R. Usha	International Symposium on Bifurcations and Instabilities in Fluid Dynamics	Barcelona, Spain	July 18-22, 2011
20.	P. Veeramani	International Conference on Nonlinear Operations, Differential Equations and Applications (ICNODEA 2011)	Cluj-Napoca, Romania	July 5-8, 2011
21.	P. Veeramani	International Conference on Multi-valued Analysis and Topology	Varenna, Italy	July 18-22, 2011
22.	P. Veeramani	National Conference on Mathematical Analysis and applications	ZB Patil College, Deopur, Dhule Maharashtra	Nov. 28-30, 2011
23.	P. Veeramani	14 th International Conference of International academy of Physical Sciences (CONIAPS XIV)		Dec. 22-24, 2011

24.	V. Vetrivel	International workshop on Computational and Applied Mathematics (CAM)	University of KwaZulu-Natal, Pietermaritzburg, South Africa	Sep.26-30, 2011
25.	T.E. Venkata Balaji	International conference in Honour of Prof. C.S. Seshadri's 80 th Birthday	CMI, Chennai	Jan. 23-27, 2012
26.	T.E. Venkata Balaji	CAAG International Conference 2012	Pondicherry University	Mar. 5-7, 2012
Short term Course:				
1.	S. Ponnusamy	Analysis Seminar Series (Three months lecture Series)	Dept. of Maths., Univ. Turku (Finland)	July-Oct, 2011
2.	S. Ponnusamy	Analysis Seminar Series (Two months lecture series)	Dept. of Maths., University of Aalto (Finland)	Nov.-Dec., 2011

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1.	A. V. Jayanthan	Regularity & Gorensteinness of Fiber cones	University of Missouri-Columbia	Sep. 9, 2011
2.	A. V. Jayanthan	Periodic occurrence of complete intersection monomial curves	University of Missouri-Columbia	Sep. 9, 2011
3.	S. H. Kulkarni	Generalized inverses and approximation numbers (Invited talk at the International Conference on Combinatorial Matrix Theory and Generalized Inverses of Matrices)	Department of Statistics, Manipal University, Manipal, Karnataka.	Jan 11, 2012
4.	P.R. Parthasarathy	STTP course on biomedical systems, signals, visuals and images	IIT Madras	Feb. 7, 2012
5.	P.R. Parthasarathy	Bulk Queues – Quencing Theory and its application,	SKR Engg. College Chennai	Jun, 24, 2011
6.	P.R. Parthasarathy	Continued Fraction, DST Inspire programme	Sri Venkateswaa Univ. Thirupathi	Dec.11, 2012
7.	P.R. Parthasarathy	Applied Birth death Processes, DST Inspire Programme		
8.	P.R. Parthasarathy	Birth and Death Processes, Dr. R. Balakrishnan Endowment Lecture	Bharathidasan Univ. Tiruchirapalli	Oct. 21, 2011
9.	P.R. Parthasarathy	Statistics for water science, overseas training programme on Water, Quality National Instrument for Teacher training and research	Chennai	Aug. 29, 2011
10.	P.R. Parthasarathy	Data Analysis Water, Quality National Instrument for Teacher training and research	Chennai	Aug, 30. 2011
11.	S. Ponnusamy	DST, INSPIRE internship Programme	Department of Geology, University of Madras	Feb. 4,2012
12.	S Ponnusamy	DST, INSPIRE internship Programme	Sri padmavati Mahila university, Tirupati.	Mar 29, 2012
13.	S. Ponnusamy	Dirichlet problems via Conformal mappings	Gandhigram Rural University	Mar. 16-18, 2012
14.	Y.V.S.S. Sanyasiraju	Incompressible Flow Computations with an Exponential Compact Higher Order Scheme	Periyar University	Mar. 29-30, 2012
15.	Y.V.S.S. Sanyasiraju	RBF Based Grid Free Schemes for Coupled Non-Linear PDE	Bharathiyar University, Coimbatore	Mar. 27, 2012

16.	Y.V.S.S. Sanyasiraju	RBF Based Grid Free Schemes	Sri Padmavati Mahila University Tirupati	Mar 2, 2012
17.	Y.V.S.S. Sanyasiraju	Development of Exponential Compact Higher Order (ECHO) schemes	NIT Warangal	Jan 27-30, 2012
18.	Y.V.S.S. Sanyasiraju	Scientific Computing with Matlab	MS College of Arts & Science, Chennai	Dec. 15, 2011
19.	Y.V.S.S. Sanyasiraju	Characteristic Analysis of ECHO schemes	Khammam	Dec. 9-11, 2011
20.	Y.V.S.S. Sanyasiraju	Local Rbf Grid-Free Scheme with An Optimal Shape Parameter Using Chebyshev Points for Steady Convection-Diffusion Equations	Vancouver, Canada	July 18-22, 2011
21.	K. C. Sivakumar	Generalized inverses and approximation numbers (Invited talk at the International Conference on Combinatorial Matrix Theory and Generalized Inverses of Matrices)	Department of Statistics, Manipal University, Manipal, Karnataka.	Jan 11, 2012
22.	S. Sundar	Refresher Course on Differential Equations,	Ramanujam Institute for Advanced Studies in Mathematics, University of Madras	Nov. 25-26, 2011
23.	M. Thamban Nair	On solving matrix equations	Mangalore University	Aug. 23-24, 2011
24.	M. Thamban Nair	On Nystrom approximation of integral operators	Goa University	Dec. 12-13, 2011
25.	R. Usha	Pre-lens tear film on a contact lens: Model and dynamics	BIFD 2011 Spain	July 21, 2011
26.	R. Usha	Hey Root! Where are you?	Stella Maries College, Chennai	Jan 5, 2012
27.	P. Veeramani	Measure of Non Compactness	Sadakathullah, College, Tirunelveli	Mar. 7, 2012
28.	P. Veeramani	Iterative Methods for finding best proximity solutions	The M.D.T. Hindu College, Tirunelveli	Mar. 21, 2012
29.	T.E. Venkata Balaji	Geometry on a Torus a.k.a. Moduli of Elliptic Curves	IISER, Thiruvananthapuram	Mar. 12, 2012
30.	T.E. Venkata Balaji	Research Science Initiative – Chennai : The Riemann Hypothesis	CCE Studio, IITM	May 2011
31.	V. Vetrivel	Karush-Kuhn-Tucker conditions in nonsmooth programming: Int. Conference on Mathematics in Engg. Buss. Management	Stella Maris College, Chennai	Mar.-9-10, 2012

Visits abroad by faculty:

Sl.No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1.	A.K.B. Chand	Singapore	Jan 1, 2012	International Conference	CPDA & Institute
2.	A. V. Jayanthan	USA	June 6 – Dec. 20, 2011	Research	DST
3.	S.G. Kamath	Czech Republic	Aug. 7 – 13 2011	Presentation of paper at QTS7	CPDA, IITM
4.	S. Ponnusamy	Malaysia,	Jan-July 2011	Research	University Sains Malaysia
5.	S. Ponnusamy	Finland	July-Oct. 2011	Research	Grant from the University of Turku

6.	S. Ponnusamy	Finland	Nov. –Dec. 2011	Research	Grant from the University of Aalto
7.	Y.V.S.S. Sanyasiraju	Canada	July 18-22, 2011	deliver a lecture	NBHM / IITM
8.	Satyajit Roy	Atlanta, Georgia, U.S.A.	May 25-28, 2011	Attended, presented paper and chaired a session at the Sixth International Conference on Dynamics Systems and applications	CPDA, IITM
9.	P.V. Subrahmanyam	Fukuoka, Japan	Nov.8 – 11, 2011	To deliver a talk at IPS centre and attended IPS conference	Waseda University
10.	S.Sundar	Fraunhofer ITWM, Kaiserslautern, Germany	Sept. 27 – 30, 2011	Invited talk at the International Workshop on Population Balance Equations	IIT M
11.	M. Thamban Nair	Sun-Yat-sen University Guangzhou (China)	May 20 – June 20, 2011	research collaboration with Dr. Yuesheng Xu Dr. Honqi Yang and Dr. Hui Cao	Sun-Yat-sen University Guangzhou (China)
12.	M. Thamban Nair	Institute of Geology and Geophysics, Beijing	June 2-5, 2011	290ollaborative research under professional visit	Institute of Geology and Geophysics, Beijing
13.	R. Usha	Spain	July 18-21, 2011	delivered a talk at BIFD-2011	CPDA

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
Awards:					
1.	A.V. Jayanthan	Boyscast fellowship	DST	Awarded for conducting advanced research in overseas research institutes	June – Dec. 2011

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/Co-author
Books:				
1.	S. Ponnusamy	Foundations of Mathematical Analysis, 2011	Birkhäuser, Boston	S. Ponnusamy

Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name
1.	Amitava Mukherjee	Associate Editor	Statistical Methodology
2.	P.R. Parthasarathy	Advisory Editor	Journal of Information and Optimization Sciences
3.	P.R. Parthasarathy	Advisory Editor	International Journal of Computer Mathematics
4.	P.R. Parthasarathy	Advisory Editor	American Journal of Mathematics and Management Sciences
5.	P.R. Parthasarathy	Advisory Editor	Journal of Decision and Mathematika Sciences, India
6.	P.R. Parthasarathy	Advisory Editor	Journal of Applied Statistical Sciences, USA
7.	P.R. Parthasarathy	Advisory Editor	Stochastic Modelling and Applications, India
8.	P.R. Parthasarathy	Advisory Editor	Journal of Statistics and Management Systems, India

9.	P.R. Parthasarathy	Member, Editorial Board	International Journal of Modern Mathematics, USA
10.	P.R. Parthasarathy	Member, Editorial Board	Far Eastern Journal of Mathematics, S.Korea
11.	P.R. Parthasarathy	Member, Reviewer Advisory Board	ACM Computing Reviews, USA
12.	S. Ponnusamy	Editor	Journal of Classical Analysis (http://jca.ele-math.com/submission)
13.	P.V. Subrahmanyam	Editor	Journal of Differential Equations and Dynamical Systems
14.	M. Thamban Nair	Editor	Editorial Board of Journal of Mathematical Analysis Illinois Publishing Corporation, Kosovo
15.	R. Usha	Member	Physics of Fluids
16.	R. Usha	Member	Fluid Dynamics Research

4.12.4 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (Rs. In lakhs)	Co-ordinators
1.	A Network of Ferromagnetic particles	3 years from 18.7.11	IC & SR	5.00	Dr. Shruti Dubey
2.	Development of theory of fractal rational splines and applications in CAGD	3 years	DST	15.07	Dr. A.K.B. Chand Dr. G. Saravana Kumar (ED)
3.	Classification and Analysis of Nonlinear Control Systems	16 July 2009 – 15 July 2012	IC&SR, IIT Madras	5.00	Dr.A.J.Shaiju
4.	Modeling of microwave passive components for high power applications	2007-2012	National Fusion Program, Institute for Plasma Research	27.00	Dr. S. Sundar
5.	Involution codes : Application to DNA strand design	3 years from 7.2.12	NFSC	5.00	Dr. Kalpana Mahalingam

Exchange programme with other Universities including Institutions/Universities under MOU;

Sl.No	Programme Name	Name of University	Guide Name
1.	DAAD Sandwich Ph.D.	AG Technomathematik T U Kaiserslautern Germany	Prof. S. Sundar
2	DAAD Network Exchange Programme	TU-Kaiserslautern, Germany. Other participating Universities are University of Witwatersrand, South Africa and ITB Bandung, Indonesia	Prof. S. Sundar

Faculty members participation with other institution under MoU:

Sl.No	Name of faculty	Participation details	Name of University/Institution which has MoU
1.	Prof. S. Sundar	DAAD Network Exchange Programme	TU Kaiserslautern, Germany (along with University of Witwatersrand, South Africa and ITB Bandung, Indonesia)

Research Publications of the faculty members & research scholars:

- Total No. of papers published in Refereed National Journals - 01
- Total No. of papers published in Refereed International Journals - 54
- Total No. of papers presented in National Conferences - Nil
- Total No. of papers presented in International conferences - 05

a. In Refereed National Journals:

Sl.No.	Name of the faculty	Title of the paper	Name of the Journal
1.	Arindama Singh	Pi at School	Mathematics News Letter 21 No. 1 (2011) 1-5

b. In Refereed International Journals:

SI.No	Name of the faculty	Title of the paper	Name of the Journal
1.	R. Balaji	Characterization of P property for some Z-Transformations on positive semi-definite cone	Electronic Journal of Linear Algebra 22, 2011 pp. 1020-1030
2.	S. H. Kulkarni and G. Ramesh	Carrier graph topology	Banach Journal of Mathematical Analysis, (5), 2011, 56 – 69.
3.	S. H. Kulkarni and G. Krishna Kumar	Linear maps preserving pseudo-spectrum and condition spectrum	Banach Journal of Mathematical Analysis (6), 2012, 45 – 60.
4.	S. H. Kulkarni and G. Ramesh	Approximation of Moore-Penrose inverse of a closed operator by a sequence of finite rank outer inverses	Functional Analysis, Approximation and Computation 3:1 (2011), 23–32
5.	S.R. Manam	Multiple integral equations arising in the theory of water waves	Applied Mathematics Letters, 24 (2011) 1369-1373.
6.	S.R. Manam and R. B. Kaligatla	Effect of a submerged vertical barrier on flexural gravity wave	International journal of engineering science, 49 (2011) 755-767.
7.	S.R. Manam and R. B. Kaligatla	A mild-slope model for membrane-coupled gravity waves	Journal of Fluids and Structures, 30 (2012) 173-187.
8.	S.R. Manam	A dual integral equation method for capillary-gravity wave scattering	Journal of Integral Equations and Applications, 24 (2012), No. 1, 81-110.
9.	S.R. Manam and R. B. Kaligatla	Structure-coupled gravity waves past a vertical porous barrier	Proceedings of the Institution of Mechanical Engineers, Part M, Journal of Engineering for the Marine Environment, 2012.
10.	P.R. Parthasarathy A. Sri Ranga	Generating birth and death processes	Stochastic analysis and applications, 29, 185-196, 2011
11.	A. Baricz S. Ponnusamy and M. Vuorinen	Functional inequalities for modified Bessel functions	Expositiones Mathematicae, 29(3) (2011), 399-414.
12.	B. Bhowmik, S. Ponnusamy and K.-J. Wirths	On the Fekete-Szegő problem for concave univalent functions	Journal of Mathematical Analysis and Applications, 373 (2011), 432-438
13.	Sh. Chen, S. Ponnusamy & X. Wang	Bloch and Landau's theorems for planar p-harmonic mappings	Journal of Mathematical Analysis and Applications, 373 (2011), 102-110
14.	Sh.Chen, S. Ponnusamy and X. Wang	Coefficient estimates and Landau-Bloch's theorem for planar harmonic mappings	Bulletin of the Malaysian, Mathematical Sciences Society 34(2), 2011, 255-265
15.	Sh . Chen, S. Ponnusamy and X. Wang	On planar harmonic Lipschitz and planar harmonic hardy classes	Annales Academiae Scientiarum Fennicae. Series A I. Mathematica, 36(2011), 567-576
16.	Sh.Chen S. Ponnusamy X. Wang	Landau's theorem and Marden constant for harmonic ν -Bloch mappings.	Bulletin of the Australian Mathematical Society, 84(2011), 19-32
17.	Sh. Chen, S. Ponnusamy and X. Wang	Properties of some classes of Planar harmonic and Planar biharmonic mappings	Complex Analysis and Operator Theory, 5(3)(2011), 901-916
18.	M. Obradović and S. Ponnusamy	A class of univalent functions defined by a differential inequality	Kodai Mathematical Journal, 34(2011), 169–178
19.	Sh.Chen S. Ponnusamy and X. Wang	Laudan's Theorem for p-harmonic mappings in several complex variables	Ann. Polon. Math. 103 (2011), 67-87
20.	M. Obradović and S. Ponnusamy	Partial sums and radius problem for certain class of conformal mappings	Siberian Mathematical Journal 52(2)(2011), 291–302
21.	S. Ponnusamy	Starlikeness criteria for certain class of analytic functions	Applied Mathematics Letters 24(2011), 381-386
22.	S. Ponnusamy, A. Vasudevarao and M. Vuorinen	Region of variability for exponentially convex univalent functions	Complex Analysis and Operator Theory, 5(3)2011, 955-966

23.	S. Ponnusamy and K.-J. Wirths	On two extreme point conjectures for concave functions	Russian Mathematics, 55(12)(2011), 44-47
24.	R. Radha and D. Venku Naidu	Generalized Bargmann transform and a group representation	Bull. Sci. Math 135 (2011), 206-214
25.	R. Radha and D. Venku Naidu	Frames in generalized Fock spaces	J. Math. Anal. App., 378 (2011) 140-150
26.	T.V.Sekhar Hema Sundar Raju Y.V.S.S.Sanyasiraju	Higher-Order Compact Scheme for the Incompressible Navier-Stokes Equations in Spherical Geometry	Communications in Computational Physics, 11 (1), 99 – 113, 2012
27.	Nachiketa Mishra Y.V.S.S.Sanyasiraju	Efficient Exponential Compact Higher Order Difference Scheme for Convection Dominated Problems	Mathematics and Computers in Simulation, 82, 617-628, 2011
28.	Y.V.S.S.Sanyasiraju Nachiketa Mishra	Characteristic Analysis of Exponential Compact Higher Order Schemes for Convection-Diffusion Equations	American Journal of Computational Mathematics, 1(2), 39-54, 2011
29.	Y.V.S.S.Sanyasiraju T.V.S. Sekhar R. Sivakumar K.Subbarayudu	The non-monotonic behavior of forced convective heat transfer under the influence of an external magnetic field	Numerical Heat Transfer, Part A, 59, 459-486, 2011
30.	Y.V.S.S.Sanyasiraju Nachiketa Mishra	Exponential compact higher order scheme for Nonlinear steady convection diffusion equations	Communications in Computational Physics, 9(4), 897-916, 2011
31.	M. Sathiyamoorthy T. Basak and S. Roy	Non-darcy buoyancy flow in a square cavity filled with porous medium for various temperature difference aspect ratios	Journal of Porous Media, (I. F.- 0.707) Vol. 14, pp.649-657, 2011
32.	T. Basak, P. V. K. Pradeep and S. Roy	A Complete Heatline Analysis on Visualization of Heat Flow and Thermal Mixing during Mixed Convection in a Square Cavity with Various Wall Heating	Industrial and Engineering Chemistry Research,(I.F.- 2.072), Vol. 50, pp.7608-7630, 2011.
33.	T. Basak, D. Ramakrishna, S. Roy, A. Matta and I. Pop	A comprehensive heatline based approach for natural convection flows in trapezoidal enclosures: Effect of various walls heating	International Journal of Thermal Sciences (I. F. -1.667) Vol.50, pp.1385-1404, 2011
34.	T. Basak, P. V. K. Pradeep, S. Roy and I. Pop	Finite element based heatline approach to study mixed convection in a porous square cavity with various wall thermal boundary conditions	International Journal of Heat and Mass Transfer F. -1.898), Vol. 54, pp.1706-1727, 2011
35.	P. M. Patil, S. Roy and I. Pop	Unsteady effects on mixed convection boundary layer flow from a permeable slender cylinder due to non-linearly power law stretching	Computers and Fluids (I. F.-1.433), Vol. 56, pp.17-23, 2012
36.	P. M. Patil, Ali J. Chamkha and S. Roy	Effects of chemical reaction on mixed convection flow of a polar fluid through a porous medium in presence of internal heat generation	Meccanica (I. F.-1.056), Vol. 47, pp.483-499, 2012
37.	P. M. Patil, S. Roy and I. Pop	Flow and heat transfer over a moving vertical plate in a parallel free stream; Role of internal heat generation or absorption	Chemical Engineering Communications (I. F.-0.913), Vol. 199, pp.658-672, 2012
38.	P. M. Patil, I. Pop, and S. Roy	Unsteady heat and mass transfer over a vertical stretching sheet in a parallel free stream with variable wall temperature and concentration	Numerical Methods for Partial Differential Equations (I.F.-1.427), Vol. 28, pp. 926-941, 2012
39.	K. Singh, S. Roy and T. Basak	Visualization of heat transport during natural convection in a tilted square cavity: Effect of isothermal and non-isothermal heating	Numerical Heat Transfer, Part A (I. F.-1.183), Vol. 61 , pp. 417-441, 2012
40.	Shruti A. Dubey	The method of lines applied to nonlinear nonlocal functional differential equations	Journal of Mathematical Analysis and Applications, Vol.no.376(2011), issue 1, pp. 275-281.

41.	Shruti Agarwal, Gilles Carbou, Stephane Labbe and Christophe Prieur	Control of a network of magnetic ellipsoidal samples	Mathematical Control and Related Field, AIMS, Vol. no. : 1(2011), no. 2, 129-147
42.	Sounaka Mishra	On the Maximum Uniquely Restricted Matching for Bipartite Graphs.	Electronic Notes in Discrete Mathematics 37: 345-350 (2011)
43.	Sounaka Mishra	Complexity of Majority Monopoly and Signed Domination Problems	Journal of Discrete Algorithms, 10, (2012), pp. 49-60
44.	Ch. Srinivasa Rao Manoj K. Yadav	Large time behavior of solutions of the inviscid nonplanar Burgers equation	J.Engineering Mathematics, 69, 345—357, 2011
45.	Ch. Srinivasa Rao E. Satyanarayana	Large time asymptotics for Periodic solutions of a generalized Burgers equation with variable viscosity	Studies in applied mathematics, 127, 1-23, 2011
46.	S. Sundar Sudhakar Matle	Axi-symmetric 2D Simulation and numerical heat transfer Characteristics for calibrating furnace in a rectangular enclosure	Applied Mathematical Modelling, 36, NO.3, 879-893, 2012
47.	M. Thamban Nair Ravi Shankar	A generalization of continuous regularized Gauss-Newton method for ill-posed problems	J. Inverse and Ill-Posed Problems, No.3 (2011), 1 -33
48.	M. Thamban Nair	Quadrature based collocation method for integral equations of the first kind	Advances in Computational Mathematics, 36 (2012) 315-329
49.	Braun,R.J.,Usha,R., Mc Fadden,G.B., Driscoll,TA., Cook,L.P., King-Smith,P.E	Thin Film dynamics on a Prolate Ellipsoid with application to the cornea	Journal of Engineering Mathematics, 73, (2012) 121-138. Dol 10.1007/s10665-011-9482-4
50.	Usha,R., Millet, S., BenHadid, H., Rousset, F	Shear-thinning film on a porous substrate :stability analysis of a one- sided model.	Chemical Engineering science, 66,(2011), 5614 –5627
51.	B.Uma and R.usha	Contaminated electrified thin film over a substrate: dynamics and stability	Int J Adv Eng Sci Appl Math DOI 10.1007/s12572-012-0050- 6,2012
52.	Eldred, A Anthony, Raj, V. Sankar P. Veeramani	On best proximity pair theorms for relatively u-continuous mappings	Non linear Anal. 74 (2011), No.12, 3870-3875
53.	Gosuru Sankara Raju P.Veeramani	A note on existence and convergence of best proximity points for pointwise cyclic contractions	Numer. Functional Analysis, Optim 32 (2011), No.7, 821-830.
54.	I. Jeyaraman V. Vetrivel	On the Lipschitzian Property in Linear Complementarity Problems over symmetric cones,	Linear Algebra and its Applications, Vol. 435 (2011), 842-851.

c. In Proceedings of National Conferences: Nil

d. In Proceedings of International Conferences:

SI.No.	Name of the faculty	Title of the paper	Institution	Period
1.	A.K. B. Chand	Natural Bicubic Spline Coalescence Fractal Interpolation Function	Global Science and Technology Fourm	Jan 30-31, 2012
2.	A. V. Jayanthan	Depths and Hilbert coefficients of fiber cones of stretched m-primary ideals	Japan-Vietnam Joint international conference, held at Hanoi, Vietnam.	Dec. 12 – 16, 2011
3.	S.G. Kamath	Reworking the Antonsen – Bormann Idea	QTS7	2012
4.	S.G. Kamath	Reworking the Antonsen – Bormann Idea	FFP11	2012
5.	Ritesh Kumar Dubey, N.Srivastava and S.Sundar	Total Variation Stability bounds on Second Order Schemes for Discontinuous Flow Problems	International Conference on AMOC	2011

Distinguished Visitors to the Department:

Sl.No.	Name of the visitor and Designation	Date of visit	Purpose of visit / Title of talk
1.	Prof.R. Anantharaman Retired Professor SUNY at Westbury & Clark Atlanta Univ. Atlanta, U.S.A.	April 6, 2011	On divergent series of measurable functions
2.	Prof.R. Anantharaman Retired Professor SUNY at Westbury & Clark Atlanta Univ. Atlanta, U.S.A.	April 7, 2011	Trigonometric System is NOT unconditional basis in LP for P 2
3.	Prof.Dipl.-Ing.Dr. Hans-Joerg Bart Lehrstuhl fuer Thermische Verfahrenstechnik T U Kaiserslautern, Germany	April 8, 2011	Population Balances linked with CFD Validation and Visualization
4.	Prof.R.V. Ramamoorthi (Michigan State University & Chennai Mathematical Institute	April 18, 2011	Dirichlet Process-Some variations and applications
5.	Dr. Neela Nataraj Department of Mathematics IIT Delhi	April 12-26, 2011	Lecture Series on Mathematical Theory of FEM
6.	Prof. K.T. Arasu Wright State University (WSU) Dayton, OH 45435, U.S.A.	June 6, 2011	Hadamard Matrices-Overview, Applications and Variations
7.	Prof. M.S. Gowda University of Maryland, U.S.A.	June 7, 2011	Completely positive cones
8.	Prof. Pi. Kannappan University of Waterloo, Canada	June 15, 2011	Application of Functional Equation
9.	Dr.Thierry Boisseaux Attached for Science and Technology Consulate General De France Bangalore	Aug. 2011	collaborative research work on the topic
10.	Dr. Dominique Aymer de la Chevalerie Director French Embassy- SST, New Delhi	Aug. 2011	Collaborative research work
11.	Dr. Manik Poddar ISI Kokata	Dec.9-12,2011	Collaborative research work
12.	Prof. Shreeram S. Abhyankar Marshall Distinguished Prof. of Maths Purdue University, USA	Jan. 3-5, 2012	Invited lecture series on commutative algebra and algebraic geometry and Plane curve singularities and Jacobian Problems
13.	Dr. Uma Balakrishnan Biomedical Postdoctoral Researcher Dept. of Mech. Engg. and Applied Mathematics, Univ of Pennsylvania	Jan.5, 2012	Mutiscale modeling of non-carrier motion with simultaneous adhesion and hydro dynamic interactions in targeted drug delivery
14.	Prof.R.B. Bapat Indian Statistical Institute, Delhi	Jan. 5-8, 2012	Theory of Permanents
15.	Prof. Kistner, University of Bielefeld	Jan 10-17, 2012	Collaborative research work
16.	Prof. M.S. Gowda Dept. of Mathematics and statistics University of Maryland, Baltimore County USA	Jan 12, 2012	On the Bilinearity rank of a proper cone and Lyapunov-like Transformations
17.	Dr. J. Natesan Integral Risk Manager, NASA Washington DC (USA)	Jan 18, 2012	General Discussion on Reliability and lean six sigma
18.	Prof. Gilles Godefroy University of Paris VI Institute of Mathematics and Jussieu Paris France	Jan 19, 2012	Spaces of Lipschitz functions and their preduals; The free Banach spaces
19.	Prof. Reinhard Illner Department of Mathematics and Statistics University of Victoria, Canada	Feb. 3 – 14, 2012	Lecture series on Random evolution in cell biology, From traffic models to flow models to functional differential equations, flocking and swarming models

20.	Prof. Junzo Watada IPS Centre Waseda Univ. Japan	Feb. 7, 2012	Building Fuzzy stochastic models and some applications
21.	Prof. Dominique Haughton Bentley University, USA & University of Toulouse, France	Mar. 12, 2012	Global Analytics: Three Illustrative Examples
	Dr. Sivananthan Sampath Johann Radon Institute for Computational and Applied Mathematics, Austria	Mar. 30, 2012	Generalized Shannon sampling theorems and function reconstruction from point values

4.12.5 Other Activities of the Department/Centre:

Other activities of the Faculty:

Sl.No	Name of the faculty	Title/Member
1.	P.V. Subrahmanyam	UGC Nominated Member for SAP programme of Pondicherry University
2.	S. Sundar	Nominated as Member of the Review Committee for Integrated Coastal Marine Area Management (ICMAM), Ministry of Earth Science, GOI.
3.	R. Usha	Discussion of a research problem with Prof. Rama Govindarajan, JNCARS, Bangalore, April 8, 2011
4.	S. Sundar	Nominated as Member of the Board of Studies in Faculty of Science and Humanities, Anna University for the period of 3 years upto 2.3.2015.

Seminar Talk:

Sl.No	Name of the Faculty	Title	Date
1.	Dr. Antony Vijesh I.I.T. Indore	Solutions of a functional Integral Equation via iteration	April 1, 2011
2.	Dr. Sridhar Krishnan Visiting Professor Department of Elec. Engg. IIT Madras Professor and Canada Research Chair in Biomedical Signal Analysis Ryerson Univ., Toronto, Canada	Instantaneous Signal Features Extract in and their Applications in Non- stationary Biomedical Signals	April 7, 2011
3.	Dr. P.N. Natarajan Visiting Associate Professor Department of Mathematics, IIT Madras	Introduction to p-adic Analysis	July 8,11,12 & 13, 2011
4.	Dr. P.N. Natarajan Visiting Associate Professor Department of Mathematics, IIT Madras	Weighted Means	July 21, 2011
5.	Dr. M.N.N. Namboodiri Department of Mathematics Cochin University of Science and Tech., Kochi-682 022	Distribution of Eigen Values Large Matrices- Szego-type	July 11, 2011
6.	Dr. Arun D Mahindrakar Department of Electrical Engg. IIT Madras	Challenges in Mathematical Control Theory	July 28, 2011
7.	Dr. Saravana Kumar Dept. Of Engineering Design, I.I.T. Madras	Fractal Tool Paths for Layered Manufacturing	Aug 4, 2011
8.	Prof. N. Sivakumar Department of Mathematics Texas A & M University U.S.A.	Sampling and recovery of bandlimited functions via spline and Gaussian interpolation	Aug.11, 2011
9.	Dr. Andrew Thangaraj Dept. of Electrical Engg.,I.I.T. Madras	Codes on Ramanujan Graphs	Aug.18, 2011
10.	Dr. R.K. Amit Dept. Of Management Studies IIT Madras	Aspects of Exchangeability in the Shapley value	Aug.27, 2011
11.	Dr. Saravanakumar Dept. Of Engineering Design, IIT Madras	Fractal Tool Paths for Layered Manufacturing	Aug. 4, 2011
12.	Dr. Andrew Thangaraj Dept. of Electrical Engg., IIT Madras	Codes on Ramanujan Graphs	Aug. 18, 2011

13.	Dr. R.K. Amit Dept. Of Management Studies IIT Madras	Aspects of Exchangeability in the Shapley value	Aug. 27, 2011
14.	Prof. K. Srinivas Institute of Mathematical Science Chennai	On Hardy's Theorm for Riemann Zeta Function	Sept. 1, 2011
15.	Dr. B. Nageswara Rao Associate Professor Dept. of CE, IIT Madras	Coupled Meshfree-fractal Finite Element Method for Fracture Mechanics and Unbounded Domain Problems	Sept. 8, 2011
16.	Dr. Arvind Pattamatta Assistant Professor Dept. of Mech. Engg. IIT Madras	Lattice Boltzmann Method for the Simulation of Heat Transport in Nanofluids	Sept. 15, 2011
17.	Dr. K. Arul Prakash Assistant Professor Dept. of Applied Mechanics IIT Madras	ASUPG Based Finite Element Approach for Fluid Flow and Heat Transfer Applications	Sept. 22, 2011
18.	Prof. Frisco Pierluigi School of Mathematical and Computer Sciences, Heriot-watt University, Edinburgh	Network models are algorithm to generate networks	Oct.7, 2011
19.	Dr. Krishna Hanumanthu Assistant Professor Chennai Mathematical Institute Chennai	Szygies and geometry of projective varieties	Oct 13, 2011
20.	Dr. Mahender Singh Institute of Mathematical Science Taramani, Chennai	Various Guises of the Borsuk-Ulam Theorm	Oct. 20, 2011
21.	Dr. Sudarshan Tiwari Dept. of Mathematics T.U. Kaiserslautern, Germany	Simulation of Moving Liquid Drop inside a Gas of Continuum to Rarefied Regimess	Oct. 27, 2011
22.	Dr.Sreelakshmi Krishnamoorthy Institute of Mathematical Science Chennai	Modular degrees of modular abelian varieties	Nov. 3, 2011
23.	Prof. Prabhu Manyem Dept. of Mathematics Shanghai University China	ESO Universal and LFP Logics: Separation between machine level and structure level	Feb. 6, 2012
24.	Prof.R. Ramanujam IMSc. Taramani	Exploring Compositional structure in Strategies in Games	Feb. 16, 2012
25.	Dr. C.V. Krishnamurthy Associate Professor Dept. of Physics, IIT Madras	Non-Fourier Heat Conduction	Feb. 23, 2012
26.	Dr. Amitava Mukherjee Assistant Professor Dept. of Mathamatics, IIT M	Non –parametric joint monitoring of location and scale of a process distribution in a single robust control chart at phase II	Mar. 1, 2012
27.	Dr. Kunal Mukherjee Institute of Mathematical Sciences Taramani, Chennai 113	MASA(s) in finite von Neumann Algebras and their associated bimodules	Mar. 8, 2012
28.	Dr. S. Lavanya Institute of Mathematical Sciences Taramani, Chennai 113	Complexity of Networks – a quantitative approach	Mar. 15, 2012
29.	Dr. Anita Das Indian Institute of Science, Bangalore	Rainbow Coloring of Graphs	Mar. 22, 2012
30.	Prof. Pramath Sastry Chennai Mathematical Institute, Chennai	The Fundamental group, the galoic group and the monodromy group	Mar. 29, 2012

Ph.D. Viva – Voce Examination

Sl.No	Name of the Scholar	Title of the thesis	Date of Viva
1.	Mr. Nachiketa Mishra	Development and Analysis of Exponential Compact Higher Order Schemes	June 27, 2011
2.	Mr. I. Jeyaraman	Linear Complementarity Problems over Symmetric Cones	July 11, 2011

3.	Mr. K.P. Deepesh	A Study on Approximation Numbers of Operators	July 11, 2011
4.	Mr. E. Satyanarayana	Solutions of some generalized Burgers Equations	2011
5.	Mr.Sudhakar Matle	A Numerical Heat Transfer Modeling Study on the Isothermal Spherical Cavity with Uniform Block Heating	Sept. 10, 2011
6.	Mr. Ramakrishna Nanduri	On certain Homological Properties of Fiber Cone	Nov. 8, 2011
7.	Mrs. R. Indhumathi	Embedded High-balanced Trees into Hypercubes	Nov. 18, 2011

Ph.D. Seminar Talk

Sl. No	Name of the scholar	Title	Date
1.	Mrs.R. Indhumathi MA04D008	Embedding Height-Balanced Trees in Hypercube	April 6, 2011
2.	Mr. Debashisha Mishra MA07D003	Least Elements of Polyhedral Sets and Nonnegative Generalized Inverses	Aug 30, 2011
3.	Mr. G. Sankararaju Kosuru, MA07D004	On Existence of Best Proximity Points and Generalized equilibrium for constrained games	Jan 9, 2012
4.	Mr. M. Rajesh Kannan MA08D007	Generalized inverse positivity of interval matrices	Feb. 22, 2012

Socially relevant activities carried out by the Department:

The Department of Mathematics and AG Technomathematik, Technische Universitaet Kaiserslautern, Germany have mutually agreed to set up a network in the scientific area of Applied Mathematics and Mathematical Modelling. This will enable intensive collaboration between IIT Madras and TU-Kaiserslautern in terms of Annual Workshops, Faculty / Student Exchange and Joint Modelling Seminars.

The department organized a "One Day National Symposium on Mathematical Methods and Applications" on 22nd December, 2011 the day of the birth anniversary of Sri Srinivasa Ramanujan, the great Indian Mathematician. The day's events were inaugurated by Prof. Bhaskar Ramamurti, Director, Indian Institute of Technology Madras, Chennai.

There were five invited lectures delivered by:

- Prof. Gadadhar Mishra, Dept. of Mathematics, IISc. Bangalore
- Prof. K.N. Raghavan, Inst. of Math. Sciences (IMSc), Bangalore
- Prof.G. Ravindra, Former Director, NCERT, Delhi
- Prof. R. Usha, IIT Madras, Chennai
- Prof. Min Xie, Chair Prof. Dept. of Systems Engg. and Engg. Mgt. City Univ. of Hong Kong

In the afternoon, parallel sessions were held on:

- Analysis and Topology; Algebra; Discrete Mathematics;
- Applied Mathematics I (Differential Equations and related topics)
- Mathematics of Non-deterministic Phenomena and other topics and
- Applied Mathematics – II (Mathematical Models)

The Valedictory function was presided over by Prof. S. H. Kulkarni, Head, Department of Mathematics and valedictory address was delivered by Prof. Ajit Kumar Kolar, Chairman, Centre for Continuing Education. Prof. Y.V.S.S. Sanyasi Raju was coordinated the Symposium.

International collaboration achievements by the Department - NIL

1. Faculty visit

Sl.No	Name of the Faculty Member	Purpose of Visit	Date & Venue
1.	A. V. Jayanthan	Research	June 6 – Dec. 20, 2011 - USA
2.	S. Ponnusamy	Visiting Faculty	July 1 – Jan. 31, 2012 – Univ. of Turku, Finland
3.	S. Ponnusamy	Research	Jan - July 2011 - Malaysia

4.13 DEPARTMENT OF MECHANICAL ENGINEERING

4.13.1 Introduction:

The Department of Mechanical Engineering was established in the year 1959. The department offers Ph.D., M.S., M.Tech, B.Tech. and Dual Degree programmes. The department has excellent facilities to carry out state-of-the-art research in three major disciplines of Mechanical Engineering, namely, Thermal Engineering, Mechanical Design and Manufacturing Engineering.

The Thermal Engineering Stream comprises of six laboratories, namely, Heat Transfer and Thermal Power, Hydro-Turbo Machines, I.C. Engines, Refrigeration & Air conditioning, Thermal-Turbo Machines and Thermodynamics & Combustion.

The Design Stream consists of the Machine Design Section, Machine Dynamics Laboratory.

The Manufacturing Engineering Stream consists of the Manufacturing Engineering Section and Precision Engineering & Instrumentation laboratories.

4.13.2 Academic Programmes:

New Courses introduced:

Sl. No.	Course No.	Title
1.	ME6005	Solar Energy for Process Heat and Power Generation
2.	ME6004	Micro and Nano scale Energy Transport

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	83	83	67	61	8	302
Dual Degree	70	74	60	52	43	299
M.Tech.	92	93	2	0	0	187
M.S.	29	29	29	12	11	110
Ph.D.	43	37	38	23	41	182
Total	317	316	196	148	103	1080

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
1.	Mr. Santhosh (Ph.D Scholar)	VETOMAC - VII	Nov.21 – 24, 2011 Shanghai, China	IIT Madras
2.	Mr. P. Balasubramani (Ph.D Scholar)	International Conference on Mechanical and Electrical Technology	Aug. 26-27, 2011 Dalian, China	IIT Madras
3.	Mr. S. Suresh Kumar	International Conference on Mechanical and Electrical Technology	Aug. 26-27, 2011 Dalian, China	IIT Madras
4.	Mr.BoopathiSabaresh (ME 07D005)	International Conference on Mechanical Engineering	July 27-29, 2011, Paris, France	I.I.T Madras
5.	Mr.Panendra KumarSahu (ME 09S028)	International Conference on Mechanical Engineering	July 27-29, 2011 Paris, France	I.I.T Madras
6.	Mr. K.R.V.Manikanthichari (ME 11S018)	International Conference for Aerospace, Mechanical and Manufacturing Engineering	Nov. 14- 17, 2011 Paris, France	I.I.T Madras

Sl. No.	Name of the Student/Scholar	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
7.	Mr. Siva Kumar S (ME 09S019)	International Conference on Fluid Mechanics, Heat Transfer and Thermodynamics (ICFMHTT 2012)	Jan. 15-17, 2011 Geroldswil Swiss Quality Hotel, Zurich, Switzerland	I.I.T Madras
8.	Mr.P. Balasubramani	Research Perspective in Mechanical Engineering	April 1 -2,2011 SV College of Engg. Sriperumbudur	IIT Madras
9.	Mr.Suresh Kumar	Research Perspective in Mechanical Engineering	April 1-2, 2011 SV College of Engg. Sriperumbudur	IIT Madras
10.	Mr. M. Chandra Sekhar Reddy (Ph.D Scholar)	NaCoMM-2011	Nov.30 –Dec.2, 2011 IIT Madras	IIT Madras
11.	Mr. N. Harish Chandra (Ms. Scholar)	NaCoMM-2011	Nov.30 –Dec.2, 2011 IIT Madras	IIT Madras
12.	Mr.Finney Charles (Ph.D Scholar)	International Conference on Nano Materials and Nano Technology 2011 (ICNANO 2011)	Dec.18 – 21, 2011 University of Delhi	IIT Madras
13.	Mr.Finney Charles (Ph.D Scholar)	Recent Advances in Material Processing (RAMP 2011)	Dec.23-24, 2011 PSG Coimbatore	IIT Madras
14.	Mr.G. Tara Krishna Manohar (Ph.d Scholar)	National Symposium of Acoustics organized by the Acoustical Society of India	Nov. 2011 at Bundelkhand University, Jhansi	IIT Madras
15.	Mr.P. Balasubramani	LACOM -2011	April 28– 29, 2011 Trivandrum	IIT Madras
16.	Mr.Suresh Kumar	LACOM -2011	April 28– 29, 2011 Trivandrum	IIT Madras
17.	Mr. Arun Kumar (Ph.D Scholar)	BARC	Nov.4-5, 2011, Mumbai	IIT Madras
18.	K. Ravi Kumar (ME07D022)	ISES Solar World Congress (SWC 2011)	28 Aug. – 2 Sep. 2011, Kassel, Germany	Institute funding
19.	G. Veershetty (ME07D023)			Self-Funding
20.	Tapano Kumar Hotta (ME10D004)	International Conference in Fluid Mechanics, Heat Transfer and Thermodynamics (ICFMHTT)	January 15-17, 2012, Zurich, Switzerland	Institute
21.	Prasanna Swaminathan (ME08D009)	Euro herm 95 Computational radiation in participating media	April 18-21, 2012, Nancy, France	DST
22.	K. Ravi Kumar (ME07D022)	3 rd International Conference on Advances in Energy Research (ICAER 2011)	Dec. 9-11, 2011, IIT Bombay	Institute funding
23.	Tapano Kumar Hotta ME10D004	ISHMT	Dec. 27 - 30, 2011, IIT Madras	Institute
24.	Prasanna Swaminathan (ME08D009)	ISHMT	Dec. 27 - 30, 2011 IIT Madras	-
25.	Pradeep M Kamath (ME09D037)	ISHMT	Dec. 27 – 30, 2011, IIT Madras	-
26.	Deepak K. Mandal (ME06D013)	ILASS, Europe-2011	Estoril, Portugal, September 2011	Institute
27.	T. G. Vignesh (ME09S014)	ILASS, Europe-2011	Estoril, Portugal, September 2011	Institute and Alumni association

Names of students/scholars who won outside prizes and awards:

SI.No.	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1.	S. Rajkumar	ME07D008	Best paper award in 22 nd National Conference on IC Engines and Combustion, 2011	NIT-Calicut, Kerala, India

4.13.3 Faculty and their activities:

Faculty:

Name and Qualification	Area of Specialisation
Professor:	
Sundararajan T., Ph.D. (HEAD)	Droplet combustion, Supersonic reacting jet flows, Computational fluid dynamics
Ajit Kumar Kolar, Ph.D.	Fluidized Bed Combustion of Coal and Biomass, Fuel Cells, Advanced Power Generation System Analysis.
Babu Viswanathan, Ph.D	CFD, High speed reacting flows, High performance computing
Chakravarthy Balaji, Ph.D.	Fundamental Heat Transfer, Optimization of Thermal Systems, Inverse Problems in Heat Transfer, Satellite Meteorology, , Numerical Weather Prediction
Chandramouli P., Ph.D.	Non-linear Dynamics, Acoustics and Fluid-structure interactions
Das S.K., Ph.D.	Heat Exchangers, Two phase flow, Nano fluids, Jet Oscillations, Nuclear Heat Transfer
Gopinath K., Ph.D.	Design of test rigs, Presses, SPM, Process equipment, Powder metallurgy and superplastic forming equipment, Friction and wear, Brakes, Clutches, Bearings, Gears and filters, Powder metallurgy, Failure analysis and development of new materials
Govardhan M., Ph.D.	Compressors, Steam and gas turbines - cascade secondary flows - boundary layers-inlet flow distortion, Tip clearance flows, Wells turbine, Cross flow fans, CFD
Krishnan Balasubramaniam, Ph.D.	Nondestructive Evaluation, Materials Characterization, Online Measurements
Kumaraswamy S., Ph.D.	Fluid Mechanics, Pumps and Hydroturbines, Cavitation in hydroturbomachines
Maiya M.P., Ph.D.	Refrigeration (Sorptions systems and co-generation), Air Conditioning (Desiccant and evaporative cooling and energy aspects), Ventilation, Drying and effluent evaporation, Metal hydride energy conversion systems
Mani A., Ph.D.	Solar energy, Refrigeration and air conditioning, Cryogenic engineering, Alternate working fluids, Effluent treatment.
Mayuram M.M., Ph.D	Surface engineering, Wear and wear control, Thermal sprayed coatings, Fatigue and fracture aspects in design and analysis
Muthuveerappan G., Ph.D.	Machine design, Vibrations of structures in fluid environments, Generation of gear teeth and fillet profiles for stress analysis and design
Narayanan S., PhD.	Random and Nonlinear Vibration, Smart Structures, Acoustics
Pramod S.Mehta, Ph.D.	Combustion Modeling, Fluid Dynamics in IC Engines, Engine Emission Control
Prasad B.V.S.S.S., Ph.D.	CFD in turbo machines, Turbine blade cooling, Rotor-stator interactions, Heat flux measurements, Thermal hydraulics

Raju Sethuraman, Ph.D.	Computational Solid Mechanics, Fatigue and fracture of materials
Ramamoorthy B., Ph.D.	Metrology, Machine Vision Applications, Manufacturing and Coating Processes
Ramesh A., Ph.D.	IC Engine Combustion and Emissions, Electronic Engine Management, Alternative Fuels
Ramesh Babu N., Ph.D.	Laser Beam Machining (LBM), Abrasive Finishing Process, Abrasive Waterjet Machining (AWJM), Process Modeling, Computer Aided Manufacturing, CNC, PLC
Seshadri Sekhar A, Ph.D.	Rotordynamics, Tribology, Condition-monitoring
Shunmugam M.S., Ph.D.	Metrology, Manufacturing – gear, BTA Machining, reaming, Centreless grinding, EDM, friction welding, Manufacturing automation & robotics, Computer application in manufacturing – process planning, inspection planning, quality control.
Singaperumal M., Ph.D.	Mechatronic System Design, Oil Hydraulics, System Simulation and Modeling
Sitaram N., Ph.D.	Turbomachinery / end wall flows, Computational fluid dynamics, Compressors and turbines, Boundary layers, Tip clearance flows
Siva Prasad N., Ph.D.	Finite element analysis, Computer aided design, Stress analysis, Machine design
Sujatha C., Ph.D.	Machine Dynamics, Vehicular Vibration, Instrumentation and signal analysis
Swarnamani S., Ph.D.	Structural Health monitoring/Diagnostics/Active Control
Venkateshan S.P., Ph.D.	Heat Transfer, Instrumentation
Venkatarathnam G., Ph.D.	Refrigeration, Cryogenic Engineering, Heat Exchangers
Vijayaraghavan L., Ph.D.	Machining, CAD, Surface Engineering, Grinding
Associate Professor:	
Arunn Narasimhan, Ph.D.	Heat Transfer and Fluid Flow in Porous Media, Phase Change and Convection
Raghu Prakash V, Ph.D.	Experimental Fatigue Analysis, Structural integrity, Test systems design
Shankar Krishnapillai, Ph.D.	Structural vibrations, Design optimization, System identification
Srinivas Reddy K, Ph.D.	Renewable Energies, Solar Energy, Energy Conservation, Energy Environment, Heat Transfer in Two-Phase Systems
Srinivasan K., Ph.D.	Jet Flow and Noise, Active and Passive Flow Control, Measurement and Instrumentation
Sujatha Srinivasan, Ph.D.	Biomechanics, Mechanisms, Prosthetics and Orthotics
Assistant Professor:	
Abhijit Sarkar, Ph.D.	Vibration, Acoustics, Asymptotic Methods
Amitava Ghosh, Ph.D.	Machining & Grinding of advantage materials, Development of abrasive tools, Metal ceramic joining
Anand T N C, Ph.D.	CFD simulations of I.C. engines processes, Laser-based diagnostics of sprays and combustion
Arvind Pattamatta, Ph.D.	Nanoscale Energy Transport, Computational Fluid Dynamics and Heat Transfer, Turbulence Modeling
Ashis Kumar Sen, Ph.D.	Microfluidics, Microfabrication, Micro Electro Mechanical Systems and Fluid Mechanics

Dhiman Chatterjee, Ph.D.	Fluid Mechanics, turbomachines, cavitation
Krishna Kannan, Ph.D.	Continuum mechanics, Thermodynamics and Constitutive modeling of polymeric materials
Mallikarjuna J M, Ph.D.	Simulation of Engine Processes, Data Acquisition, Design of Engine Components, In-cylinder flow analysis using PIV.
Manivannan P V, Ph.D.	Instrumentation and Controls, Mechatronic System Design, Microprocessor
Narasimhan Swaminathan, Ph.D.	Computational materials science and mechanics, Radiation damage in materials, Multiscale modelling of complex phenomenon in nuclear and fuel cell materials, Finite element method, Continuum mechanics
Parag Ravindran, Ph.D.	Viscoelastic Fluids Constitutive Modeling
Prabhu Rajagopalan, Ph.D.	Acoustics and Ultrasonic wave methods, NDE
Raghavan V, Ph.D.	Combustion modeling, Droplet combustion, Laminar flames
Ravikiran Sangras, Ph.D.	Experimental Fluid Mechanics, Combustion, Turbulent Flows
Samuel G L., Ph.D.	Measurement and Inspection of Free Form Surfaces Evaluation of Form Errors, Micro Machining
Shaligram Tiwari, Ph.D.	Refrigeration and Air conditioning, Flow Transition, Vortex Dynamics, CFD, Maragonic Convection
Shamit Bakshi, Ph.D.	CFD in I.C. Engines, Liquid Atomization and Spray Systems, Fuel Nozzle Modeling
Somashekhar S Hiremath, Ph.D.	Micromachining, Mechatronic System Design Oil Hydraulics, System Simulation and Modelling, FEM.
Sushanta Kumar Panigrahi, Ph.D.	Friction stir processing and welding, Superplastic forming Nanomanufacturing, Process-structure-property correlation, Metal matrix/nano composites, Machining of advanced materials, Mechanical behavior of materials Thermo-mechanical processing of light weight structural metallic materials
Viswanath K., Ph.D.	Turbomachinery Noise

Professor Emeritus:

Ganesan V., Ph.D.	Theoretical and Experimental Studies in Fluid Flow, Heat Transfer and Combustion in I.C Engines, Gas Turbines, After-burners and Related Engineering Equipment.
Ganesan N., Ph.D.	Finite Element Analysis, Vibration and Smart Structures
Srinivasa Murthy S., Ph.D.	Refrigeration & Air conditioning, Energy Conservation & Heat Recovery, Solar & Hydrogen Energy Utilisation

Visiting Professor:

Ramamurthi K., Ph.D.	Combustion, Propulsion, Explosions
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Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1.	Dr. M. P. Maiya / Dr. Shaligram Tiwari / Dr. S.M. Shiva Nagendra	National Conference on Refrigeration and Air conditioning (NCRAC 2011) (Organized)	July 7 -9, 2011

2.	Dr. V. Raghu Prakash	ASME International Congress and Exposition 2011 at Denver, Co, USA on Mechanical Property evaluation at different size scales and Modeling Manufacturing Process	Nov. 14 – 17, 2011
3.	Dr. S. Narayanan Dr. A.S. Sekhar Dr. Abhijit Sarkar Dr. C. Sujatha	National Symposium on Rotor Dynamics (NSRD)	Dec. 19-21, 2011
4.	Dr. BVSSS. Prasad	11 th Asian International Conference on Fluid Machinery and 3 rd Fluid Power Technology Exhibition	Nov. 21-23, 2011
5.	Dr. Arunn Narasimhan	21 st National and 10th ISHMT-ASME Heat and Mass Transfer conference	Dec. 27-30,2011
Seminar:			
1.	Dr. N. Siva Prasad Dr. A.S. Sekhar	National Seminar on Tribology of Materials	Aug. 26, 2011
Symposia:			
1.	Dr.Dhiman Chatterjee	WIMRC 3 rd Intl Cavitation Forum, Warwick University, UK.	Jul. 4 -6, 2011
Workshop:			
1.	Dr. V. Raghu Prakash	Fatigue and Fracture Mechanics	Jul. 8– 9, 2011
2.	Dr. N. Siva Prasad Dr. Shankar Krishnapillai	Workshop on Engineering Optimization	Jan. 5- 7, 2012
Short term Course:			
1.	Dr. ShaligramTiwari Dr.K. Arul Prakash	Theoretical and Computational Fluid Dynamics	Mar. 10 -14, 2012
2.	Dr. C. Sujatha	Vibration Training Programme at Raton Technologies, Pune	Aug. 29 – 31, 2011
3.	Dr. Sujatha Srinivasan Dr. Parag Ravindran	Self Awareness and Higher Goals in Education	June 21–26, 2011
4.	Dr BVSSS. Prasad	CFD on Turbomachines Training	Aug. 10-12, 2011
5.	Dr.BVSSS. Prasad	CFD Training on Fluidization and combustion for CFBC Boilers	Aug. 22-31, 2011
6.	Dr. K. S. Reddy Dr. Ajit Kumar Kolar	Advanced Energy Technologies	Feb.20 – 24, 2012

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1.	Dr. N. Siva Prasad	Finite Element Analysis using Abaqus / Ansys	Vignan University	Dec. 20-24, 2011
Seminar:				
Symposia:				
1.	Dr. V. Raghu Prakash	Estimation of corrosion Fatigue crack Growth through Frequency Sheddug Method	ASTM/ESIS International Symposium	May 18-20, 2011
Conference:				
1.	Dr. Shaligram Tiwari	IUTAM Symposium of Bluff Body Flows (Attended)	Kanpur, India	Dec.12-16, 2011
2.	Dr. A. Mani	SOLARIS-2012, Keynote Speech Oral Presentation-Title of the paper: Solar Refrigeration(IT 18)	Varanasi, India	Feb.7-9, 2012
3.	Dr. Raghu Prakash V	ICAF 2011	Montreal, Canada	May 30 – June 3, 2011
4.	Dr. N. Siva Prasad	11 th US National Congress on Computational Mechanics 2011,	Minneapolis, Minnesota, USA	July 25–29, 2011

Sl. No.	Name of faculty	Title	Institution	Period
5.	Dr. Prabhu Rajagopal	Quantitative Nondestructive Evaluation (QNDE)	University of Vermont, Bwlington, VT, USA	July 17–22, 2011
6.	Dr. A.S. Sekhar	International Conference on VETOMAC-VII	Shanghai Jiao Tong University, Shanghai, China	Nov. 21- 24, 2011
7.	Dr. C. Sujatha	International Conference on VETOMAC-VII,	Shanghai Jiao Tong University, Shanghai, China	Nov.21 – 24, 2011
8.	Dr. Sujatha Srinivasan	NaCOMM - 2011	IIT Madras	Nov.30 –Dec.1, 2011
9.	Dr. M.M. Mayuram	Advances in Construction, Manufacturing and Automation Research (INCACMA 2012),	Kongu Engg. College, Erode	Mar. 31, 2012
10.	Dr. BVSSS. Prasad	ASME TURBO EXPO 2011,	Vancouver, Canada	June 6 -11, 2011
11.	Dr. M. Govardhan	ASME 2011 International Mechanical Engineering Congress and Exposition	Denver, Colorado, USA.	Nov. 11-17, 2011
12.	Dr. BVSSS. Prasad	38 th NCFMFP	Manit, Bhopal	Dec. 15-17, 2011
13.	Dr M M Mayuram	Chair a Technical Session	RMK Engineering College, Chennai.	Dec 19-20, 2012
14.	Dr.V. Raghavan	NCICEC-2011	NIT Calicut	Dec. 2011
15.	Dr T Sundararajan	NCICEC-2011	NIT Calicut	Dec. 2011
16.	Dr. Ravi Kiran Sangras	Nat FUE- National Frontiers of Engineering Conference	IIT Hyderabad	2011
17.	Dr. K. S. Reddy	31st International Thermal Conductivity Conference (ITCC) and the 19th International Thermal Expansion Symposium (ITES)	Saguenay, Qc, Canada	June 26 - 30, 2011
18.	Dr. K. S. Reddy	ISES Solar World Congress (SWC 2011)	Kassel, Germany	Aug. 28 – Sep.2, 2011
19.	Dr. K. S. Reddy	10th International Conference in Sustainable Energy Technologies (SET 2011)	Kumburgaz, Istanbul, Turkey	Sep. 4-7, 2011
20.	Dr. K. S. Reddy	International Conference on Energy Security, Global Warming and Sustainable Climate - Solaris 2012	Varanasi	Feb. 7 – 9, 2012
21.	Dr. Arvind Pattamatta	AIAA Thermophysics and Heat transfer conference	Honolulu, Hawaii, USA	June 27-30, 2011
22.	Dr. J.M. Mallikarjuna	International Conference on Mechanical, Production and Automobile Engineering (ICMPAE-2011)	Combustion Institute	Dec 17-18, 2011
23.	Dr. J.M. Mallikarjuna	SAE 10th International Conference on Engines & Vehicles (SAE 11ICE-0253)	Combustion Institute	Sep 11-15, 2011
Training:				
1.	Dr. Sujatha Srinivasan	TA Training Programme	IITM	July 25 – 27, 2011
2.	Dr. Abhijit Sarkar	CEP Training	M/S Tafe Ltd.	2 Days
Short term Course:				
1.	Dr. Abhijit Sarkar	Fluid Structure Acoustic Interaction” on Theoretical & Computational Fluid Dynamics”	AICTE Short term Training, Department of Applied Mechanics, IITM	

Sl. No.	Name of faculty	Title	Institution	Period
2.	Dr. Sujatha Srinivasan	Teaching-Learning Methodologies CAD	Dept. of Engineering Design, IIT Madras	Sep.16, 2011.
3.	Dr. Sujatha Srinivasan	Teaching-Learning Methodologies	Dept. of Applied Mechanics, IIT Madras	Nov. 25, 2011

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1.	Dr. V. Raghu Prakash	Fatigue and Fracture Fundamentals	BHEL Trichy	April 1, 2011 April 15-16, 2011
2.	Dr. N. Siva Prasad	Orientation Programmes for the Scientists of DRDO in its Post Induction Training School (POINTS)	Defence Institute of Advance Technology, Pune	May 2-4, 2011
3.	Dr. N. Siva Prasad	Pressure Vessels and Piping	GE Bangalore	May 13-16, 2011
4.	Dr. V. Raghu Prakash	Creativity, Innovation and Optimization	Bannari Institute of Technology, Secohyamangalam	June 16, 2011
5.	Dr. P. Chandramouli	Payload Faring Acoustics	LPSC, Mahendragiri (ISRO)	July 26, 2011
6.	Dr. V Raghu Prakash	Design for manufacture and Assembly	Srikrishna College of Engineering & Technology, Coimbatore	July 14, 2011
7.	Dr. Sujatha Srinivasan	Development of Quality Control Tools in Prosthetics & Orthotics	Mobility India, Bangalore	Dec.12, 2011
8.	Dr. V. Raghu Prakash	Damage Mechanics – Aerospace Materials	NDE 2011, Chennai	Dec. 6, 2011
9.	Dr. V. Raghu Prakash	Damage Mechanics and its role in Residual Life Assessment of Power Plant Components	NDE 2011, Chennai	Dec.6, 2011
10.	Dr. V. Raghu Prakash	Clinic for Fatigue Analysis	IGCAR, Kalpakkam	Dec. 22, 2011
11.	Dr. Sujatha Srinivasan	Development of quality control tools in prosthetics and orthotics	Mobility India, Bangalore	Dec.12, 2011
12.	Dr. C. Sujatha	Signal Analysis for Mechanical Engineers	CVRDE, Avadi	Feb.6, 2012
13.	Dr. A.S. Sekhar	Principles of Product Design	CVRDE	Mar.9, 2012
14.	Dr. BVSSS. Prasad	CFD Investigations of Blockage development in FBR Subassemblies	IGCAR, Kalpakkam	Nov. 19, 2011
15.	Dr. A. Mani	NBA Accreditation	NIT Hamirpur, Himachal Pradesh	Apr. 14-18, 2011
16.	Dr. A. Mani	Given lecture and had discussion	Defence Laboratory, DRDO, Jodhpur	Apr.20-21, .2011
17.	Dr. M. P. Maiya	Selection of Faculty	VIT Vellore	July 28, 2011
18.	Dr. M. P. Maiya	Expert Committee to Evaluate programmers seeking NBA Accreditation	L.D.College of Engineering, Ahmedabad	Aug. 4-5, 2011
19.	Dr. M. P. Maiya	Psychromerty and Equipment system and participate in the workshop Design on Energy Efficiency through Psychometric conversations in HVAC Equipment Design	NIT, Jaipur	Sep.17, 2011

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
20.	Dr. M. P. Maiya	Expert Committee to Evaluate programmers seeking NBA Accreditation	Anjuman Islamic College of Engineering, Mumbai	Oct.21, 2011
21.	Dr. A. Mani	Went for Inspection and had discussion	M/s. Sanmar Ltd, Mettur	Nov.13, 2011
22.	Dr. M. P. Maiya	Expert Member Accreditation of JEC	Jabalpur	Nov.17-18, 2011
23.	Dr. A. Mani	Expert member for Doctoral committee and conducted comprehensive viva-voce examination	NIT, Trichy	Dec. 21, 2011
24.	Dr. A. Mani	External examiner for PhD viva voce	Coimbatore Institute of Technology, Coimbatore	Dec.23, 2011
25.	Dr. A. Mani	Conducted enquiry	Gandhigram, Dindigul	Jan. 10-11, 2012
26.	Dr. A. Mani	UPSC confidential assignment,	New Delhi	Jan.29- Feb.3, 2012
27.	Dr. M. P. Maiya	Evaluation of Ph. D Thesis	NIT Surathkal Karnataka	Feb. 20-21, 2012
28.	Dr. M. P. Maiya	Expert Committee Meeting	Central Leather Research Institute	Mar. 9, 2012
29.	Dr. M. P. Maiya	Inaugural and Keynote Address at MECHKRIYA 12	Thanthai Periyar Government Institute of Technology, Vellore	Mar. 15, 2012
30.	Dr.V. Raghavan	CFD Basics	SSN College, Chennai	Jan. 10, 2011
31.	Dr. Ravi Kiran Sangras	Thermodynamics	IIT Hyderabad	Aug- Dec 2011
32.	Dr. Ravi Kiran Sangras	Viscous Fluid Dynamics	IIT Hyderabad	Aug- Dec 2011
33.	Dr.S.K.Das	Heat Pipe and Heat Exchanger	Government College of Engineering-Kannur-670563 Kerala, India	Mar.24, 2012
34.	Dr.S.K.Das	NBA Visit and College Inspection	Jalgaon visit	Apr. 4-8, 2012
35.	Dr.K.S.Reddy	Concentrating Solar Power Technologies	NIT Calicut	June 9, 2011
36.	Dr.K.S.Reddy	Understand the Interdependencies and Imparities of Environment for Energy – Global/Regional/India	Great Lakes Institute of Management, Manamai	Aug.27, 2011
37.	Dr.K.S.Reddy	Solar Thermal Power Generation	Institute of Energy Studies, Anna University, Chennai	Dec. 14, 2011
38.	Dr.K.S.Reddy	Solar Energy Technologies for Sustainable Energy and Water Production	National Science Foundation, IIT Madras	Dec.27, 2011
39.	Dr.K.S.Reddy	Keynote Lecture on Design and Development of Energy Efficient Receivers for CSP Systems	BHU, Varanasi	Feb. 7, 2012
40.	Dr. Arvind Pattamatta	Modeling Thermal Transport Processes in Micro-electronic Cooling and Energy Conversion Applications	TU Braunschweig	June 9, 2011
41.	Dr. Arvind Pattamatta	Mesoscale simulation techniques	Centre for Converging Technology, University of Rajasthan	Dec. 2011
42.	Dr. Arvind Pattamatta	Lattice Boltzmann Methods for the Simulation of heat transport in Nanofluids	Department of Mathematics, IIT Madras	Sep 15, 2011
43.	Dr.Arunn Narasimhan	Convection in Bi- and Tri-Dispersed Porous media.	Institute of Mathematical Science, Chennai.	Jan 12,2012

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
44.	Dr. J.M. Mallikarjuna	In-cylinder Flow Analysis in an IC Engine Using PIV Technique	Department of Mechanical Engg., Rajarajeswari College of Engineering, Bangalore	Feb. 24 -25, 2012
45.	Dr. J.M. Mallikarjuna	1. Hydrogen as an Engine Fuel 2. Controlling NOx Emission from Hydrogen Fuelled I.C Engine and a Key note Talk on Energy – Current Scenario	AICTE, New Delhi SIT Tumkur.	June 20 - July 2, 2011

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1.	Dr. V. Raghu Prakash	USA Canada	May 17- June 3, 2011	ASTM Symposium, CA,NC A&T University, NC NRC, Mc Gill University, Montreal Canada, ICAF 2011 Symposium & Conference, Montreal, QC	
2.	Dr. Prabhu Rajagopal	UK	May 9– 31,2011	Imperial College: Interact with faculty involved with the NDE Laboratory.etc. New Castle University : Visited the Electrical, Electronic & Computer Engineering Department etc.	
3.	Dr. Raghu Prakash V	Canada	May 30- June 3, 2011	To present a paper	
4.	Dr. P. Chandramouli	Brazil	July 10, 2011	To present a papers	
5.	Dr. N. Siva Prasad	Minneapolis, Minnesota, USA	July 25–29, 2011	To present a paper	
6.	Dr. Krishnan Balasubramanian	Northwestern University, USA	July 14– 26, 2011	To present paper and Chaired 1 session	
7.	Dr. Prabhu Rajagopal	i) Northwester University ii) Imperial College, London		Part of "Intelligent Structural Health Monitoring " Project and discussed collaborations Discussed ongoing and facture collaborations	
8.	Dr. M.M. Mayuram	USA	Oct. 16–20, 2011	Presented a paper and invited talk at the symposium on "Hentxen across multi scale" in MSZJ congress 2011	
9.	Dr. M.M. Mayuram	Los angles	Oct. 24-26, 2011	Participate in the "International Joint Tribology Conference" (IJTC 2011)	
10.	Dr. V. Raghu Prakash	Derver, Co, USA	Nov.13 –20, 2011	To present two papers in the ASME IMECE 2011	
11.	Dr. C.Sujatha	Shanghai, China	Nov. 21 -24, 2011	To present a paper in VETOMAC VII 2011	
12.	Dr. A.S. Sekhar	Shanghai, China	Nov.21 -24, 2011	To present a paper in VETOMAC VII 2011	
13.	Dr. P. Chandramouli	Shanghai, China	Nov. 21-24, 2011	To participate in VETOMAC VII 2011	
14.	Dr. S. Srinivasa Murthy	Spain	April 2011	2 nd Polygeneration Conference	Conference Committee

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
15.	Dr. G. Venkatarathnam	Tarragona, Spain	Mar.30-Apr.1, 2011	2 nd European Polygeneration Conference	
16.	Dr. S. Srinivasa Murthy	Solar Institute Juelich Aachen University of Applied Sciences Germany	June 7-24,2011	To deliver lectures on Hydrogen Energy and discuss on Sustainable Energy Research etc.,	IIT Madras
17.	Dr. G. Venkatarathnam	Prague, Czech Republic	Aug. 21-26, 2011	International Congress of Refrigeration	
18.	Dr. A. Mani	Singapore	Dec 12-15, 2011	International Conference on Materials Science Metal& Manufacturing (MS2011) – Hotel Canning Oral Presentation- Title of the paper : Metal foam wick structure for Heat Pipe application and Visit to NUS/NTU Universities in Singapore	IIT Madras
19.	Dr. V. Raghavan	USA	June 2011	Research Collaboration	WPI, USA
20.	Dr. Dhiman Chatterjee	UK	2 -7 July, 2011	Presenting paper at 3rd Intl Cavitation Forum 2011	CPDA
21.	Dr. BVSSS. Prasad	Vancouver, Canada	June 6 -11, 2011	ASME Turbo Expo 2011	
22.	Dr. M. Govardhan	Brussels, Belgium	July 4-7, 2011	10 th International Symposium on Experimental Computational Aerothermodynamics of Internal Flows, (ISAIIF 10)	Inst. Funds
23.	Dr. M. Govardhan	Denver, Colorado, USA	Nov. 11-17, 2011	ASME 2011 International Mechanical Engineering Congress and Exposition	Inst. Funds
24.	Dr. Sarit Kumar Das	MIT, USA	June-Dec2011	Peabody Visiting Professor	Institute Fund
25.	Dr.K. S. Reddy	UK	21–25 June,2011	Project Review Meeting	DST-UKIERI
26.	Dr.K. S. Reddy	Canada	26–30 June,2011	To attend International Conference	Institute Fund
27.	Dr.K. S. Reddy	Germany	Aug.28-Sep.2, 2011	To attend International Conference	Institute Fund
28.	Dr.K. S. Reddy	Turkey	Sep.4 –7, 2011	To attend International Conference	Institute Fund
29.	Dr. Arvind Pattamatta	Germany	June- Aug., 2011	IIT DAAD faculty exchange program	DAAD
30.	Dr. Arvind Pattamatta	USA	June 27-30, 2011	To attend International conference	IIT CPDA
31.	Dr.C.Balaji	Canada	July 22-29, 2011	Keynote speaker at IEEE International Symposium and Geosciences and Remote Sensing (IGARSS)	Institute Fund
32.	Dr. J.M. Mallikarjuna	Pattaya, Thailand	Dec 17-18, 2011	Attended International Conference on Mechanical, Production and Automobile Engineering (ICMPAE-2011),	Institute
33.	Dr. J.M. Mallikarjuna	Capri, Napoli, Italy	Sep 11-15, 2011	Attended SAE 10th International Conference on Engines & Vehicles (SAE 11ICE-0253)	Institute

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
Awards:					
1.	Dr. C Balaji	Tamil Nadu Scientist Award	(Engineering and sciences), 2010	Govt. of Tamilnadu	
2.	Dr. Arvind Pattamatta	DAAD-IIT Faculty exchange	DAAD	Visit TU Braunschweig	May 2011
3.	Dr. V. Ganesan	Excellence in Aerospace Education Award	Aeronautical Society of India, 2011.		
4.	Dr. V. Ganesan	Rashtriya Gaurav Award	field of Science and Technology, and education	Economic Growth and National Integration at New Delhi	Jan. 2012
5.	Dr. V. Ganesan.	Best Citizens of India Award	International Publishing House New Delhi	outstanding performance in the chosen area of activity	Feb. 2012
6.	Dr. J.M. Mallikarjuna	Best Paper Award	International Conference on Mechanical, Production and Automobile Engineering (ICMPAE-2011)	held at Pattaya, Thailand	Dec 17-18, 2011

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1.	Sarit Kumar Das	International Journal of Micro-Nano Scale Transport		
2.	Dr. Arunn Narasimhan	Modeling Retinal Laser Surgery in Human Eye, Chapter 11, Human Eye Imaging and Modeling.	Taylor and Francis pub., NY. (in press)	Dr. Arunn Narasimhan Dr. Lingam Gopal
3.	Dr. Arunn Narasimhan	The Scientific Legacy of Josef Stefan, in Josef Stefan: His Scientific Legacy on the 175th Anniversary of His Birth	Benham Science Publishing	

Fellowships of Academies and Professional Societies:

Sl. No.	Name of faculty	Year of admission
Others:		
1.	International Academy of Refrigeration	1994
2.	Institution of Engineers (India) (IE)	1998
3.	International Energy Foundation	1998
4.	American Society of Mechanical Engineers	2002
5.	International Academy of Information Technologies	2004

Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name
1.	Dr. S. Srinivasa Murthy	Member	Editorial Board, Journal of Energy, Heat and Mass Transfer
2.	Dr. S. Srinivasa Murthy	Member	Editorial Board, Innovative AC& R

3.	Dr. S. Srinivasa Murthy	Editor	International Journal, Applied Thermal Engineering, Elsevier
4.	Dr. S. Srinivasa Murthy	Member	Editorial Board, International Journal of Low Carbon Technologies
5.	Dr. M. Govardhan	Member	Journal of Thermal Science

4.13.4 Design and Development Activities:

Brief and specific details of Process/Instruments/Equipment/ Software designed and developed:

New facilities added or major equipment procured:

Sl.No.	Name of Equipment	Value (Rs. in lakhs)
1.	Closed circuit water tunnel test facility with independent pressure and velocity control	10.00
2.	Lock-in Amplifier	2.70
3.	Intel Xeon Workstations	1.90

4.13.5 Research and Consultancy:

Sponsored Research Projects:

S. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1.	Fatigue Evaluation of Materials using Indentation Test Methods	3 years	IGCAR- IITM Cell	26.28	Dr. V. Raghu Prakash
2.	Seismic test on circuit Breakers for siemens Ltd	14.6.2011 - 24.6.2011	Aurangabad	12.00	Dr. C. Sujatha
3.	Seismic test on circuit breaker for siemens		Aurangabad	03.53	Dr. C. Sujatha
4.	Seismic withstand tests on Lighting arresters		LAMCO Hyderabad		Dr. A.S. Sekhar
5.	CFD analysis of leakage flows through labyrinth seals, tip shroud seal, platform gaps and stator-rotor gaps for varying GT engine conditions.		GTRE, Bangalore	18.59	Dr. BVSSS Prasad Dr. A.S.Sekhar
6.	Development of improved orthotic knee joints	17.8.2011- 16.8.2012	Society of Biomedical technology	09.96	Dr. Sujatha Srinivasan
7.	Design and Analysis of Ejection System for Towed Flexible Cylinder	07/08/09- 31/03/12	NPOL Kochi	30.41	Dr. BVSSS Prasad, Dr. Sandipan Bandyopadhyay, Dr. Dhiman Chatterjee Dr. YVSS Sanyasiraju
8.	Upgrading facilities for MEMS design activities	19/03/09- 30/09/12	Natl. Prog. on Micro and Smart Systems	38.74	Dr. Enakshi Bhattacharya Dr. Dhiman Chatterjee
9.	Conjugate heat transfer experiments and analysis for predicting the external and internal heat transfer coefficient of gas turbine vanes and blades	30/03/11- 29/03/13	Gas Turbine Research Establishment	45.42	Dr. BVSSS Prasad, Dr. YVSS Sanyasiraju, Dr. N. Sitaram Dr. Dhiman Chatterjee
10.	Experimental and numerical investigation of bubble motion under combined hydrodynamic and acoustic field"	02/09/11- 01/09/14	Naval Research Board	72.00	Dr. Dhiman Chatterjee Dr. Shamit Bakshi
11.	Design and development of hydrokinetic turbine suited for Indian condition"	18/07/11- 17/07/13	National Institute of Ocean Technology	15.61	-

S. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
12.	Development of Mixed Refrigerant cascade refrigerators operating with non-flammable refrigerants for cooling space simulation chambers	(ongoing)	Indian Space Research Organization (ISRO)	26.00	Dr. G. Venkatarathnam / Dr. S. Srinivasa Murthy
13.	Generation, Storage and Distribution of Solar Hydrogen	2012-2015	Department of Science and Technology (DST)	28.00	Dr. S. Srinivasa Murthy/ Dr. M.P. Maiya
14.	Solar cooling and Production of Potable Water with Two- Stage Silica Gel – Water Adsorption System	2012-2015	Department of Science and Technology (DST)	35.00	Dr. S. Srinivasa Murthy Dr. M.P. Maiya
15.	An investigation for the enhancement of boiling and condensation heat transfer in low temperature sea water desalination system	(ongoing)	National Institute of Ocean Technology (NIOT)	51.00	Dr. A. Mani
16.	Numerical study of wake characteristics for flow past single and multiple vibrating bluff bodies	08.08.2011 to 07.08.2013	Naval Research Board (DRDL)	10.94	Dr. Shaligram Tiwari Dr. V. Raghavan
17.	Multisensor Hot Film Anemometry for Periodic Flow Measurements	Dec. 2009 – Dec. 2011	ARDB	04.73	Dr. N. Sitaram
18.	Hot air calibration of five hole probes	July – 2009 July - 2012	BRNS	33.16	Dr. N. Sitaram Dr. M. Govardhan
19.	Design and Analysis of Ejection System for Towed Flexible Cylinder	3 years	NPOL, Kochi	30.00	Dr. BVSSS. Prasad Dr. Dhiman Chatterjee Dr. YVSS. Sanyasiraju Dr. Sandhipan
20.	Computational Investigations of Single and Two Phase Flows in Creep Distorted Rod-Bundles	3 Years	BRNS	16.80	Dr. BVSSS. Prasad Dr. BSV. Prasad Patnaik
21.	CFD analysis of Leakage Flows through labyrinth seals, tip shroud seals, platform gaps and stator-rotor gaps for varying GT engine conditions	2 Years	GATET GTRE	18.59	Dr. BVSSS. Prasad
22.	Conjugate Heat Transfer Experiments and Analysis for Predicting the External and Internal Heat Transfer Coefficients of Gas Turbine vanes and Blades	30.03.11 – 29.03.13	GATET GTRE	45.50	Dr. BVSSS Prasad Dr. Dhiman Chatterjee Dr. YVSS Sanyasiraju Dr. N. Sitaram
23.	Studies on Transport of hydrogen-steam-air within a confinement	3 years From 12-5-2010	AERB CSR	27.30	Dr.S.K.Das Dr.T.Sundararajan Dr.V.Raghavan
24.	Study of cell migration under thermal and chemical gradients using Micro fluidics based Bio-MEMS	On going	DBT New Delhi	69.48	Dr.S.K.Das Dr.T.Panda Dr.N DasGupta Dr. A DasGupta
25.	Design, Development and Demonstration of High Performance Parabolic Trough Based 300 kWe Solar Thermal Power Plant	2011 - 2014	CSIR	314.87	Dr. K. S. Reddy

S. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
26.	Design and Development of Solar Parabolic Trough Collector for Direct Steam Generation	2010 - 2013	DST	34.00	Dr. K. S. Reddy Dr. A. K. Kolar
27.	Development of Solar Concentrator for Sea Water Desalination	2009 – 2012	DST- UKIERI	29.00	Dr. K. S. Reddy Dr. Tadhg O Donovan, HWU, UK
28.	Natural Evaporator for Textile Industry	16-03-2011 – 31-03-2012	Dept. of Environment, TN	9.60	Dr. Ligy Philip Dr. B. S. Murthy Dr. A. Kannan Dr. K. S. Reddy
29.	Numerical and experimental studies on thermal boundary resistance across nanostructure interfaces	2010-2013	ICSR, IIT Madras	10	Dr. Arvind Pattamatta
30.	Investigation of Heat Transfer Augmentation on dimpled surfaces using wall jet and impinging jet flows	2012-2015	DST	20	Dr. Arvind Pattamatta
31.	Investigation of Mixing in Gas turbine cooling rings with porous medium modeling.	2009-2012	ARDB	18	Dr. Arunn Narasimhan, Dr. Chakravarthy S R
32.	Joint National Centre for Combustion Research and Development	5 years, Started on Dec 2011	DST	460	Dr. T. Sundararajan Dr S R Chakravarthy
33.	Development of a Mode Switching Biogas-Biodiesel/Diesel HCCI Engine with a High Pressure Common Rail Injection System	2 years, Started on March 2012	DST	88.39	Dr. A. Ramesh Dr. J. M. Mallikarjuna.
34.	Experimental and numerical investigation of bubble motion under combined hydrodynamic and acoustic field	2011- 2014	Naval Research Board	72.00	Dr. Dhiman Chatterjee, Co-investigator: Dr. Shamit Bakshi

Industrial Consultancy projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1	Dr. P. Chandramouli	Seismic testing of CTS/CVTS/Circuit breakers)	ABB Vadodara	12.00
2	Dr. P. Chandramouli	Seismic testing of CTS/CVTS/Circuit breakers)	Crompton Greaves	2.00
3	Dr. V. Raghu Prakash	Fracture investigation of shock Absorban,	Gabriel India Ltd. Hosur	0.08
4	Dr. Sujatha Srinivasan	Development of improved Orthotic Knee joints	SBMT	9.96
5	Dr. C. Sujatha Dr. P. Chandramouli Dr. S. Swarnamani	800 kV, 245kV and 145kV, 420kV, CVTS & CTS	ABB Ltd	12.00
6	Dr. C. Sujatha Dr. A.S.Sekhar	Seismic withstand tests on Lightning arresters	LAMCO Hyderabad	---
7	Dr. K. S. Reddy	Evaluation of Insulation Materials	Rockwool Industry, Goenkar Rockwool, Thermocare International	2.40
8	Dr. J.M. Mallikarjuna	Testing of MK10 (HSMF) Engine as per BIS Standards	M/s Greaves Cotton Limited, Chennai	1.75
9	Dr. J.M. Mallikarjuna	Testing of Fuel Saver	M/s MAAG Fuel Saving, Chennai	0.35

RBIC projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1.	Dr. V. Raghu Prakash	HCF Testing of Ti-Specimens under salt environment	GTRE, Bangalore	09.84
2.	Dr. A.S.Sekhar Dr. P Chandramouli	Study of torsional vibrations of Power train of a Dump Truck	BEML, KGF	05.13
3.	Dr. C. L. Rao, Dr B. S. V. Prasad Patnaik, Dr. Abhijit Sarkar	Blast mitigation through fluid structure interaction	DMRL, Hyderabad	21.00
4.	Dr. Dhiman Chatterjee Dr. BVSSS Prasad	Thermal Stress analysis - multiphase steam/water mixing of HP Bypass Valves	BHEL Trichy	16.55
5.	Dr. M. Govardhan	Performance enhancement of 12 hub sixe KKK AP Fans with TLT Blades	BHEL, Ranipet	13.00
6.	Dr. M. Govardhan Dr. K. Viswanath	Low Noise Compact Fan Development for 60 kW, 415V, 3000 RPM three phase PM Machine	BHEL, Ranipet	05.51
7.	Dr. BVSSS. Prasad	Expert review of CFB boiler site performance and design development	BHEL, Trichy	16,00
8.	Dr. BVSSS. Prasad	Effects of Coal feed points on the hydrodynamics in fluidized beds	BHEL, Trichy	15.00
9.	Dr. BVSSS. Prasad Dr. S. Vengadesan	CFD modeling for airflow visualization addressing effects of wind box, SADC dampers, nozzle tilts & mill combinations.	BHEL, Trichy	27.00
10.	Dr. BVSSS. Prasad Dr. K. Srinivasan	CFD modeling of fans for engine cooling applications	M/s Lucas TVS, Chennai	05.00
11.	Dr. BVSSS. Prasad	Literature survey and strategic planning to develop an integrated 3-dimensional computational model for flow dynamic analysis	M/s BHEL, Trichy	02.00
12.	Dr. BVSSS. Prasad	Conjugate convection study on spherical model using CFD	M/s Renault Nissan Technology	02.25
13.	Dr. BVSSS. Prasad	Establishing flow Resistance Coefficient (Zeta) Value through CFD Analysis	M/s BHEL, Trichy	05.00
14.	Dr. BVSSS. Prasad Dr. S. Raghavan	Instrumentation and testing of cold scale down model of 125 MWe & 250 MWe CFBC boilers	M/s BHEL, Trichy	34.40

Research Publications of the faculty members & research scholars:

- | | | | |
|----|--|---|----|
| a. | Total No. of papers published in Refereed National Journals | - | 15 |
| b. | Total No. of papers published in Refereed International Journals | - | 99 |
| c. | Total No. of papers presented in National Conferences | - | 17 |
| d. | Total No. of papers presented in International conferences | - | 68 |

a) In Refereed National Journals:

- Study of dynamic effect of trade irregularities on railway trade system, C. Sujatha and K. Ganesh Babu, Advance in vibration engineering 10(2), 2011, pp 133-148.
- S. Narayanan and Pankajj Kumar: "Numerical Solutions of Fokker Planck Equation of Nonlinear Systems subjected to Random and harmonic excitations" Article in press. Probabilistic Engineering Mechanics.
- Sehu Sebastin , M. Senthil Rajon, S. Jithu and S. Narayanan: "Longitudinal Vibration response of a Vibration isolation Module with Kevlar-29 Fabric Strength Member". Accepted for publication in "Mechanics of Advanced Materials and Structures"

4. Modification of strain life equation for sheet metals considering an isotropy due to crystallographic texture". Accepted for publication by Fatigue and Fracture of Engineering Materials and Structures, September 2011, K. Hariharan and Raghu V Prakash.
5. Thermo-mechanical measurement of elasto - plastic transitions during cyclic loading", accepted for publication by Theoretical and Applied Fracture Mechanics, September 2011, Raghu V Prakash, T. Pravin, T. Kathirvel, B. Krishnan
6. Mathan G and Siva Prasad N, Studies on the dynamic response of piping system with gasketed flanged joints', IPVP-D-09-00098. (Accepted for Publication).
7. M. Dhanwani, B.S.V. Prasad Patnaik, Abhijit Sarkar "Optimal design of an energy harvester for vortex induced vibration" accepted in Fluid Mechanics & Fluid Power 2011 to be held at MANIT, Bhopal in December 2011.
8. K. Saravanan and A.S. Sekhar, "Crack detection in a rotor by operation deflection shape and kurtosis using laser vibrometer measurements" accepted for Journal of vibration and Control. Invited to submit a chapter to the forth coming book, composite material, ISBN 980-953-307-269-7, INTech publishers.
9. C. Sujatha, B.Janarthanan and P. Chandramouli, "Longitudinal Dynamics of a Tracked Vehicle: Simulation and Experiment", accepted for publication in Journal of Terramechanics,
10. S. Ganesan & C. Padmanabhan, "Rotor Dynamic Modeling of High Speed Flexible Coupling", Advances in Vibration Engg., Vol.10, 313-324 (Dec 2011)
11. Muaryappa Amarnath, Sujatha Chandramohan and Swarnamani Settaraman, "Experimental investigations of surface wear assessment of spur gear teeth", online publication before print in Journal of Vibration and Control 1077546311399947
12. B. Janarthanan, Chandramouli Padmanathan and C. Sujatha, "Longitudinal dynamics of a tracked vehicle: simulation and experiment ,became online in Journal of Texas mechanics on 25.02.2012.
13. Annapurna A and N. Siva Prasad, 'Finite element analysis of residual warpage and stress distribution in flip-chip on board (FCOB) assembly during reflow soldering process' EP-10-1065 Accepted for publication. Soldering and Surface Mount Technology.
14. Sudheesh R.S and N. Siva Prasad(2012), 'Comparative study of Heat Transfer Parameter estimation using Inverse Heat Transfer models of a Trailing Liquid Nitrogen Jet in Welding', Journal of numerical methods on heat and fluid flow
15. N. Sitaram, J. M. Issac and M. Govardhan, "Flow Measurements in Passages of Different Diffusers of a Centrifugal Compressor at Off-Design Conditions",Journal of Aerospace Sciences and Technologies, Vol. 64, No.1, pp. 26-38, 2012.

b) In Refereed International Journals:

1. Shem Rao and S. Narayanan: "Robust Control of Chaotic Vibration of Composite Iolite in the Presence of Noise using Sliding Mode Method". Accepted for publication in International Journal of Bifurcation and Chaos.
2. B. Janarthanan, Chandramouli Padamanathan and C. Sujatha: "Lateral Dynamics of Single Unit Slide stressed Tracked Vehicle", International Journal of Automotive Technology, Accepted for Publication & in Press
3. K. Saravanan and A.S. Sekhar: "Crack Identification in a Centilever Beam using Rotational Laser Vibrometer Based Coupled of Bending, Axial and Torsional Vibrations" has been accepted for publication in International Journal of Structural Engineering.
4. Nanda Kishore, A. and N. Siva Prasad 'An Experimental study on Flat-Joggle-Flat bonded joints in composite laminates'. International Journal of Adhension and Adhesives: (Accepted for Publication).
5. Parag Ravindran and Krishna Kannan, "A study of Growth and Remodeling in Soft Tissues" International Journal of Advances in Engineering Sciences and Applied Mathematics.
6. S. Ganesan & C. Padmanabhan, "Modeling of Parametric excitation of a flexible coupling – rotor System due to Misalignment," Proc. ImechE Part c: J. of Mech. Engg. Science, Vol-225, pp.2907-2918.
7. P.Kumar and S. Narayanan, "Efficient path integral solution of Fokker-Plank Equation response, bifurcation and periodicity of nonlinear systems" International Journal of Advances in Engineering Sciences and Applied Mathematics. (Published online at Springer link). DOI: 10.1007/s12572-011-0044-9.
8. A. Sarkar, M.V. Kunte & V.R.Sonti, "Unified Dispersion Characteristics of Structural Acoustic Waveguides" Computer Modeling in Engineering & Sciences, Vol 81 (3), pp 249-267, 2012.
9. D.Mallikarjuna Reddy and S.Swarnamani, "Damage Detection and Identification in Structures by Spatial Wavelet Based Approach" International Journal of Applied Science and Engineering 2012.10,1, pp77-95.
10. K. Saravanan and A.S. Sekhar, "Crack detection in a rotor by operation deflection shape and kurtosis using laser vibrometer measurements" (accepted and in print) Journal of vibration and Control, DOI: 10.1177/1077546312444770.
11. M. V. Kunte, A. Sarkar and V. R. Sonti, "Asymptotic expansions for the coupled wave numbers in an infinite orthotropic flexible fluid-filled cylindrical shell", accepted for publication in Journal of the Acoustical Society of America, 2012.

12. M. Suresh and A. Mani, "Experimental studies on bubble characteristics for R134a-DMF bubble absorber", *Experimental Thermal and Fluid Science*, 39 (2012), 79-89
13. Balamurugan. P and Mani. A, "Numerical studies on vertical tubular generator in vapour absorption refrigeration system", *International Journal of Air-Conditioning and Refrigeration*, 19 (2) (2011), 121-129
14. Balamurugan. P and Mani. A, "Heat and mass transfer studies on compact generator of R134a/DMF vapour absorption refrigeration system", *International Journal of Refrigeration*, 35 (2012), 506-517
15. E.Anil Kumar, M. Prakash Maiya and S. Srinivasa Murthy Measurement and analysis of Effective thermal conductivity of $MmNi_{4.5}AL_{0.5}$ hydride bed; *Ind. Engg. Chem. Res.*, Vol. 50, 2011, pp 12990 -12999
16. S. Srinivasa Murthy Heat and Mass Transfer in solid state hydrogen storage: A review; *Trans, ASME – Jr of Heat Transfer*, Vol. 134, 2012, pp. 1 -11
17. G. Venkatarathnam and L. R. Oellrich, Identification of the phase of a fluid using the partial derivatives of pressure volume and temperature without reference to saturation properties: Application in phase equilibria calculations, *Fluid Phase Equilibria*, 301 (2) 225-233 (2011)
18. V. S. Chakravarthy, R K. Shah, and G. Venkatarathnam, A Review of Refrigeration Methods in the Temperature Range 4 – 300 K, *ASME Journal of Thermal Science and Engineering Applications*, 3 (3), 1-11, (2011)
19. K. Krishnakumar, Anish K. John, and G. Venkatarathnam, A review on transient test techniques for obtaining heat transfer design data of compact heat exchanger surfaces, *Experimental Thermal and Fluid Science*, 35, 738–743 (2011)
20. N. Lakshmi Narasimhan, and G. Venkatarathnam, Effect of mixture composition and hardware on the performance of a single stage JT refrigerator, *Cryogenics*, Volume 51, Issue 8, 446-451(2011)
21. L. Harikrishnan, ShaligramTiwari, M.P. Maiya, " Numerical Study of heat and mass transfer characteristics on a falling film horizontal tubular absorber for R134a- DMAC", *Int, J, Thermal Sciences*, Vol. 50, pp. 149-159, 2011.
22. L. Harikrishnan, M.P. Maiya, ShaligramTiwari, " Experimental investigations on Heat and mass transfer characteristics of falling film horizontal tubular absorber,"*Int, J, Heat and Mass Transfer*, Vol. 54, pp. 2609-2617, 2011.
23. L. Harikrishnan, ShaligramTiwari, M.P. Maiya, " Effect of solution temperature and absorber pressure in R134a-DMAC system using horizontal tubular absorbers", *Int, J, Low Carbon Technologies*, available online December 21, 2011, doi: 10. 1093/ ijct/ctro41.
24. B. Shaji MohanShaligramTiwari, M.P. Maiya, "Parametric studies on coupled columns of liquid desiccant- vapor compression hybrid air conditioning system", *Int, J, Low Carbon Technologies*,available online November 10, 2011, doi: 10. 1093/ ijct/ctro33.
25. Seik Mansoor Ali, RaghavanVaudeven, K. Velusamy, ShaligramTiwari, "A numerical study of concurrent flame propagation over methanol pool surface", *J. Heat Transfer (ASME)*, Vol.134, 041202-1, 2012.
26. Diwakar S.V., P. MangarjunaRao, N. Kasinathan, Sarit K. Das and T. Sundararajan, 2011, Numerical prediction of fire extinguishment characteristics of sodium leak collection tray, *Nuclear Engineering and Design*, Vol. 241 (12), pp. 5189-5202.
27. Ashwin R., S.V. Diwakar and Sarit K. Das, 2012, Numerical Prediction of Contact Line Dynamics on Super-Hydrophobic Surfaces, Accepted for publication in *International Journal of Micro-Nano Scale Transport*.
28. 3 Dimensional numerical simulation of turbulent bluff-body, stabilized, lean premixed combustionS Soma Sundaram, V Babu, CObulesu, R. Sivakumar*Combustion Science and Technology* Vol 184, Issue 3 (in press)
29. Sivakumar S, RavikiranSangras and VasudevanRaghavan, 2012, Characteristics of Turbulent Round Jets in its Potential-Core Region, *International Journal of Mechanical and Aerospace Engineering*, Vol. 6, pp. 119-125.
30. C. Kanthasamy, V. Raghavan, and K. Srinivasan, " Effect of low frequency burner vibrations on the characteristics of jet diffusion flames," *International Journal of Spray and Combustion Dynamics*, Multi- Science, UK, vol. 4, No. 1, 2012, pp. 77-96
31. S. Narayanan, K. Srinivasan, T. Sundararajan, and K. Ramamurthi, "Acoustic characteristics of chamfered Hartmann whistle," *Journal of Sound and Vibration*, Elsevier, vol. 330, issue 11, May 2011, pp. 2470-2496.
32. G.C.Vidyasagar, V. Raghavan, K. Srinivasan," The Effect of Upstream Annular Cavities in Circular Jet Burners on Stability Characteristics of Jet Diffusion Flames." *Combustion Science and Technology*, Taylor & Francis, vol. 183, Number 6, June 2011. Pp. 614-626
33. Ramesh Mallela, and Dhiman Chatterjee, 2011, "Numerical investigation of the effect of geometry on the performance of jet pump", *Proc. I. Mech. E, Part C: J Mechanical Engineering Science*, 0954406211401163.
34. Parikshit Verma and Dhiman Chatterjee, 2011, "Parametric characterization of piezoelectric valveless micropump", *Microsyst Technol*, 17: 1727-1737
35. Abhilash R. Malipeddi, and Dhiman Chatterjee, 2012, "Influence of duct geometry on the performance of Darrieus hydroturbine", *Renewable Energy*, 43, 292-300.
36. Seralathan, S., and Govardhan, M., "Effect of Forced Rotating Vaneless Diffusers on Centrifugal Compressor Stage Performance", *Journal of Engineering Science and Technology*, Vol. 6, No.5, pp. 558-574, 2011.

37. Krishna Nanda Kumar and Govardhan, M., "Secondary Loss Reduction in a Turbine Cascade with a Linearly Varied Height Streamwise Endwall Fence", *International Journal of Rotating Machinery*, Vol. 2011, Article ID 352819, 16 pages doi:10.1155/2011/352819
38. Puneeshwar Lal Verma and Govardhan, M., "Flow Behind Bluff Bodies In Side-By-Side Arrangement" *Journal of Engineering Science and Technology*, Vol.6, No.6, pp. 745-768, 2011.
39. N. Sitaram and G. Ch. V. Shivakumar, "Effect of Partial Shrouds on the Performance and Flow Field of a Low Aspect Ratio Axial Flow Fan Rotor", *International Journal of Rotating Machinery Engines* Volume 2011, Article ID 146969, 11 pages, doi:10.1155/2011/146969
40. Subba Rao, R., Govardhan, M., "Effect of Axial Gap on the Aerodynamics of a Single Stage Turbine", *International Journal of Earth Sciences and Engineering*, Special Issue on Recent Advances and Challenges in Energy-2012, Manipal Institute of Technology, January 4-6, 2012, pp. 371-377.
41. Govardhan, M., and Lakshmana Sampat, D., "Computational Studies of Flow through Cross Flow Fan: Effect of Casing Parameters", *International Journal of Fluid Mechanics Research*, Vol. 39, No.1, pp. 54-74, 2012.
42. K. Ravi Kumar and K. S. Reddy, 4-E (Energy-Exergy-Environmental-Economic) analyses of line focusing stand-alone concentrating solar power plants, *Int. J. of Low Carbon Technologies*, 0 (2012), 1-15
43. K. S. Reddy, K. Ravi Kumar, T. S. O'Donovan and T. K. Mallick, "Performance Analysis of an Evacuated Multi-Stage Solar Water Desalination Systems", *Desalination*, 288 (2012), 80-92
44. N. Sendhil Kumar, K. S. Reddy and T. K. Mallick, Heat loss characteristics of trapezoidal cavity receiver for solar linear concentrating system, *Applied Energy* 93 (2012), 523-531
45. K. Ravi Kumar and K. S. Reddy, Effect of porous disc receiver configurations on performance of solar parabolic trough concentrator, *Heat Mass Transfer*, 48 (2012) 555-571
46. M.V.J.J. Suresh, K. S. Reddy and A.K. Kolar, Thermodynamic analysis of a coal-fired power plant repowered with pressurized pulverized coal combustion, *Proc. IMechE Vol. 0 Part A: J. Power and Energy*, DOI: 10.1177/0957650911418421 (2011).
47. M.V.J.J. Suresh, K. S. Reddy and A.K. Kolar, ANN-GA based optimization of a high ash coal-fired supercritical power plant, *Applied Energy*, 88 (2011), 4867-4873
48. K. S. Reddy, Performance evaluation of solar TIM modified ICS water heating system, *Int. J. of Green Energy, Energy and Environment*, 1(4), (2011) 1-7.
49. M.V.J.J. Suresh, K. S. Reddy and A.K. Kolar, Thermodynamic optimization of advanced steam power plants retrofitted for oxy-coal combustion, *J Eng Gas Turbines Power* 133 (2011) 063001-1-12.
50. R. K. Chandran, I. Banerjee, G. Padmakumar, and K. S. Reddy, Investigation of Thermal Striping in Prototype Fast Breeder Reactor Using Ten-Jet Water Model, *Heat Transfer Engineering*, 32(5), 1–17, 2011.
51. S. Savithiri, A.Pattamatta and S.K. Das, "Scaling Analysis for the Investigation of Slip mechanisms in Nanofluids". *Nanoscale Research Letters*, Vol. 6:471, 1-15, 2011.
52. A. Pattamatta and G. Singh, "Assessment of Turbulence Models in the Prediction of Flow field and Thermal Characteristics wall jet", *Frontiers in Heat and Mass Transfer* (in press), 2012.
53. R.Chandrasekar, C.Balaji, "Sensitivity of Tropical Cyclone Jal simulations to Physics Parameterizations", *Journal of Earth System Science*, 2012, (in press).
54. Praveen Krishnan, K. Srinivasa Ramanujam C. Balaji, "An Artificial Neural Network Based Fast Radiative Transfer Model for Simulating Infrared Sounder Radiances", *Journal of Earth System Science*, 2012, (in press)
55. Srinivasa Ramanujam, R.Chandrasekar, Deepak Subramani, C. Balaji, "On The Effect Of Non-Raining Parameters In Retrieval Of Surface Rain Rate Using TRMM PR And TMI Measurements", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 2012, (in press)
56. Rajesh Baby, C. Balaji, "A Neural Network Based Optimization Of Thermal Performance Of Pcm Based Finned Heat Sinks - An Experimental Study", *Experimental Heat Transfer*, 2012, (accepted).
57. Konda Reddy, C. Balaji, "Estimation Of Temperature Depended Heat Transfer Coefficient in a Vertical Rectangular Fin using Liquid Crystal Thermography", *International Journal of Heat and Mass Transfer*, 2012, (accepted).
58. Baby, R., Balaji, C, "Experimental investigations on phase change material based finned heat sinks for electronic equipment cooling", *International Journal of Heat and Mass Transfer*, (55), 2012, 1642-1649.
59. Pradeep. M. Kamath, C. Balaji, S. P. Venkateshan, "Experimental Investigation of Flow Assisted Mixed Convection in High Porosity Foams in Vertical Channels", *International Journal of Heat and Mass transfer*, (54), 2011:5231-5241.
60. Srinivasa Ramanujam. K, Chandrasekar. R, Balaji. C, "A new PCA-ANN algorithm for retrieval of rainfall structure in a precipitating atmosphere", *International Journal of Numerical Methods for Heat and Fluid Flow*, (21), 2011:1002-1025.
61. Srinivasa Ramanujam. K, Balaji. C, "Radiative Transfer Simulations for the MADRAS Imager of Megha-Tropiques" *Journal of Earth System Science*, (120), 2011:1-17.

62. Gnanasekaran, N, Balaji, C., "A Bayesian approach for the simultaneous estimation of surface heat transfer coefficient and thermal conductivity from steady state experiments on fins", *International Journal of Heat and Mass Transfer*, (54) , 2011: 3060-3068.
63. Premachandran. B C. Balaji, "Conjugate Mixed Convection with Surface Radiation from a Vertical Channel with Protruding Heat Sources", *Numerical Heat Transfer, Part A: Applications*, (60), 2011:171-196.
64. Gnanasekaran, N, C. Balaji, "A Correlation for Nusselt Number under Turbulent mixed Convection using Transient heat transfer Experiment" *International Journal Frontiers in Heat and Mass Transfer (FHMT)*, 2, 023008 (2011) DOI: 10.5098/hmt.v2.2.3008.
65. Maheswari, N., Balaji, C., Ramesh. A, "A non linear regression based multi-objective optimization of parameters based on experimental data biodiesel blends", *Journal of Biomass and Bioenergy* (35), 2011: 2171-2183.
66. Parthasarathy. U, Sundararajan. T, Balaji. C, Velusamy. K, "Characterization of Sodium flow in over hexagonal fuel sub-assemblies", *International Communications in Heat and Mass Transfer* (38), 2011: 928-937.
67. Kumar. A, Balaji, C., "ANN based estimation of heat generation from multiple protruding heat sources on a vertical plate under conjugate mixed convection", *International Journal of Thermal Sciences*, (50), 2011: 532-543.
68. Ramana, P. V., Narasimhan, A. and Chatterjee, D., (2012), "Thermo-Hydraulics of Tube Banks with Porous Interconnectors using Water as Cooling Fluid," *Frontiers in Heat and Mass Transfer*, (in press)
69. Narasimhan, A. and Jha, K. K., (2012), "Bio-Heat Transfer Simulation of Retinal Laser Irradiation," *Int. J. Numer. Meth. Biomed. Engng.* [DOI: 10.1002/cnm.1489]
70. Narasimhan, A., Reddy, B. V. K. and Dutta, P. (2011), "Thermal Management using the Bi-disperse Porous Medium Approach," *Int. J. of Heat and Mass Transfer*, [DOI 10.1016/j.ijheatmasstransfer.2011.11.006]
71. Narasimhan, A., (2011), "The Role of Porous Medium Modeling in Biothermofluids," *J. of the Indian Institute of Science*, 91 (3), 243-266. [Invited review]
72. Gundiah, N., Narasimhan, A. and Dutta, P., (2011) "Macromolecular Transport Through Porous Arterial Walls," *J. of the Indian Institute of Science*, 91 (3), 267-282.
73. Narasimhan, A. and Jha, K. K., (2011), "Bio-Heat Transfer Simulation of Square and Circular Array of Retinal Laser Irradiation," *Frontiers in Heat and Mass Transfer*, 2, 033005 [DOI: <http://dx.doi.org/10.5098/hmt.v2.3.3005>]
74. Jha, K. K. and Narasimhan, A., (2011), "Three-Dimensional Bio-Heat Transfer Simulation of Sequential and Simultaneous Retinal Laser Irradiation," *Int. J. Thermal Sci.*, 50(7), 1191-1198. [DOI:10.1016/j.ijthermalsci.2011.02.005]
75. Ramanathan, V., Narasimhan, A. and Babu, V., (2011), High Rayleigh Number Natural Convection Inside 2D Porous Enclosures Using the Lattice Boltzmann Method, *ASME J. Heat Transfer*, 133 (6), 062501 (9 pages), [DOI:10.1115/1.4003534]
76. Narasimhan, A. and Reddy, B. V. K., (2011), "Resonance of Natural Convection inside a Bi-disperse Porous Medium Enclosure", *ASME J. Heat Transfer*, 133 (4), 042601 (9 pages). [DOI: 10.1115/1.4001316]
77. Narasimhan, A. and Reddy, B. V. K., (2011), Laminar Forced Convection in a Heat Generating Bi-Disperse Porous Medium Channel, *Int. J. Heat and Mass Transfer*, 54 (1-3), 636-644. [DOI: 10.1016/j.ijheatmasstransfer.2010.08.022]
78. Tapano Kumar Hotta, S P Venkateshan, "Natural and Mixed convection heat transfer cooling of discrete heat sources placed near the bottom on a PCB", "*International Journal of Mechanical and Aerospace Engineering*", Vol 6 2012, Page No 266.
79. Pradeep M Kamath, C Balaji, S P Venkateshan, "Experimental investigation of flow assisted mixed convection in high porosity foams in vertical channels", *International Journal of Heat and Mass Transfer*, Vol 54 2011, Page No 5231. Robin Jacob, Tanmay Basak and Sarit K. Das, Experimental and Numerical Study on Microwave heating on Nanofluids, accepted for publication in *International Journal of Thermal Sciences*.
80. Vellaisamy Kumareasan, Ramalingam Velraj and Sarit K. Das, The effect of carbon nanotubes in enhancing the thermal transport properties of PCM during solidification , *Heat and Mass Transfer* published online DOI 10.1007/s00231-012-0980-3.
81. Ashwin Ramesh, S.V. Diwakar and Sarit.K. Das Numerical Prediction of Contact Line Dynamics on Super-Hydrophobic Surfaces , published in *Int. J. Micro-nano Scale Transport*, Volume 2, Number 1, March 2011, Pages 99-107.
82. Soujit Sen Gupta, MANOJSIVA Velayutham, Sreenath Krishnan, Sreeprasad Theruvakkattil Sreenivasan, Pawan K Singh, Pradeep Thalappil, Sarit .K. Das, Thermal conductivity enhancement of nanofluids containing Graphene nanosheets , published in *Journal of Applied Physics*, Volume 110, pages 084302, (2011)
83. Soham Ghosh.; Tamal Das, M Tech; Suman Chakraborty.; Sarit K Das, Predicting DNA mediated drug delivery in interior carcinoma using electromagnetically excited nanoparticles, , published in *Computers in Biology and Medicine*. Volume 41, Issue 9, Pages 771-779 (2011)
84. Diwakar S.V., Mangarjuna Rao P., Kasinathan N., Sarit K. Das, Sundararajan. T "Numerical Prediction of fire extinguishment characteristics of sodium leak collection tray in a fast breeder reactor" , published in *Nuclear Engineering and Design* , Volume 241, Pages 4633-5326 (2011)

85. Nilesh Agarwal, S.M.Ali, K.Velusamy and S.K.Das " A Correlation for Heat Transfer in Laminar Natural Convection in an Enclosure Containing Uniform Mixture of Air and Hydrogen", published in International Communication in Heat and Mass Transfer 39(1),pp.24-29,(2012)
86. Priyank Gullipalli and Sarit K. Das, Mathematical Modelling of Red Blood Cells Squeezing through Micro-capillaries and the Effect of Malaria Infection, published in International Journal of Micro-Nano Scale Transport , Volume 1 ,pages 351-362, (2010)
87. Nilesh Agarwal, K.Velusamy, Sarit.K.Das " A Method to Characterize Mixing and Flammability of Hydrogen air Mixtures in Enclosure" ,published in International Journal of Hydrogen Energy, Volume 36,Issue 19,Pages 12607-12617,September 2011
88. Pawan K. Singh, P. V. Harikrishna, T. Sundararajan, Sarit K. Das, Experimental and Numerical Investigation of Flow of Nanofluids in Microchannels,Journal of Heat Transfer, Volume 133, Issue 12, art no.121701,2011
89. Savithiri S, Arvind Pattamatta and Sarit K Das, Scaling Analysis for the Investigation of Slip Mechanisms in Nanofluids, published in Journal of Nanoscale Research letters, Volume 6,Issue1,Pages-471,2011
90. Venkatesan M., Sarit K. Das and A.R. Balakrishnan ,Effect of Diameter on Two-phase Pressure Drop in Narrow Tubes, published in Experimental Thermal and Fluid Science Volume 35, Issue 3, April 2011, Pages 531-541
91. K. Shaji , Prabhakara Rao Bobbili, Bengt Sundén, Wilfried Roetzel, Sarit K. Das, LMPD – A New Concept in the Analysis of Flow Distribution in Parallel Channel Plate Heat Exchangers, published in Heat Transfer Engg, Volume 33, Issue 8,2012.
92. Suman Bose, Sarit Das, Jeffrey M. Karp and Rohit Karnik, A Semi-Analytical Model to Study the Effect of Cortical Tension on Cell Rolling, Biophysical Journal 2010 Dec 15;99(12):3870-9
93. K. Hari Krishna, Harish Ganapathy, G. Sateesh and Sarit K. Das, Pool Boiling Characteristics of Metallic Nanofluids, published in Journal of Heat transfer-Transaction of the ASME, Volume 133, Issue 11, art.no. 111501,Nov 2011
94. Satyanarayana Murthy V V R and Ganesan, V. (2011)Reacting flow analysis in an aero gas turbine afterburnerInternational Journal of Green Energy, Energy and Environment, Vol. 1, No.4, Jan 2011, pp. 22-29
95. Rajkumar M and Ganesan V (2011)Optimization of flame stabilizer position in an aircraft gas turbine engine afterburner using the finite volume methodInternational Journal of Green Energy, Energy and Environment, Vol.2, No.1, April 2011, pp. 30–39
96. Alan Kuriakose and Ganesan V (2012) CFD Simulation of Spray and Combustion Characteristics in a CRDI Diesel Engine International Journal of Green Energy, Energy and Environment, Vol.2, No. 2, July 2011, pp. 34–40
97. S. Rajkumar, Pramod S. Mehta and Shamit Bakshi, 2012, "Phenomenological modeling of combustion and emissions for multiple-injection common rail direct injection engines", International Journal of Engine Research, published online before print December 13, 2011, doi: 10.1177/1468087411428989.
98. Deepak Kumar Mandal and Shamit Bakshi, 2012, "Internal circulation in a single droplet evaporating in a closed chamber", International Journal of Multiphase Flow,42, 42-51.
99. Deepak Kumar Mandal and Shamit Bakshi, 2012, "Evidence of oscillatory convection Inside an evaporating multicomponent droplet in a closed chamber", Journal of Colloid and Interface Science, doi: 10.1016/j.jcis.2012.04.046.

c) In Proceedings of National Conferences:

1. Mohan Damu and Sujatha Srinivasan, "A Dynamic Model of gait using the roll-over shape for the Ankle-Foot Systems" accepted for oral presentation at the 18th congress of the European Society of Biomechanics.
2. M. Chandra Sekhar Reddy and A. S. Sekhar "Identification of Unbalance and Looseness in Rotor Bearing Systems using Neural Networks" 15th National Conference on Machines and Mechanisms (NaCoMM 2011), IIT Madras, Non.30-Dec. 2011 Narosa Publishers, pp. 301-308.
3. N.Harish Chandra and A.S.Sekhar, "Vibration based fatigue damage assessment of cantilever beams," 15th National Conference on Machines and Mechanisms (NaCoMM 2011), IIT Madras, Non.30-Dec. 2011 Narosa Publishers, pp 291-300.
4. M. Dhanwani, B.S.V. Prasad Patnaik, Abhijit Sarkar "Optimal design of an energy harvester for vortex induced vibration" accepted in Fluid Mechanics & Fluid Power 2011 to be held at MANIT, Bhopal in December 2011.
5. G. T. K. Manohar, Uday Shankar Roy and Abhijit Sarkar, "Vibration Analysis of Bent Pipes using FEM", National Symposium of Acoustics organized by the Acoustical Society of India and held at Bundelkhand University, Jhansi, November, 2011.
6. Shyamprasad N R, Diwakar SV, ShaligramTiwari, Sundararajan T; Numerical simulation of external flows around oscillating rigid bodies using a novel fixed Cartesian grid methodology; IUTAM Symposium on Bluff Body Flows, December 12-16, 2011, IIT Kanpur, India.
7. Raghu Vamsee G, Mithun M G, PratishPatil, ShaligramTiwari; Characteristics of unsteady wake for flow past synchronous transverse oscillation of square prism;IUTAM Symposium on Bluff Body Flows, December 12-16, 2011, IIT Kanpur, India.

8. Jagmohan Singh, Raghu Vamsee G, ShaligramTiwari; Effect of aspect ratio and trailing edge elongation of elliptical cylinder on wake characteristics; IUTAM Symposium on Bluff Body Flows, December 12-16, 2011, IIT Kanpur, India.
9. GautamGhaisas, Shaligram Tiwari; Reconstruction of two-dimensional interfaces by parabolic interface tracking for free surface ; Proceedings of the 38th National Conference on Fluid Mechanics and Fluid Power, December 15-17, 2011, MANIT, Bhopal.
10. Shaji Mohan B., ShaligramTiwari, M.P. Maiya, “ Studies on vapor liquid-desiccant vapor-compression hybrid air-conditioning system: effect of room specific humidity” National Conference on refrigeration and air conditioning, July 07-09, 2011, IIT Madras, Chennai, India.
11. Shyamprasad N R, Diwakar SV, ShaligramTiwari, Sundararajan T; Numerical simulation of external flows around oscillating rigid bodies using a novel fixed Cartesian grid methodology; IUTAM Symposium on Bluff Body Flows, December 12-16, 2011, IIT Kanpur, India
12. N. Sitaram, Aswin Vuddagiri, Rajesh Kumar Panda and S. K. Soren, “High temperature calibration facility for multi hole pressure probes”, submitted for presentation at the 38th National Conference on Fluid Mechanics & Fluid Power and publication in the proceedings, Dec. 15-17, 2011, Bhopal.
13. N. Sitaram and S. M. Swamy, “Performance improvement of a centrifugal compressor by passive means”, submitted for presentation at the 38th National Conference on Fluid Mechanics & Fluid Power and publication in the proceedings, Dec. 15-17, 2011, Bhopal.
14. N. Sitaram and Satyansh Kumar, “Look up table method for five hole probe data reduction”, submitted for presentation at the 38th National Conference on Fluid Mechanics & Fluid Power and publication in the proceedings, Dec. 15-17, 2011, Bhopal.
15. N. Sitaram and K. Vinay, “An improved rotatable single hole pressure probe with high spatial resolution”, submitted for presentation at the 38th National Conference on Fluid Mechanics & Fluid Power and publication in the proceedings, Dec. 15-17, 2011, Bhopal.
16. N. Sitaram and S. M. Swamy, “Experimental investigations on a centrifugal compressor with partial shrouds”, submitted for presentation at the 25th National Convention of Aerospace Engineers and publication in the proceedings, Nov. 4-5, 2011, Ranchi.
17. S Rajkumar, Pramod S Mehta and Shamit Bakshi, 2011, “Modeling Spray Processes in High Pressure Multiple-injection CRDI Engines”, 22nd National Conference on IC Engines And Combustion NIT-Calicut, Kerala, India.

d) In Proceedings of International Conferences:

1. Raghu V Prakash, K. Anadavel and P. Balasubramani: “An overview of Fretting Aspects Relating to Aero-engine Dovetail Attachment” Proceedings of the International Committee on Aeronautical Fatigue 2011, Montreal, Caranada
2. Sudheesh R S. and N. Siva Prasad , ‘Estimation of Parameters of a Trailing Heat Sink in Welding using Inverse Heat Transfer Method’, 11th US National Congress on Computational Mechanics 2011 (USNCCM), Minneapolis, Minnesota, USA
3. N. Siva Prasad, M .S .Shunmugam, Sanjay Kumar and Sriramachandira Aithal, ‘Design Of Slow Speed And High Torque Compact Gearboxes For Rotatable Plug Drive Systems’ 2011, SMiRT 21, New Delhi
4. N. Siva Prasad, M .S. Shunmugam and Sriramachandra Aithal, ‘Finite Element Analysis of Large Diameter Slewing Ring Bearings Of Fast Breeder Reactor Top Shield Structures’ 2011, SMiRT 2, New Delhi
5. Rajesh Male and N. Siva Prasad, ‘Finite Element Analysis of Passenger car Radial Tire using Mooney-Rivlin&Yeoh Models’, ‘International Conference on Applications and Design in Mechanical Engineering (ICADME 2012), Penanag, Malaysia.
6. K.Saravanan and A.S. Sekhar , “Vibration Based Statistical Features For Shaft Crack Detection in a Rotor ” Proc. of International Conference on Vibration Engineering & Technology of Machinery (VETOMAC-VII), November 21 to 24, 2011, Shanghai, China, proc. In CD
7. N.Babu, S.Narayanan, Sujatha Srinivasan , V.Balamurugan , Hybrid locomotion mobile robot for uneven terrain and kinematics analysis, Proceeding of 5th International Conference on Advances in Mechanical Engineering (ICAME-2011), June 06-08, 2011, S.V. National Institute of Technology, Surat, Gujarat, India, pp.154 -158.
8. Vishnu Prasad and Mani. A, “Experimental investigations with various nozzles in a two phase flow jet pump”, 11th Asian International conference on Fluid Machinery, Nov 21 - 23, 2011, IIT Madras
9. Somasundaram. D, Mani. A, and Kamaraj M, “Metal foam wick structure for heat pipe applications”, Annual International Conference on Material Science, Metals and Manufacturing (M32011), Singapore, Dec 12-13, 2011
10. Balamurugan. P and Mani. A, “Experimental studies on R134a-DMF tubular generator of vapour absorption refrigeration system”, Fifth International Conference on Energy Research & Development, Kuwait, 2012 (Accepted for oral presentation)

11. Balamurugan. P and Mani. A, "Effect of operational parameters on heat and mass transfer in generator of R134a-DMF absorption refrigeration system", 14th International Refrigeration and Air conditioning Conference, Purdue, July 16-19, 2012 (Accepted for oral presentation)
12. Somasundaram. D, Mani. A and Kamaraj M, "Numerical analysis of thermal performance of flat heat pipe", 14th International Refrigeration and Air conditioning Conference, Purdue, July 16-19, 2012 (Accepted for oral presentation)
13. Vishnu Prasad, Kumarasamy .Sand Mani. A, " Effect of various nozzle profiles on performance of a two- phase flow jet pump, International conference on fluid mechanics, heat transfer and thermodynamics, January 2012, Zurich, Switzerland
14. G. Venkatarathnam and S. Srinivasa Murthy, An Analysis of Coupled PEM Fuel cell Metal Hydride Hydrogen Storage Tank System, 2nd European Polygeneration Conference, Tarragona, Spain, 30th March-1st April 2011
15. M. Siva Sankar and G. Venkatarathnam, Experimental investigations on a mixed refrigerant nitrogen liquefier, paper No. 647, Proc. Of the International Congress of Refrigeration, August 21-26, 2011, Prague, Czech Republic
16. Sreenath, K., Sarit K. Das and Dhiman Chatterjee, 2011, "Effect of acoustic cavitation on saturated nucleate pool boiling", WIMRC 3rd Intl Cavitation Forum, Warwick University, UK, 4 -6 July, 2011
17. Kishorkumar Sarva., Kumaraswamy, S., and Govardhan, M., "Optimization of Pump Selection for Turbine Mode Operation" Hydrovision India, 5 – 7, May 2011 – pp.1-12, New Delhi, India.
18. Rajesh Kumar Panda and B.V.S.S.S. Prasad, "Flow Visualization and Conjugate Heat Transfer Study From Shower Head Impinging Jets", ASME-Turbo Expo 2011, Paper id: GT2011- 45098, June 6-10, 2011, Vancouver, Canada
19. Krishna Nandan Kumar and M. Govardhan., "Flow through Turbine Cascade with and without Streamwise End Wall Fence- Study of Flow Topology" Proceedings of the 10th International Symposium on Experimental Computational Aerothermodynamics of Internal Flows, (ISAIF 10), Paper No. 134, pp. 1-10, July 4-7, 2011, Brussels, Belgium.
20. Ramakrishna, P.V., and Govardhan, M., "Studies on downstream stator with rotor re-staggering and forward sweeping in a subsonic axial compressor stage" Proc. of the ASME International Mechanical Engineering Congress and Exposition (IMECE2011), Paper No. IMECE2011-65101, pp. 1-10, November 11-17, 2011, Denver, Colorado
21. Ramakrishna, P.V., and Govardhan, M., "Effect of Tip Clearance on the Performance of Forward Swept Subsonic Axial Compressor Rotors at High Stagger Angles" Proc. of the ASME International Mechanical Engineering Congress and Exposition (IMECE2011), Paper No. IMECE2011-65103, pp. 1-11, November 11-17, 2011, Denver, Colorado.
22. T. Manoj Kumar Dundi, N. Sitaram and M. Suresh, "Application of Gurney Flaps on a Centrifugal Fan Impeller", accepted for presentation at the 11th Asian International Conference on Fluid Machinery and publication in the proceedings, Nov. 21-23, 2011, Chennai, India.
23. M. Suresh and N. Sitaram, "Gurney flap applications for turbomachinery flow control Impeller", submitted for presentation at the 9th International Conference on Mechanical Engineering and publication in the proceedings, Dec. 10-20, 2011, Dhaka, Bangladesh.
24. Ramesh Rajkumar, Ramamurthy, S., Govardhan, M., "Mixed Flow Impeller Performance Deviations due to Variation in Clearance Gap" Proceedings of the 38th National Conference on FM & FP (FMFP-2011), TM_01, December 13-17, 2011, MANIT, Bhopal
25. Rayapati Subba Rao and Govardhan, M., "Effect of axial gap on the aerodynamics of a one and half stage turbine" Proceedings of the 38th National Conference on FM & FP (FMFP-2011), TM-07, December 13-17, 2011, MANIT, Bhopal.
26. Rajesh Kumar Panda, Sudheer Kumar, B.V.S.S.S. Prasad, "Conjugate Heat Transfer From a Flat Plate With Different Film Cooling Configurations", 21st National & 10th ISHMT-ASME Heat and Mass Transfer Conference, Paper id: ISHMT_IND_03_013, December 27-30, 2011, IIT Madras, India
27. Rayapati Subba Rao and Govardhan, M., "Effect of Axial Gap on the Aerodynamics of a Single Stage Turbine" Recent Advances and Challenges in Energy (RACE 2012), The Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal, January 4-6, 2012, pp. 371-377.
28. Govardhan, M. and Aji Abraham, " Effect of Axial Gap on the Performance of an Axial Gas Turbine", Paper submitted to ICADME 2011 (International Conference on Applications and Design in Mechanical Engineering), Universiti Malaysia Perlis (UniMAP), Kangar, Malaysia, 27-28 February, 2012.
29. Govardhan, M. and Arjun Kulkarni, " Effect of Moving Wall on Secondary Flow Losses in a Reaction Turbine Cascade". Paper submitted to ICADME 2011 (International Conference on Applications and Design in Mechanical Engineering), Universiti Malaysia Perlis (UniMAP), Kangar, Malaysia, 27-28 February, 2012.

30. K. S. Reddy, V. A. Devaraj, "4-E (Energy-Exergy-Environment-Economic) Analysis of Stand Alone and Coal Hybrid Solar Power Plants", International Conference on Energy Security, Global Warming and Sustainable Climate - Solaris 2012, Varanasi, India, 7-9 February 2012, pp36
31. K. S. Reddy, T. Sri Hari Vikram, "Investigations on Solar Parabolic Dish based Vapour Absorption Air Conditioning System" Proceedings of the 20th National and 9th International ISHMT-ASME Heat and Mass Transfer Conference, IIT Madras, 27-30 December, 2011
32. K. Ravi Kumar and K. S. Reddy, Experimental investigation of solar parabolic trough concentrator with porous disc enhanced receiver, 3rd International Conference on Advances in Energy Research (ICAER 2011), IIT Bombay, India, 9-11 December, 2011
33. K. S. Reddy and K. Ravi Kumar, Investigation of heat losses from the trapezoidal cavity receiver for linear Fresnel reflector solar power system, ISES Solar World Congress (SWC 2011), Kassel, Germany, 28th August – 2nd September 2011.
34. K. S. Reddy and Veershetty Gumtapure, Flux distribution and field analysis of CSP collector, ISES Solar World Congress (SWC 2011), Kassel, Germany, 28th August – 2nd September 2011
35. K. S. Reddy and Vikram Singh, "Effect of Knudsen Number on Effective Thermal Conductivity of Two-Phase Materials", 31st Int. Thermal Conductivity Conference and 19th Int. Thermal Expansion Symposium, Saguenay, Quebec, Canada, 26 - 30 June 2011
36. A. Pattamatta, G. Singh and H. Mongia. "Assessment of Turbulence Models for free and confined Impinging jet flows". 42nd AIAA Thermophysics Conference, June 27-30, 2011, Hawaii, USA.
37. G. Singh, A. Pattamatta and H. Mongia. "Assessment of Turbulence Models for heated wall jet flows". 42nd AIAA Thermophysics Conference, June 27-30, 2011, Hawaii, USA.
38. R. Chandrasekar, Chaitanya S. Paranjape C. Balaji, "Track forecasting of tropical cyclones in the North Indian Ocean with 3DVAR Data Assimilation Techniques", Opportunities and Challenges in Monsoon Prediction in a Changing Climate (OCHAMP-2012), Feb 21-25, 2012 Pune, INDIA.
39. K. Srinivasa Ramanujam, Deepak Subramani, C. Balaji, "Profile Matching Algorithm using Tropical Rainfall Measuring Mission Precipitation Radar and Microwave Imager measurements in a Bayesian Framework", Opportunities and Challenges in Monsoon Prediction in a Changing Climate (OCHAMP-2012), Feb 21-25, 2012 Pune, INDIA.
40. Velusamy K, Anoop B, C. Balaji, "Comparative Analysis of Heat Transfer in Serrated and Solid Finned Tubes", 21 st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
41. Samarjeet Chanda, C. Balaji, et al "An Inverse Analysis for Estimation of Thermal Conductivity of Orthotropic Composite Medium Using Artificial Neural Network", 21 st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
42. S.P.Pathak, K.Velusamy, C. Balaji, "Conjugate Heat Transfer Characteristics of Finned Tube Heat Exchanger in Fast Breeder Reactors", 21 st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
43. Pradeep M Kamath, C. Balaji, S.P. Venkateshan, "Effect Aspect Ratio on Mixed Convection in a Highly Porous Form- An Experimental study", 21 st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
44. Anil Kumar Sharma, B.K, C. Balaji, et al, "Conjugate Conduction, Natural Convection and Thermal Radiation Heat Transfer from Fins Attached To Sodium Service Valve Of Fast Reactor", 21st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
45. U. Parthasarathy, C. Balaji, et al, "Characterization of Axial Flow of Liquid Sodium Over Hexagonal And Circular Subassemblies in a Fast Reactor Core", 21 st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
46. U. Parthasarathy, C. Balaji, et al, "Estimation of Effect of Inter-Wrapper Flow Heat Transfer on Core Temperatures Using Porous Body Model", 21 st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
47. B. Konda Reddy, N. Gnanasekaran, C. Balaji, "Simultaneous Estimation of Multiple Parameters With Bayesian Inference Based on Liquid Crystal Thermography Data", 21 st National and 10th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
48. Shaik. Imran Ahamed, C. Balaji, "In Search A Simpler Thermal Model For Mixed Convection From Protruding Heat Sources On A Vertical Plate: A Combined Numerical And Experimental Study", 21 st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.

49. Rajesh Baby, C. Balaji, "Improving the Performance of Portable Electronic Equipment Using Finned Heat Sinks Filled With Phase Change Materials", 21 st National and 10 th International ISHMT-ASME Heat and Mass Transfer conference, Dec 27-30, Madras, India, 2011.
50. C. Balaji, K. Srinivasa Ramanujam, "Retrieval Of Rainfall From The Madras Microwave Imager Of Megha-Tropiques", IEEE Geoscience and Remote Sensing Society, Vancouver, BC, Canada, July 24 -29, 2011.
51. Kaushal Kumar Jha, Sundarraj,C., Arunn Narasimhan, "Natural Convection in Vitreous humor during Transpupillary ThermoTherapy(TTT)," International Conference on Computational methods for Thermal Problems, Dalian, China, 2011.
52. Sundarraj,C., Kaushal Kumar Jha, Arunn Narasimhan, "Natural Convection in Vitreous humor of Human Eye during Transpupillary ThermoTherapy(TTT)," 21st National and 10th ISHMT-ASME Heat and Mass Transfer conference, IIT Madras, Chennai, 2011.
53. Sridar.S, Kaushal Kumar Jha, Arunn Narasimhan Non-Fourier Bio Heat Transfer Modeling of Retinal Laser Surgery, 21st National and 10th ISHMT-ASME Heat and Mass Transfer conference, IIT Madras, Chennai, 2011.
54. P. V. Ramana, Arunn Narasimhan and Dhiman Chatterjee "Experimental study of forced convection in porous medium enhanced tube banks using humid air as coolant", 21st National and 10th ISHMT-ASME Heat and Mass Transfer conference, IIT Madras, Chennai, 2011.
55. Tapano Kumar Hotta, S P Venkateshan, "Natural and Mixed convection heat transfer cooling of discrete heat sources placed near the bottom on a PCB", "International Conference on Fluid Mechanics, Heat Transfer and Thermodynamics", Zurich, Switzerland, January, 15 - 17, 2012.
56. Tapano Kumar Hotta, S P Venkateshan, "Natural convection heat transfer from protruding discrete heat sources", 21st National and 10th ISHMT-ASME Heat and Mass Transfer Conference, IIT Madras, India, 27 -30st December 2011.
57. Pradeep M Kamath, C Balaji, S P Venkateshan, "Effect of aspect ratio on mixed convection in a highly porous foam - an experimental study", 21st National and 10th ISHMT-ASME Heat and Mass Transfer Conference, IIT Madras, India, 27
58. Prasanna Swaminathan, S P Venkateshan, "The role of radiation and conduction on temperature inversion in a horizontal participating media", 21st National and 10th ISHMT-ASME Heat and Mass Transfer Conference, IIT Madras, India, 27 -30st December 2011.
59. Vikas R, Mallikarjuna J M and Ganesan V, 3-D Numerical Study of Effect of Flow Parameters upon the Uniformity of NH₃ in Urea-SCR, Proceedings of 3rd International Conference on Mechanical, Industrial, and Manufacturing Technologies (MIMT 2012), Shenzhen, China, March 24-25, 2012.
60. Gnana Sagaya Raj, A., J. M. Mallikarjuna and V. Ganesan, Flow Investigation on Different Combustion Chamber Configuration in a DI Diesel Engine – A CFD Approach, Proceedings of 3rd International Conference on Mechanical, Industrial, and Manufacturing Technologies (MIMT 2012), Shenzhen, China, March 24-25, 2012.
61. Harshit Kumar Gupta and Mallikarjuna, J M, Thermo-Kinetic Model to Predict Start of Combustion in Homogeneous Charge Compression Ignition Engine, Proceedings of International Conference on Mechanical, Production and Automobile Engineering (ICMPAE-2011), Pattaya, Thailand, Dec 17-18, 2011.
62. Krishna Addepalli, S., Y. Ramachandra Babu, Davinder Kumar and J. M. Mallikarjuna, Effect of Ports Configuration on Trapping Efficiency of a Two-Stroke Engine – A CFD Analysis, Proceedings of SAE 10th International Conference on Engines & Vehicles (SAE 11ICE-0253), Capri, Napoli, Italy, Sep 11-15, 2011.
63. Vikas R, Mallikarjuna J M and Ganesan V 3-D Numerical Study of Effect of Flow Parameters upon the Uniformity of NH₃ in Urea-SCR 2012 3rd International Conference on Mechanical, Industrial, and Manufacturing Technologies (MIMT 2012). March 24-25, 2012, in Shenzhen, China, M10012, Applied Mechanics and Materials Journal (ISSN: 1660-9336), April 2012
64. Gnana Sagaya Raj, J.M.Mallikarjuna and V.Ganesan Flow Investigation on Different Combustion Chamber Configuration in a DI Diesel Engine – A CFD Approach 2012 3rd International Conference on Mechanical, Industrial, and Manufacturing Technologies (MIMT 2012). March 24-25, 2012, in Shenzhen, China, M10015, Applied Mechanics and Materials Journal (ISSN: 1660-9336), April 2012
65. Deepak Kumar Mandal, and Shamit Bakshi, 2011, "Measurement of surface concentration of an evaporating multicomponent droplet under different ambient Conditions", 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal.
66. T.G. Vignesh and Shamit Bakshi, 2011, "Static Interface Reconstruction using Piecewise Continuous Linear Interface Calculation (PCLIC)", 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal.
67. Supriya Sarkar, S. Pimpalnerkar, B. Rogberg, P. Sivaprasad, Shamit Bakshi, 2011, "Numerical Modelling of Gas and Liquid Metal Flow in Atomization Chamber during Powder Production", 24th European Conference on Liquid Atomization and Spray Systems, Estoril, Portugal.

68. S Rajkumar, Pramod S Mehta and Shamit Bakshi, 2011, "Parametric Investigation for NO_x and Soot Emissions in Multiple-injection CRDI Engine using Phenomenological Model", JSAE/SAE International Conference on Powertrains, Fuels and Lubricants, Kyoto, Japan, Paper No. JSAE 20119210 (SAE 2011-01-1810).

Distinguished Visitors to the Department:

Sl.No.	Name of the visitor and Designation	Date of visit	Purpose of visit
1	Dr. Alberto Coronas University Rovira i Virgili, Tarragona, Spain	December 2011 for one month	
2	Dr. M. C. Bourouis, University Rovira i Virgili, Tarragona, Spain	February-March 2011 for one month	
3	Dr. Martin Geier, IRMB, TU Braunschweig	February-March 2012	DAAD-IIT Faculty exchange

4.13.6 Other Activities of the Department/Centre:

- Acquired a CNC Routing Machine with project funds (about 6 lakhs) for profile cutting of soft materials (wood, plastic, composites, Cu, Al, etc). The machine is housed in MDS 103.
- Resource Person from TLC core team for FDP-2011 for the session on Active and Cooperative Learning.
- Dr Sujatha Srinivasan represented IIT-Madras at the National Conference on Role of Assistive Technologies in Enabling Access of Persons with Disabilities held at IIM Bangalore on 20th and 21st January, 2012

4.14 DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

1. Introduction:

The Department of Metallurgical and Materials Engineering (MME) is one of the oldest departments of IIT Madras, established in 1959 as Department of Metallurgy at the very inception of the Institute. The Department is actively engaged in research, education and industrial consultancy. It offers B.Tech., M.Tech., M.S. and Ph.D. degrees. The Department's teaching, research and consultancy activities cover a broad spectrum of materials science & engineering and industrial metallurgy (metal casting, metal joining, metal forming and materials technology). The Department developed a unique character at the outset owing to its strong linkages with the industry and the expertise of the faculty in industrial metallurgy. Over the years, the research interests of the faculty have diversified into many areas of materials science & engineering. The Department has excellent research infrastructure in the broad areas of materials processing (forming, joining, casting, particulate processing, nanostructured materials), characterization (X-ray diffraction, electron microscopy, thermal analysis, scanning probe microscopy), mechanical testing, environmental degradation, surface engineering, and computational materials science. The Department continues to strive for excellence and realizing its vision of becoming 'a pioneering Department in the country for teaching, research, and consultancy in emerging areas of materials science and engineering, while consolidating the Department's strength in traditional areas of metallurgical engineering.' The activities for the year 2011-2012 bear testimony to a vibrant department's progress in keeping with its vision.

2. Academic Programmes:

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	30	37	24	22	4	117
Dual Degree	12	12	11	9	13	57
M.Tech.	20	18	1	0	0	39
M.S.	7	8	6	2	0	23
Ph.D.	20	16	16	8	21	81
Total	89	91	58	41	38	317

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
Abroad:				
1	Sujith Ravindran	International Conference on High Performance Ceramics	November 04-07, 2011, Xiamen, China	
India:				
1	Devaraj	49th National Metallurgist Day and 65th Annual Technical Meeting of Indian Institute of Metals	Nov. 13-16, Hyderabad	Dept.
2	Niraj M Chawake	49th National Metallurgist Day and 65th Annual Technical Meeting of Indian Institute of Metals	Nov. 13-16, Hyderabad	Dept.
3	Praveen Kumar	49th National Metallurgist Day and 65th Annual Technical Meeting of Indian Institute of Metals	Nov. 13-16, Hyderabad	Dept.
4	Gerald Tennyson	49th National Metallurgist Day and 65th Annual Technical Meeting of Indian Institute of Metals	Nov. 13-16, Hyderabad	Dept.
5	Sai Gautham	49th National Metallurgist Day and 65th Annual Technical Meeting of Indian Institute of Metals	Nov. 13-16, Hyderabad	Dept.
6	Hrishikesh Nath	49th National Metallurgist Day and 65th Annual Technical Meeting of Indian Institute of Metals	Nov. 13-16, Hyderabad	Dept.
7	Sujith Ravindran	Two days international workshop Advanced Ceramics for the Future ACF-2012	Jan. 16-17, 2012	

8	Sangeetha Raman,	Two days international workshop Advanced Ceramics for the Future ACF-2012	Jan. 16-17, 2012	
9	A. B. Kousaalya	Two days international workshop Advanced Ceramics for the Future ACF-2012	Jan. 16-17, 2012	
10	N. Srinivasan	Two days international workshop Advanced Ceramics for the Future ACF-2012	Jan. 16-17, 2012	
11.	P. Mohan Babu	Two days international workshop Advanced Ceramics for the Future ACF-2012	Jan. 16-17, 2012	
11.	P. Mohan Babu	Four-day course on Computational Materials Thermodynamics: Hands on Training with Thermo-Calc	December 18-21, 2011	

Names of students/scholars who won outside prizes and awards:

Sl.No.	Name of the Student/Scholar	Name of Prize	Prize awarded by
1	Devaraj	Second prize in Poster Competition in Emerging Materials Section	Indian Institute of Metals
2	Niraj M Chawake	Second prize in Poster Competition in Emerging Materials Section	Indian Institute of Metals
3	Hrushikesh Nath	Best poster award	Indian Institute of Metals
4	Gerald Tennyson	Best oral presentation	Indian Institute of Metals
5.	Dr. Sumantra Mandal	Alexander von Humboldt Research Fellowship to carryout research at the Max Planck Institute for Iron Research (MPIE), Dusseldorf, Germany.	Alexander von Humboldt Foundation
6	B. Ratna Sunil	BAJPAI-SAHA Award for the best student paper presentation	XXII National Conference of the Society for Biomaterials and Artificial Organs (India)
7	Zaheatha S, Rajathi, Rajkamal Balu, Madumathi.K, S.Alamelu Bai	Best Poster Presentation Award (First)	XXI National Conference of the Society for Biomaterials and Artificial Organs (India)
8	S.L. Pramod	Canadian Commonwealth Scholarship Programme to conduct research for 5 months in Ryerson University	
10	G. M. Karthick	Shastri Indo-Canadian Institute scholarship to do research for three months in Canada	
11	Saikumar Vidula	Shastri Indo-Canadian Institute scholarship to do research for three months in Canada	

4.14.3 Faculty and their activities:

Faculty:

Name and Qualifications

Major area of specialization (only 3 areas)

Professor:

Prasanna Kumar, T.S. [Head]
Ph.D. (IIT Madras)

Process modeling, CAD/CAM, finite element analysis, higher level automation, establishment of mathematical modeling techniques related to steel plant technology

Kesavan Nair, P.
Ph.D. (IIT Madras)

X-ray diffraction, residual stress analysis, electroless coatings, synthesis and characterization of carbon nanotubes

Bhattacharya, S.S.
Ph.D. (IIT Madras)

Superplasticity of materials (analytical and experimental) super plastic forming, high temperature deformation behavior of materials, metal forming, advanced materials testing

Ganesh Sundara Raman, S. Ph.D. (IIT Madras)	Fatigue, fracture mechanics, fretting fatigue, short cracks, mechanical behavior of materials, fretting wear, tribology, thermal spray processing, coatings
Kamaraj, M. Ph.D. (IIT Madras)	Creep deformation and fracture mechanisms of titanium aluminides, superalloys and welded joints, development of wearsurfacing materials; tribological tests on weld deposits (plasma transferred arc, plasma spray, HVOF processes etc.), studies of the relationships between processing, microstructure, deformation and fracture processes in advanced materials, fretting fatigue of structural materials, development of marine propeller materials
Murty, B.S. Ph.D. (IISc Bangalore)	Thermodynamics and kinetics of phase transformations, mechanical alloying and rapid solidification processing, nanocrystallization of bulk metallic glasses, nanocrystalline metals, alloys and intermetallic compounds, nanocomposites, grain refinement of Al alloys, in-situ composites, transmission electron microscopy
Prasad Rao, K. Ph.D. (IIT Madras)	Welding, Surface Engineering (corrosion and wear)
Sampath, V. Ph.D. (IISc Bangalore)	Shape memory alloys and smart materials, composite materials, powder metallurgy, sol-gel processing, physical metallurgy, structure-property correlations
Sampath Kumar, T.S. Ph.D. (IISc Bangalore)	Biomaterials, microwave processing, surface science, intermetallics, high T _c superconductors, analytical instrumentation
Paramanand Singh Ph.D. (IIT Bombay)	Study of advanced ceramics (both functional and structural ceramics), nanostructured materials, shape memory alloys and electronic materials, ceramic matrix composites, metal matrix composites, mechanical alloying, metallic foam and warm compaction, powder metallurgy, powder characterization
Balasubramanian, M. Ph.D. (IIT Madras)	Advanced ceramics & composites, nanocomposites processing, materials characterization
Uday Chakkingal Ph.D. (Rensselaer Polytechnic Institute)	Metal forming and materials processing, severe plastic deformation processes, aluminium alloys, fatigue
Associate Professor:	
Prathap Haridoss Ph.D. (U. Wisconsin – Madison)	Production and characterization of carbon nanotubes, synthesis of CdS nanocrystals, CO tolerant PEM fuel cell catalysts
Hari Kumar, K.C. Ph.D. (IIT Delhi)	Computational thermodynamics, CALPHAD: computer coupling of phase diagrams and thermochemistry, thermodynamic database for technology important materials, process metallurgy, physical metallurgy, Ab Initio methods, microstructure simulation
Phanikumar, G. Ph.D. (IISc Bangalore)	Solidification using electromagnetic levitation and melt spinning, transport phenomena in manufacturing processes, microstructure simulation and characterization.
Subramanya Sarma, V. Ph.D. (IIT Madras)	Materials processing, development, characterization and microstructure-mechanical properties correlations in engineering materials
Assistant Professor:	
Bauri, R. Ph.D. (IISc Bangalore)	Metal matrix composites, aluminium alloys, solid oxide fuel cells

<p>Gandhi, A.S. Ph.D. (IISc Bangalore)</p>	<p>Physical ceramics; ceramic nanomaterials; high temperature protective coatings (environmental and thermal barrier coatings); materials for energy systems (solid oxide fuel cells, SOFC's); phase stability and transformations; metastable effects; thermally driven interactions in layered systems; surface engineering; zirconia ceramics; non-equilibrium phenomena in oxides</p>
<p>Janaki Ram, G.D. Ph.D. (IIT Madras)</p>	<p>Joining of materials, rapid manufacturing, aerospace materials, biomaterials, surface engineering</p>
<p>Ravi Kumar, N.V. Ph.D. (MPI-Stuttgart)</p>	<p>Polymer derived ceramics, silicon carbide/silicon nitride ceramics, nanostructured materials, high temperature mechanical properties, object oriented finite element programming-for prediction of macroscopic properties</p>
<p>Ravi Sankar, K. Ph.D. (IISc Bangalore)</p>	<p>High temperature deformation, superplasticity, nanocrystalline materials, size effects in plastic deformation</p>
<p>Sabita Sarkar Ph.D. (IISc)</p>	<p>Process modeling/design of metallurgical and chemical processes, modeling and simulation of flow through packed bed, fluidized bed, heat and mass transfer, granular flow, multi-phase flow, reacting flow etc.</p>
<p>Sankaran, S. Ph.D. (IIT Kanpur)</p>	<p>Mechanical behavior of materials, electron microscopy, structure property correlations</p>
<p>Bakshi, Srinivasa Rao Ph.D. (Florida International University, Miami, USA)</p>	<p>Thermal spraying, Carbon nanotube reinforced composites, Microstructure property correlations at different length scales, Nuclear materials</p>
<p>Lakshman Neelakantan Ph.D. (Max-Planck Institute for Iron Research, Düsseldorf, Germany & Ruhr University Bochum, Bochum, Germany)</p>	<p>Corrosion characteristics, Electrochemical behavior of NiTi, NiTi-X shape memory alloys (SMAs), Smart coatings for corrosion protection, Electro-dissolution, -planarization and -deposition, Micro and mechano electrochemistry</p>
<p>Manas Mukherjee Ph.D. - Technical University Berlin, Germany</p>	<p>Metal foams - production and characterization, Physics of foaming, X-ray tomography, Solidification</p>
Emeritus Scientist/ Emeritus Professor:	
<p>Seshadri, S.K. Ph.D. (Imperial College London)</p>	<p>Electroless deposition of nickel and its composites. evaluation of wear and corrosion characteristics of electro and electroless composite coatings. high temperature oxidation studies of composite coatings. stress corrosion behaviour of maraging steel weldments</p>
<p>Venugopal, P. Ph.D. (IIT Madras)</p>	<p>Metal forming processes, component development, press tool design (inclusive of applied maths), metal forming machine tools dynamics, design & applications (inclusive of applied maths), cold extrusion of materials, solid state joining of dissimilar powder metallurgical preforms, ironing of friction prone materials, deep drawing and bending of sheet materials - powder metallurgical characterization, viscous extrusion of ceramics (ybcO, nano-materials etc). energy related aspects relevant to metal deformation the main focus is towards ensuring cost effectiveness in metal forming with conservation of energy in terms of machines, tools and processes</p>

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1	Prof. T.S. Sampath Kumar	International Conference on "Biomaterials, Implant Devices and Tissue Engineering BIDTE-2012	January 6-8, 2012

2.	Prof. B.S. Murty	Materials Science Section of Indian Science Congress, Bhubaneswar	Jan 3-8, 2012
Seminar:			
1	Prof. N. Siva Prasad Prof. A.S. Sekhar Prof. M. Kamaraj	National Seminar on Tribology and Materials	August 26, 2011
Symposia:			
1	Srinivasa Rao Bakshi, Sandip Harimkar and Arvind Agarwal	Advances in Surface Engineering: Alloyed and Composite Coatings in 2012 TMS Annual Meeting and Exhibition, Orlando, USA	March 11-15, 2012
Workshop:			
1	Prof. B. S. Murty and Dr. Srinivasa Rao Bakshi	A one day workshop on Atom Probe Tomography (APT-2012)	January 9, 2012
2	Dr. N. V. Ravi Kumar and Dr. R. Jayaganthan	International Workshop on Advanced Ceramics for the Future (ACF 2012)	January 16-17, 2012
Short term Course:			
1	Prof. M. Kamaraj and Dr. Srinivasa Rao Bakshi	Two day course on Heat Treatment of Industrial Components	July 29-30, 2011
2	Prof. M. Balasubramanian, Prof. R. Velmurugan and Prof. M. Kamaraj	Two day course on Processing and Applications of Composite Materials	August 26-27, 2011
3	Prof. M. Kamaraj, Prof. K. Prasad Rao, and Mr. G. Jothinathan	Two-day course on Failure Analysis of Industrial components	October 28-29, 2011
4	Dr. K. C. Harikumar and Prof. M. Kamaraj	Four-day course on Computational Materials Thermodynamics: Hands on Training with Thermo-Calc	December 18-21, 2011
5	Prof. M. Kamaraj, Dr. T.S.N. Shankara Narayanan and Dr. U. Kamachi Mudali	Training course on Corrosion Control and Prevention	February 14-15, 2012

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings

SI.No.	Name of faculty	Title	Institution	Period
Workshop:				
1	Dr. Srinivasa Rao Bakshi	Workshop on Mechanical Behavior of Systems at Small Length Scales	Trivandrum	September 18-21, 2011
2	Dr. V. Subramanya Sarma	Workshop on "X-Ray Diffraction Methods" from 26th December to 31st December 2011 organized by UGC networking resource centre for materials (NRC-M)	IISc, Bangalore	
3	Prof. T. S. Sampath Kumar	Workshop on Nanocoating and Applications - NANOCOAT 2011	Dept. of Mechanical Engineering, Anna University, Chennai	May 30, 2011
4	Dr. Srinivasa Rao Bakshi	Four-day course on Computational Materials Thermodynamics: Hands on Training with Thermo-Calc	IIT Madras	December 18-21, 2011
5	Dr. N. V. Ravi Kumar	Four-day course on Computational Materials Thermodynamics: Hands on Training with Thermo-Calc	IIT Madras	December 18-21, 2011
6	Dr. V. Subramanya Sarma	Four-day course on Computational Materials Thermodynamics: Hands on Training with Thermo-Calc	IIT Madras	December 18-21, 2011
Seminar:				
1	Dr. Srinivasa Rao Bakshi	Light metals alloys and composites (LACOM-2011), Trivandrum	IIM Trivandrum Chapter and NIIST, Trivandrum	April 29, 2011

2	Dr. N. V. Ravi Kumar	Indo-US Science and Technology Forum, Irvine, CA, USA	National Academy of Sciences, USA and the Indo-US Science and Technology Forum, India	April 17-21, 2011
3	Dr. N. V. Ravi Kumar	UKIERI Dissemination Seminar on Pioneering Ferrous Metallurgy		
Symposia:				
1	Prof. B. S. Murty	18 th International Symposium on Metastable, Amorphous and Nanostructured Materials (ISMANAM-2011), Gijon, Spain		June 26-30, 2011
2	Prof. T. S. Sampath Kumar	15 th Symposium on Ceramics in Medicine, Biology and Biomimetics and the 22 nd Symposium on Apatite/	National Institute for Materials Science, Tsukuba, JAPAN	
Conference:				
1	Dr. S. Sankaran	CALPHAD XL, Rio de Janeiro, Brazil	Associação Brasileira de Metalurgia	May 22-27, 2011
2	Dr. K. C. Harikumar	CALPHAD XL, Rio de Janeiro, Brazil	Associação Brasileira de Metalurgia	May 22-27, 2011
3	Prof. B. S. Murty	Third International Conference on Advances in Solidification Processes (ICASP-3), Rolduc Abbey, The Netherlands		June 7-10, 2012
4	Prof. T. S. Sampath Kumar	International Conference on Biomaterials and Implants: Prospect and Possibilities in the New Millennium (BIO 2011)	CGCRI, Kolkata	July 21-23, 2011
5	Dr. G. D. Janaki Ram	64 th Annual Assembly & International Conference of the International Institute of Welding		July 17-22, 2011
6.	Prof. B.S. Murty	IUMRS-ICA, Taipei, Taiwan		September 18-23, 2011
7	Prof. Uday Chakkingal	10 th Intl. Conference on Technology of Plasticity, Aachen, Germany	Aachen, Germany	September 25-30, 2011
8	Prof. B.S. Murty	49 th National Metallurgist Day and 65 th Annual Technical Meeting of Indian Institute of Metals	Hyderabad	November 15, 2011
9	Dr. Srinivasa Rao Bakshi	49 th National Metallurgist Day and 65 th Annual Technical Meeting of Indian Institute of Metals	Hyderabad	November 13-16, 2011
10	Dr. S. Sankaran	49 th National Metallurgist Day and 65 th Annual Technical Meeting of Indian Institute of Metals	Hyderabad	November 13-16, 2011
11	Prof. T. S. Prasanna Kumar	26 th ASM Heat Treating Society Conference, Cincinnati, Ohio, USA	Cincinnati, Ohio, USA	October 31 – November 3, 2011
12	Dr. Subramanya Sarma	16 th International Conference on Textures of Materials	IIT Bombay	
13	Dr. A. S. Gandhi	National Conference on Emerging Trends in Nanoscience & Nanotechnology	Rajiv Gandhi College of Engineering, Nagpur.	December 20-21, 2011
14	Prof. T. S. Sampath Kumar	International Conference on Biomaterials, Implant Devices and Tissue Engineering (BIDTE2012)		
15	Prof. B. S. Murty	ICONSAT-2012	Hyderabad	January 21-22, 2012
16	Prof. S. S. Bhattacharya	ICONSAT-2012	Hyderabad	January 21-22, 2012

17	Prof. B.S. Murty	Silver Jubilee Conference of Institute of Engineers	Varanasi	January 23-24, 2012
18	Dr. N. V. Ravi Kumar	International Conference on Materials Processing and Characterization (ICMPC 2012)	GRIET, Hyderabad	March 8-9, 2012
19	Prof. Uday Chakkingal	National Conference on Superplasticity	Osmania University, Hyderabad	March 16-17, 2012
20	Dr. Srinivasa Rao Bakshi	2012 TMS Annual Meeting and Exhibition	Orlando, USA	March 11-15, 2012
21	Dr. A.S. Gandhi	Thermal Barrier Coatings III	Irsee, Germany	August 7-12, 2011

Special Lectures delivered by the faculty in other Institutions:

Sl.No.	Name of faculty	Topic of Lecture	Institution	Date
1.	Prof. T. S. Sampath Kumar	Nanotechnology and its Applications	St. Peters's College of Engineering & Technology, Avadi, Chennai	May 17, 2011
2.	Prof. M. Kamaraj	Mechanical Testing of Metallic Materials, polymers and Ceramics	IISc, Bangalore	
3.	Dr. Srinivasa Rao Bakshi	Carbon Nanotube Reinforced Aluminium Matrix Composites	Rajalakshmi Engineering College, Chennai	July 19, 2011
4.	Prof. B. S. Murty	Nanocomposites with exceptional properties by high kinetic energy processing	Iowa state University and Ames Laboratory, USA	July 21, 2011
5.	Prof. B. S. Murty	Functional Nano Materials by high energy ball milling	Oakland University, Detroit USA	July 18, 2011
6.	Prof. B. S. Murty	In-situ composites: A new Generation of composites for automobile applications	Ryerson University, Canada	July 6, 2011
7.	Dr. N. V. Ravi Kumar	Bio-inspired Materials Science	Rajalakshmi Engineering College, Chennai	July 20, 2011
8.	Prof. T. S. Sampath Kumar	Eggshell derived nanophase bioceramics	PSG College of Technology, Coimbatore	July 18, 2011
9.	Prof. T. S. Sampath Kumar	Bioceramic applications of egg shell waste	CGCRI, Kolkata	July 21, 2011
10.	Prof. M. Kamaraj	Materials for Automobile Applications	Rajalakshmi Engineering College, Chennai	July 20, 2011
11.	Dr. Srinivasa Rao Bakshi	Carbon Nanotube Reinforced Aluminum Composites: Current Status and Challenges	Vellore Institute of Technology, Katpadi	September 7, 2011
12.	Dr. V. Subramanya Sarma	Electron back scatter diffraction in scanning electron microscope: principles and applications	Crystal Growth Centre, Anna University	
13.	Dr. Srinivasa Rao Bakshi	"Processing and Mechanical Properties of Carbon Nanotube Reinforced Aluminum Matrix Composites" and "Tribological Behavior of CNT Reinforced Aluminium Matrix Composites"	KPR Institute of Engg. and Technology, Coimbatore	October 8, 2011
14.	Dr. G. Phanikumar	"Role of Undercooling in Solidification; Modeling of Solidification Microstructure" and "Modeling of Solidification Microstructure"	DMRL, Hyderabad	October 31, 2012

15.	Dr. N. V. Ravi Kumar	"Processing and characterization UHT ceramic composites" and "Mechanical behavior of ceramic matrix composites"	KPR Institute of Engg. and Technology, Coimbatore	October 8, 2011
16.	Dr. Srinivasa Rao Bakshi	"Carbon Nanotubes Synthesis, Properties and Applications" and "Carbon Nanotube Reinforced Metal Matrix Composites"	Pondichery Engineering College	October 26, 2011
17.	Dr. G. Phanikumar	Phase Field Simulation of Solidification Microstructure	Aditya Birla Science and Technology Co. Ltd., Mumbai	
18.	Dr. Srinivasa Rao Bakshi	Processing and Applications of Carbon Nanotube Reinforced Metal Matrix Composites	St. Joseph's College of Engineering, Chennai	
19.	Dr. A. S. Gandhi	Nanomaterials for Energy Technology	Rajiv Gandhi College of Engineering, Nagpur.	December 20, 2011
20.	Dr. V. Subramanya Sarma	Fundamentals of X-ray line broadening	IISc Bangalore	December 31, 2011
21.	Prof. T. S. Sampath Kumar	Bioactivity studies on fine grained AZ31 Magnesium alloy processed by groove pressing	National Institute for Materials Science, Tsukuba, JAPAN	
22.	Dr. V. Subramanya Sarma	Strengthening of FCC metals and alloys through cryo-deformation: Role of stacking fault energy	IISc Bangalore	
23.	Dr. A. S. Gandhi	Introduction to Ceramic Materials	Sri Manakula Vinayagar College of Engineering, Puducherry	
24.	Prof. T. S. Sampath Kumar	Innovative calcium phosphate bioceramics from egg-shell waste	Loyola Institute of Frontier Energy (LIFE), Loyola College, Chennai	
25.	Prof. B. S. Murty	Nanocomposites with exceptional properties	KIIT University Bhubaneswar	January 4, 2012
26.	Dr. Srinivasa Rao Bakshi	Mechanical and Thermal Properties of Carbon Nanotube Reinforced Aluminium Composites at Multiple Length Scales	KIIT University Bhubaneswar	
27.	Dr. G. Phanikumar		KIIT University Bhubaneswar	
28.	Prof. B. S. Murty	High Entropy alloys: a new class of alloys – Excitement and Challenges	IT BHU, Varanasi	
29.	Prof. Uday Chakkingal		Osmania University, Hyderabad	March 16, 2012
30.	Dr. N. V. Ravi Kumar		GRIET, Hyderabad	March 8, 2012
31.	Dr. K. C. Harikumar		IGCAR Kalpakkam	February 13, 2012
32.	Prof. V. Sampath		Saveetha University, Chennai	March 12, 2012
33.	Dr. Srinivasa Rao Bakshi	Carbon Nanotube Reinforced Metal Matrix Composites	Anna University	March 28, 2012
34.	Dr. Srinivasa Rao Bakshi	Carbon Nanotubes as Reinforcements in Metal Matrix Composites	Sri Venkateswara College of Engineering, Chennai	March 31, 2012
35.	Dr. N. V. Ravi Kumar		Sri Venkateswara College of Engineering, Chennai	March 31, 2012
36.	Prof. T. S. Sampath Kumar	nanoBiomaterials	Tirumalai Engineering College	March 20, 2012

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1.	Dr. N. V. Ravi Kumar	USA	April 18-21, 2011	Presented a paper in 4th Indo-US Frontiers of Science Symposium	Indo-US Science and Technology Forum
2.	Dr. S. Sankaran	Brazil	May 22-27, 2011	Presented paper in CALPHAD XL organized by Associação Brasileira de Metalurgia, held in <i>Rio de Janeiro</i>	IIT Madras
3.	Dr. K. C. Harikumar	Brazil	May 22-27, 2011	Presented paper in CALPHAD XL organized by Associação Brasileira de Metalurgia, held in <i>Rio de Janeiro</i>	IIT Madras
4.	Prof. B. S. Murty	The Netherlands	June 9, 2011	Presented Invited talk in Third International Conference on Advances in Solidification Processes (ICASP-3)	-
5.	Prof. B. S. Murty	Spain	June 28, 2011	Presented Invited talk in 18th International Symposium on Metastable, Amorphous and Nanostructured Materials (ISMANAM-2011)	-
6.	Prof. B. S. Murty	Germany	June 10-25, 2011	Visiting Professor at the Helmholtz Zentrum Berlin for Materials and Energy, Berlin	-
7.	Prof. B. S. Murty	Canada	July 1-31, 2011	Visiting Professor at Ryerson University, Toronto	-
8.	Prof. B. S. Murty	USA	July 18, 2011	Invited talk at Oakland University, Detroit USA	-
9.	Prof. B. S. Murty	USA	July 21, 2011	Invited lecture at Iowa state University and Ames Laboratory	-
10.	Prof. Uday Chakkingal	Germany	September 25-30, 2011	10th Intl. Conference on Technology of Plasticity, Aachen, Germany	IIT Madras
11.	Prof. T. S. Prasanna Kumar	USA	October 31 – November 3, 2011	26 th ASM Heat Treating Society Conference, Cincinnati, Ohio, USA.	IIT Madras
12.	Prof. T. S. Sampath Kumar	Japan		15th Symposium on Ceramics in Medicine, Biology and Biomimetics and the 22nd Symposium on Apatite/ National Institute for Materials Science, Tsukuba, JAPAN	-
13.	Dr. Srinivasa Rao Bakshi	USA	March 11-15, 2012	2012 TMS Annual Meeting and Exhibition, Orlando, USA,	IIT Madras
14.	Dr. A.S. Gandhi	Germany	August 7-14, 2011	Conference titled 'Thermal Barrier Coatings III'	Engineering Conferences International and IIT Madras
15.	Dr. A.S. Gandhi	USA	February 29 2012 to March 3, 2012	Indo-American Frontiers of Engineering Symposium	Indo US Science and Technology Forum

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
Honours:					
1.	Prof. T. S. Sampath Kumar	Member, Board of Governors, NIT Mizoram	NIT Mizoram		

2.	Prof. M. Kamaraj	Faculty Member Selection Committee	BS Abdur Rahman University		
3.	Prof. B. S. Murty	Visiting Professor	Helmholtz Zentrum Berlin for Materials and Energy, Berlin		June 10-25, 2011
4.	Prof. B. S. Murty	Visiting Professor	Ryerson University, Toronto		July 1-31, 2011
5.	Prof. T. S. Sampath Kumar	keynote address	Workshop on Nanocoating and Applications - NANOCOAT 2011 organised by the Dept. of Mechanical Engineering, Anna University, Chennai		May 30, 2011
6.	Prof. B. S. Murty	Adjunct Professor and Member Graduate Studies	Ryerson University, Toronto		July 1-31, 2011
7.	Prof. M. Kamaraj	Expert member for the Board of studies in Metallurgical Engineering	PSG College of Technology, Coimbatore		
8.	Dr. Ranjit Bauri	Project Review Committee (PRC) member	Dept. of Scientific and Industrial Research (DSIR), Ministry of Science & Technology, Govt. of India.		
9.	Dr. G. D. Janaki Ram	Prof. Placid Rodriguz Memorial Lecture	National Welding Seminar 2011		
10.	Prof. B. S. Murty	Key Note lecture	National Conference on Emerging Trends in Nanoscience & Technology and Lecture series, VNIT Nagpur		
11.	Prof. T. S. Sampath Kumar	Plenary Speaker	International Conference on Biomaterials, Implant Devices and Tissue Engineering (BIDTE2012)		
12.	Prof. B. S. Murty	Head, Materials Panel, Naval Research Board	Naval Research Board		
13.	Prof. B. S. Murty	President, Materials Science Section	99 th Indian Science Congress Association Meeting		
14.	Prof. B. S. Murty	Eminent Materials Engineer Award	Institute of Engineers		
15.	Prof. B. S. Murty	Chief Guest for the National metallurgist Day Celebrations	Salem Steel Plant		
16.	Prof. Uday Chakkingal	Keynote lecture	National Conference at Osmania University, Hyderabad		March 16, 2012
17.	Dr. N. V. Ravi Kumar	Keynote Lecture	International Conference on Materials Processing and Characterization (ICMPC 2012)		March 8, 2012

18.	Dr. A.S. Gandhi	Invited Speaker	Indo-American Frontiers of Engineering Symposium	Expertise in high temperature materials	March 3, 2012
19.	Prof. T. S. Sampath Kumar	Chief Guest at the inaugural function for the CSIR Sponsored National Workshop on Modern Techniques in Material Characterization and Testing (MCMT'2012)	S.A. Engineering College, Thiruverkadu, Chennai		March 5, 2012
ii. Awards:					
1	Prof. T. S. Sampath Kumar	JBT Best Paper Award	Journal of Biomaterials and Tissue Engineering/American Scientific Publishers	For the paper "Electrospun Polycaprolactone/Poly(1,4-butylene adipate-co-polycaprolactam) Blends: Potential Biodegradable Scaffold for Bone Tissue Regeneration"	
2	Prof. T. S. Sampath Kumar	Member of the Board of Studies for three years	Anna University		2012-2015

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1	Dr. N. V. Ravi Kumar	"High temperature mechanical properties of amorphous and nano-crystalline Si-B-C-N ceramics " in Design, Processing and Properties of Ceramic Materials from Pre-ceramic Precursors	NOVA publishers	
2	Prof. B. S. Murty	Textbook of Nanoscience and Nanotechnology	Universities Press	P Shankar, Baldev Raj, B B Rath, James Murday

Fellowships of Academies and Professional Societies:

Sl. No.	Name of faculty	Year of admission
INAE:		
1	Prof. K. Prasad Rao	2011

Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name
1	Prof. V. Sampath	Lead Guest Editor	Smart Materials Research Journal

Other professional services:

Name of Faculty	Service	Date and details
Dr. A. S. Gandhi	Served as external examiner for B.Tech final year projects in Materials Science and Engineering, Anna University	April 29, 2011

Prof. M. Kamaraj	Project External Examiner for Final year B.Tech Manufacturing Engineering Department, Anna University	May 5, 2011
Prof. V. Sampath	DST sponsored STPP on Biomaterials and Tissue Engineering IIT Madras	February 6, 2012
Prof. S. Ganesh Sundara Raman	DC meeting in VIT Vellore	February 24, 2012
Prof. M. Kamaraj	Viva Voce for M.S Thesis, Anna University	February 22, 2012
Dr. N. V. Ravi Kumar	Coordinator, Meeting of the materials science group with the visiting German delegation	February 24, 2012
Prof. T. S. Sampath Kumar	Attended Senate Meeting in VNIT Nagpur	March 15, 2012
Prof. M. Kamaraj	Conduct Ph.D Viva-Voce Examination, IIT Roorkee	March 22, 2012
Prof. S. Ganesh Sundara Raman	Selection committee meeting of IGCAR	March 28, 2012
Prof. M. Kamaraj	Selection committee meeting of IGCAR	March 28, 2012
Prof. T. S. Sampath Kumar	Examiner of Comprehensive Examination, SCTIMST, Trivandrum	March 28, 2012
Dr. V. Subramanya Sarma	Promotion interview meeting, IGCAR Kalpakkam	March 30, 2012
Prof. M. Kamaraj	Attended Board of Studies Meeting in Met. Engg. In PSG Tech, Coimbatore	March 31, 2012

4.14.4 Design and Development Activities:

Patents:

Patents filed:

SI.No.	Name of faculty	Topic of patent
1	Prof. B. S. Murty jointly with Dr. S.K.S. Parashar, Dr. K. Parashar, Mr. P. Chaudhuri	A novel process for the preparation of nanocrystalline single phase lithium metatitanate at room temperature (Patent application filed: 1260/KOL/2011)
2	Prof. B. S. Murty Jointly with Dr. A.B.S. Sastry, Dr. B.L.V. Prasad, Dr. K. Sridhar, Mr. A. Karthik	A novel process of preparing nano copper and nano copper obtained thereof (Patent application number awaited)

4.14.5 Research and Consultancy:

Sponsored Research Projects:

SI. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	Development of nanocrystalline matrix composites/ coatings by mechanical alloying followed by spark plasma sintering/cold spraying	13.05.2011 to 12.05.2013 (3 years)	IIT Madras Seed Grant	4.75 Lakhs	Dr. Srinivasa Rao Bakshi
2	Synthesis and multi-scale property evaluation of multi-walled CNT reinforced Al composites having improved dispersion	02.06.2011 to 01.06.2013 (2 years)	ISRO-IITM Cell	22.08	Dr. Srinivasa Rao Bakshi
3	Development of high strength and ductile Al alloy based composite in solid state by Friction stir processing (FSP)	Sept. 26, 2011 – Sept. 25, 2014	Naval Research Board	27.26	Dr. Ranjit Bauri
4	Fatigue behaviour of an ultra fine grained aluminium alloy processed by equal channel angular pressing	3 years	DST	40.8	Prof. Uday Chakkingal and Prof. Ganesh Sundara Raman
5	Characterization of metallic materials for biaxial loading	2 years	ISRO	29.56	Prof. Velmurugan and Dr. N. V. Ravikumar

Industrial Consultancy projects:

Sl.No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1	Dr. G. D. Janaki Ram	Failure analysis of evaporator core assemblies	Visteon Automotive Systems	2.53
2	Dr. Basavaraj M. Gurappa and Dr. Ravi Sankar Kottada	Fabrication of macroporous ceramic materials using bijel templates (Area: Advanced materials/Fuel Cells)	Nissan Indian R&D	8.36
3	Dr. A.S. Gandhi	Microstructure, hardness and fractography of failed sample	Ijjin Automotive Pvt. Ltd.	0.46

RBIC projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1.	Dr. K.C. Hari Kumar and Dr. A.S. Gandhi	Critical review of literature on the constitutional and thermochemical data of oxide systems	GE India Technology Center	7.5

Exchange programme with other Universities including Institutions/Universities under MOU; Faculty members participation with other institution under MoU:

Sl.No.	Name of faculty	Participation details	Name of University/Institution which has MoU
1	Dr. Srinivasa Rao Bakshi	M.Tech student visited abroad institution	Deakin University

Research Publications of the faculty members & research scholars:

- Total No. of papers published in Refereed National Journals - Nil
- Total No. of papers published in Refereed International Journals - 100
- Total No. of papers presented in National Conferences - 6
- Total No. of papers presented in International conferences - 15

a) In Refereed National Journals: NIL**b) In Refereed International Journals:**

- Srinivasa R. Bakshi, Akanksha Bhargava, Seyedreza Mohammadzadeh, Arvind Agarwal, Igor Tsukanov, "Computational Estimation of Elastic Properties of Spark Plasma Sintered TaC by Meshfree and Finite Element Methods" Computational Materials Science 50 (2011) 2615-2620
- Mitun Das, Sandip Bysakh, Debabrata Basu, T.S. Sampathkumar, Vamsi Krishna Balla, Susmita Bose, Amit Bandyopadhyay, Microstructure, mechanical and wear properties of laser processed SiC particle reinforced coatings on titanium, Surface & Coatings Technology, (in press) (2011)
- Ranjit Bauri, Processing Ni-YSZ anode by electroless Ni deposition with AgNO₃ as activator Surface Engineering, In Press, DOI 10.1179/1743294411Y.0000000026 (2011)
- D.Baskar, Rajkamal Balu and T.S.Sampath Kumar Mineralization of pristine chitosan film through biomimetic process International Journal of Biological Macromolecules, in press (2011)
- C Swetha and Ravi Kumar, Quasi-static uni-axial compression behaviour of hollow glass microspheres/epoxy based syntactic foams Materials and Design, doi:10.1016/j.matdes.2011.04.058 (2011)
- Sangeetha Raman and N.V. Ravi Kumar, Interfacial morphology and nanomechanics of cement of the barnacle, Amphibalanus reticulatus on metallic and non-metallic, BIOFOULING: The Journal of Bioadhesion and Biofilm Research: Vol. 27, Issue 6, July 2011, pp 569 - 577 (2011)
- P. Chakravarthy, Uday Chakkingal and P. Venugopal, Deformation and temperature aided sintering during hooker extrusion of sintered preforms of steel. Powder Metallurgy, 2011, Vol 54, No3, 193-201
- P. Chakravarthy, Uday Chakkingal and P. Venugopal, Use of ring compression test and plastic Poisson's ratio in extruding sintered powder metallurgical preforms. Powder Metallurgy, 2011, (online) DOI 10.1179/174329011Y.0000000011

9. Sujith Ravindran, Kousaalya Adhimoolam, N.V. Ravi Kumar, Coarsening Induced Phase Transformation of Hafnia in Polymer Derived Si-Hf-C-N-O Ceramics, *Journal of the American Ceramic Society*, accepted for publication (2011)
10. T. Shanmugasundaram, M. Heilmaier, B.S. Murty, V. Subramanya Sarma, Thermal stability of vacuum hot pressed bulk nanostructured Al-Cu alloys. *Materials Science Forum*, 690.234-237 (2011)
11. Sunita Prem Victor, TS Sampath Kumar, CDHA Ceramic Microspheres for Periodontitis Treatment: Synthesis, Characterization, and Doxycycline Release Profile, *The Indonesian Journal of Dental Research.* , 2 (1) [in press] (2011)
12. Rajkamal Balu, T. S. Sampath Kumar, Murugan Ramalingam, and Seeram Ramakrishna, Electrospun polycaprolactone/poly(1,4-butylene adipate-co-polycaprolactam) blends: potential biodegradable scaffold for bone, *Journal of Biomaterials and Tissue Engineering.*, (in press) (2011)
13. V. Vijaya Lakshmi, Ranjit Bauri, Phase formation and ionic conductivity studies on ytterbia co-doped scandia stabilized zirconia electrolyte for SOFCs, *Solid State Sciences*, Vol. 13, 1520-1525 (2011)
14. Sumit Goenka, Rajkamal Balu, and T.S. Sampath Kumar, Effects of nanocrystalline calcium deficient hydroxyapatite incorporation in glass ionomer cements, *Journal of the Mechanical Behavior of Biomedical Materials*
15. Sujith Ravindran, A. B. Kousaalya, N.V. Ravi Kumar, Synthesis and phase stability of precursor derived HfO₂/Si-C-N-O nanocomposites, *Ceramics International*
16. Sangeetha Raman, N.V. Ravi Kumar, Construction and nanomechanical properties of the exoskeleton of the barnacle, *Amphibalanus reticulatus*, *Journal of Structural Biology*
17. Sumantra Mandal, A.K. Bhaduri, V. Subramanmya Sarma, Role of twinning on dynamic recrystallization and microstructure during moderate to high strain rate hot deformation of a Ti-mod, *Metallurgical and Materials Transactions A* (2012) 2056-2068.
18. A. Kauffmann, J. Freudenberger, D. Geissler, S. Yin, W. Schillinger, V. Subramanya Sarma, H. Bahmanpour, R. Scattergood, Severe deformation twinning in pure copper by cryogenic wire drawing, *Acta Materialia* 59, (2011) 7816-7823.
19. A. Sivaraman and U. Chakkingal, Workability of an aluminium alloy processed by equal channel angular pressing, *Steel Research International*, Special edition, pp. 269-273 (2011)
20. Sumantra Mandal, A.K. Bhaduri, V. Subramanya Sarma, Influence of state-of-stress on dynamic recrystallization in a titanium-modified austenitic stainless steel, *Metallurgical and Materials Transactions A*, in press (2011)
21. D.Kesavan and M. Kamaraj, Influence of aging treatment on microstructure, wear and corrosion behavior of a nickel base hardfaced coatings, *Wear*, 272 (2011) pp 7-17 (2011)
22. K. A. Padmanabhan, S. Sankaran , V. Subramanya Sarma, Satyam Suwas, O. Engler, and S. Jupp, Texture Analysis for Determining the Rate Controlling Process in the Transient and Steady State Regions of Superplastic Flow, *Materials Science Forum*, Vols. 702-703 (2012) pp 360-365
23. Papa Rao Mondi, R. Madhavan, V.Subramanya Sarma, and S. Sankaran, Study of Texture in Ultra Fine Grained Dual Phase Steel Sheets, *Materials Science Forum*, Vols. 702-703 (2012) pp 806-809
24. S. Chenna Krishna, K. Thomas Tharian, Bhanu Pant, Ravi Sankar Kottada, Age-Hardening Characteristics of Cu-3Ag-0.5Zr Alloy, *Materials Science Forum* , 710 (2012) 563-568
25. Praveen S, B S Murty, Ravi Sankar Kottada. Alloying Behavior in Multi-Component AlCoCrCuFe and NiCoCrCuFe High Entropy Alloys. *Materials science and engineering -A*, (accepted for publication)
26. S. Chenna Krishna, K. Thomas Tharian, Bhanu Pant, Ravi Sankar Kottada, Age-Hardening Characteristics of Cu-3Ag-0.5Zr Alloy, *Materials Science Forum* , 710 (2012) 563-568 (2012)
27. Praveen S, B S Murty, Ravi Sankar Kottada, Alloying Behavior in Multi-Component AlCoCrCuFe and NiCoCrCuFe High Entropy Alloys, *Materials science and engineering -A*, (accepted for publication) (2011)
28. R. Raja Madhavan, A.S. Gandhi, K.V. Govindan Kutty, A novel and inexpensive wet chemical route for precursor synthesis of synroc monoliths, *Journal of Nuclear Materials*, doi:10.1016/j.jnucmat.2011.10.043 (2011)
29. R. Suresh Kumar, A.K. Shukla, S. Babu, D. Sivakumar, A.S. Gandhi, Densification of silicon carbide using oxynitride additives for space-based telescope mirror applications, *Optical Engineering*, 50, 070504-1 – 3 (2011)
30. R. Suresh Kumar, D. Sivakumar, A.S. Gandhi, Mechanical behaviour of molybdenum disilicide reinforced silicon carbide composites, *Scripta Materialia*, 65, 838–841 (2011)
31. B. Ramakrishna Rao, A.K. Shah, M. Srinivas, J. Bhatt, A.S. Gandhi, B.S. Murty, On prediction of amorphous phase forming compositions in iron rich Fe-Zr-B ternary system and their synthesis, *Metallurgical & Materials Transactions A*, doi: 10.1007/s11661-011-0784-y (2011)
32. K. Murugan, Tata N. Rao, G.V. Narashima Rao, A.S. Gandhi, B.S. Murty, Effect of dehydration rate on non-hydrolytic TiO₂ thin film processing: Structure, Optical and Photocatalytic Performance Studies, *Materials Chemistry and Physics*, 129, 810-815 (2011)

33. V. Vijaya Lakshmi, R. Bauri, A.S. Gandhi, S. Pau, Synthesis and characterization of nanocrystalline ScSZ electrolytes for SOFCs, *International Journal of Hydrogen Energy*, doi:10.1016/j.ijhydene.2011.02.139 (2011)
34. Archana Loganathan, A.S. Gandhi, Fracture toughness of γ ZrO₂ stabilised with MO_{1.5} (M = Y, Yb & Gd) for thermal barrier application, *Transactions of Indian Institute of Metals*, 64, 71-74 (2011)
35. Sumantra Mandal, A.K. Bhaduri and V. Subramanya Sarma, Origin and role of sigma 3 boundaries during thermo-mechanical processing of a Ti-modified austenitic stainless steel, *Materials Science Forum*, Vols. 702-703 pp 714-717 (2012)
36. S. Gowthama Gowda, S.S. Bhattacharya and P. Venugopal, Coining Test for Evaluation of Tool Performance, *Trans. IIM*, DOI: 10.1007/s12666-011-0103-8 (2011)
37. Mitun Das, Vamsi Krishna Balla, Debabrata Basu, Indranil Mannaa, T. S. Sampath Kumar, Susmita Bose and Amit Bandyopadhy, Laser processing of in-situ synthesized TiB-TiN reinforced Ti6Al4V alloy composite coatings, *Scripta Materialia* (In Press)
38. Schloth, P. Weisser, M.A. Van Swygenhoven, H. Van Petegem, S. Susila, P. Subramanya Sarma, V. Murty, B.S. Lauterbach, S, Two strain hardening mechanisms in nanocrystalline austenitic steel-an in-situ synchrotron X-Ray diffraction study, *Scripta materialia* 66 (2012) 690-693.
39. Rajeev K. Gupta, Kris S. Darling, R.K. Singh Raman, K.R. Ravi, Carl C. Koch, B.S. Murty, R.O. Scattergood, Synthesis, characterization and mechanical behaviour of an in situ consolidated nanocrystalline FeCrNi alloy, *J. Materials Science* (In Press)
40. D. Babu, B. Majmudar, Amit Srivastava, B. Ramakrishna Rao, D. Srivastava, B.S. Murty, and D. Akhtar, Structure, Properties and Glass Forming Ability of Melt Spun Fe-Zr-B-Cu Alloys with Different Zr/B Ratio, *Metall. Mater. Trans. A* (In Press)
41. B. Karthik, G. Sai Gautam, N.R. Karthikeyan, and B.S. Murty, Analysis of mechanical milling in Simoloyer: an energy modeling approach, *Metall. Mater. Trans.* (In Press)
42. V. Udhayabanu and B.S. Murty, Mechanical Activation of nanocrystalline α -Al₂O₃ Formation from Gibbsite Using High Energy Ball Milling, *Trans. Ind. Inst. Metals* (In Press)
43. C.R. Das, S. K. Albert, J. Swaminathan, A.K. Bhaduri, B. Raj, B.S. Murty, Improvement in creep resistance of modified 9Cr-1Mo steel weldment by boron addition, *Welding World* (In Press)
44. Ajeet K. Srivastav and B. S. Murty, Dilatometric analysis on shrinkage behaviour during nonisothermal sintering of nanocrystalline tungsten mechanically alloyed with molybdenum, *J. Alloys Comp.* (in Press)
45. J. Bhatt, B. Nikhil, S. Shekher, A. Naik, R. Karthikeyan, D. R. Peshwe and B.S. Murty, Synthesis of nanostructured Al-Mg-SiO₂ Metal Matrix Composites using High-Energy Ball Milling and Spark Plasma Sintering, *J. Alloys Comp.* (in Press)
46. C.R. Das, S.K. Albert, J. Swaminathan, S. Raju, A.K. Bhaduri and B.S. Murty, Transition of Crack from Type IV to Type II Resulting from Improved Utilisation of Boron in the Modified 9Cr-1Mo steel Weldment, *Metall. Mater. Trans.* (in Press)
47. S. Roopas Kiran, V.R.K. Murthy, V. Subramanian and B.S. Murty, Effect of grain size on microwave dielectric characteristics of high-energy ball milled zinc magnesium titanate ceramics, *J. Am. Ceram. Soc.* (in Press)
48. Kantesh Balani, Srinivasa R. Bakshi, Tarang Mungole, and Arvind Agarwal, Ab-initio molecular modeling of interfaces in tantalum-carbon system, *Journal of Applied Physics* 111 (2012) 063521
49. Archana Loganathan, A.S. Gandhi, "Fracture toughness of γ ZrO₂ stabilised with MO_{1.5} (M = Y, Yb & Gd) for thermal barrier application", *Transactions of the Indian Institute of Metals*, 64, 71-74 (2011).
50. V. Vijaya Lakshmi, R. Bauri, A.S. Gandhi, S. Paul, "Synthesis and characterization of nanocrystalline ScSZ electrolytes for SOFCs", *International Journal of Hydrogen Energy*, 36, 14936-14942 (2011).
51. Karupiah Murugan, Tata N. Rao, G.V. Narashima Rao, A.S. Gandhi, B.S. Murty, "Effect of dehydration rate on non-hydrolytic TiO₂ thin film processing: Structure, Optical and Photocatalytic Performance Studies", *Materials Chemistry and Physics*, 129, 810-815 (2011).
52. B. Ramakrishna Rao, A.K. Shah, M. Srinivas, J. Bhatt, A.S. Gandhi, B.S. Murty, "On prediction of amorphous phase forming compositions in iron rich Fe-Zr-B ternary system and their synthesis", *Metallurgical and Materials Transactions A*, 42, 3913-3920 (2011).
53. R. Suresh Kumar, D. Sivakumar, A.S. Gandhi, "Mechanical behaviour of molybdenum disilicide reinforced silicon carbide composites", *Scripta Materialia*, 65, 838-841 (2011).
54. R. Suresh Kumar, A.K. Shukla, S. Babu, D. Sivakumar, A.S. Gandhi, "Densification of silicon carbide using oxy-nitride additives for space-based telescope mirror applications", *Optical Engineering*, 50, 070504-1 - 3 (2011).
55. R. Raja Madhavan, A.S. Gandhi, K.V. Govindan Kutty, "A novel and inexpensive wet chemical route for precursor synthesis of synroc monoliths", *Journal of Nuclear Materials*, 420, 554-558 (2011).
56. R. Suresh Kumar, D. Siva Kumar, A.S. Gandhi, "Effect of molybdenum disilicide additions on the oxidation behaviour of silicon carbide", *Scripta Materialia*, 66, 451-454 (2011).
57. R. Suresh Kumar, D. Siva Kumar, A.S. Gandhi, "Processing and properties of silicon carbide and its composites containing MoSi₂ and ZrB₂", *Materials Science and Engineering A*, 540, 107-114 (2012).

58. P.A. Manojkumar, A.S. Gandhi, M. Kamaraj, V. Thomas Paul, N. Kumar, A.K. Tyagi, "Role of nanocrystalline feedstock in the tribological behaviour of alumina coatings deposited by detonation gun", *International Journal of Refractory Metals and Hard Materials* (accepted April 2012. DOI: 10.1016/j.ijrmhm.2012.04.018).
59. Archana Loganathan and A.S. Gandhi, "Effect of high temperature aging on the fracture toughness of ytterbia stabilized t' zirconia", *Scripta Materialia* (accepted May 2012, DOI: 10.1016/j.scriptamat.2012.05.001).
60. Anand Kumar, S., Ganesh Sundara Raman, S., Sankara Narayanan, T.S.N. and Gnanamoorthy, R., Influence of Surface Mechanical Attrition Treatment on Fretting Wear Behaviour of Ti-6Al-4V, *Advanced Materials Research*, 463-464, 316-320, **2012**.
61. Venkatesh, C.V., Ganesh Sundara Raman, S. and Uday Chakkingal, Low Cycle Fatigue Behaviour of Al-Mg-Si Alloy AA6061 Processed by Equal Channel Angular Pressing, *Advanced Materials Research*, 463-464, 97-101, **2012**.
62. Anand Kumar, S., Ganesh Sundara Raman, S., Sankara Narayanan, T.S.N. and Gnanamoorthy, R., Fretting Wear Behaviour of Surface Mechanical Attrition Treated Alloy 718, *Surf. Coat Technol.* (in press).
63. Anand Kumar, S., Sundar, R., Ganesh Sundara Raman, S., Kumar, H., Gnanamoorthy, R., Kaul, R., Ranganathan, K., Oak, S. M. and Kukreja, L. M., Fretting Wear Behaviour of Laser Peened Ti-6Al-4V, *Tribology Trans.* (in press)
64. A.K. Bhaduri, C.R. Das, S.K. Albert, A. Klenk and B.S. Murty, "Study of deformation behavior of simulated intercritical heat affected zone of modified 9Cr-1Mo steel" *Mater. Manu. Proc.* **26** (2011) 62-65.
65. Sheela Singh, Nelia Wanderka, B.S Murty, Uwe Glatzel and John Banhart, "Decomposition in Multi-component AlCoCrCuFeNi High Entropy Alloy", *Acta Mater.*, **59** (2011) 182-190.
66. M. Venkata Ramana, N. Ramamanohar Reddy, K.V. Siva Kumar, V.R.K. Murthy and B.S. Murty, Magneto-electric Effect on Multiferroic $\text{Ni}_{0.93}\text{Co}_{0.02}\text{Mn}_{0.05}\text{Fe}_{1.95}\text{O}_{4.8}/\text{PbZr}_{0.52}\text{Ti}_{0.48}\text{O}_3$ Particulate Composites: Dielectric, Piezoelectric properties, *Modern Phys. Lett. B*, **25** (2011) 345-358.
67. M. Venkata Ramana, S. Roopas Kiran, N. Ramamanohar Reddy, K.V. Siva Kumar, V.R.K. Murthy and B.S. Murty, "Investigation and Characterization of $\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3$ Nanocrystalline Ferroelectric Ceramics: By Conventional and Microwave Sintering Methods", *Mater. Chem. Phys.*, **126** (2011) 295-300.
68. Jatin Bhatt, S. Kumar and B.S. Murty, "Thermodynamic model and synthesis of Bulk Metallic Glass in Cu-Zr-Ti system by Mechanical Alloying" *Mater. Sci. Forum*, **675-677** (2011) 189-192.
69. M.S. Senthil Saravanan, S.P. Kumaresh Babu, K. Sivaprasad, B. Ravisankar, P. Susila and B.S. Murty, "Consolidation of CNT reinforced AA4032 nanocomposites by ECAP", *Int. J. Nano Sci*, **10** (2011) 233-236.
70. P. Susila, D. Sturm, M. Heilmaier, B.S. Murty and V. Subramanya Sarma, "Effect of yttria particle size on the microstructure and compression creep properties of nanostructured oxide dispersion strengthened ferritic (Fe-12Cr-2W-0.5Y₂O₃) alloy", *Mater. Sci. Eng. A*, **528** (2011) 4579-4584.
71. T. Prakash, S. Ramasamy and B.S. Murty "Effect of DC bias on electrical conductivity of nanocrystalline α -CuSCN" *AIP Advances*, **1** (2011) 022107(1-7).
72. A. Elsayed, B.S. Murty and C. Ravindran, "Effects of Al-Ti-B based grain refiners on AZ91E Magnesium alloy grain size and microstructure" *Int. J. Metal Casting* **5**(2) (2011) 29-41.
73. Ch. Sree Rama Linga Prasad, G. Sreenivasulu, S. Roopas Kiran, M. Balasubramanian and B.S. Murty, "Electrical and Magnetic Properties of Nanocrystalline BiFeO₃ Prepared by High Energy Ball Milling and Microwave Sintering", *J. Nanosci. Nanotech.*, **11** (2011) 4097-4102.
74. A. Lombardi, F. D'Elia, C. Ravindran, B.S. Murty, R. MacKay, "Analysis of the Secondary Phases in the Microstructure of 319 Type Al Alloy Engine Blocks using Electron Microscopy and Nanoindentation", *Trans. Ind. Inst. Metals.*, **64** (2011) 7-11.
75. Nikhil Charbhai, B.S. Murty and S. Sankaran, "Microstructural characterization of the Al-Cu-TiB₂ *in-situ* Composites", *Trans. Ind. Inst. Metals.*, **64** (2011) 117-121.
76. Sree Harsha Nandam, S. Sankaran and B.S. Murty, "Precipitation Kinetics in Al-Si-Mg/TiB₂ *in-situ* Composites", *Trans. Ind. Inst. Metals.*, **64** (2011) 123-126.
77. M. Venkata Ramana, S. Roopas Kiran, N. Ramamanohar Reddy, K.V. Siva Kumar, V.R.K. Murthy and B.S. Murty, "Synthesis of lead free sodium bismuth titanate (NBT) ceramic by conventional and microwave sintering methods", *J. Advanced Dielectrics*, **1** (2011) 71-77.
78. T. Prakash, S. Ramasamy and B.S. Murty "Influence of bias voltage dielectric relaxation of nanocrystalline anatase TiO₂ using modulus formalism" *J. Appl. Phys.*, **109** (2011) 84116(1-5).
79. M. Ashfaq, K.P. Rao, H.K. Rafi, B.S. Murty, H.C. Dey, A.K. Bhaduri, "Friction welding of titanium to 304L stainless steel using interlayers", *Practical Metallography*, **48** (2011) 188-207.
80. Renga Ravi, S Manivannan, Gandham Phanikumar, B.S. Murty, and Suresh Sundarraj, "Influence of Mg on grain refinement of near eutectic Al-Si alloys" *Metall. Mater. Trans. A*, **42** (2011) 2028-2039.
81. V. Udhayabanu, K. R. Ravi, K. Murugan, D. Sivaprahasam and B.S. Murty "Development of Ni-Al₂O₃ *in-situ* Nanocomposite by Reactive Milling and Spark Plasma Sintering", *Metall. Mater. Trans. A*, **42** (2011) 2085-2093.

82. V. Udhayabanu, K. R. Ravi and B.S. Murty, "Development of *in-situ* NiAl-Al₂O₃ Nanocomposite by Reactive Milling and Spark Plasma Sintering", J. Alloys Comp., **509** (2011) S223-S228.
83. K. Surekha, B.S. Murty and K. Prasad Rao, "Comparison of Corrosion Behaviour of Friction Stir Processed and Laser Melted AA 2219 Aluminium Alloy", Mater. Design., **32** (2011) 4502-4508.
84. S.S. Nayak, H.J. Chang, S.K. Pabi, D.H. Kim, B.S. Murty, "Formation of metastable phases and nanocomposite structures in melt spun Al-Fe alloys", Mater. Sci. Eng. A, **528** (2011) 5967-5973.
85. T. Shanmugasundaram, M. Heilmaier, V. Subramanya Sarma and B.S. Murty "Thermal stability of vacuum hot pressed bulk Nanostructured Al-Cu Alloy", Mater. Sci. Forum, **690** (2011) 234-237.
86. A. Elsayed, C. Ravindran and B.S. Murty, "Effect of Al-Ti-B Based Master Alloys on Grain Refinement and Hot Tearing Susceptibility of AZ91E Magnesium Alloy", Mater. Sci. Forum, **690** (2011) 351-354.
87. Karuppiyah Murugan, Tata N. Rao, G.V. Narashima Rao, Ashutosh S. Gandhi and B.S. Murty, "Effect of dehydration rate on non-hydrolytic TiO₂ thin film processing: Structure, Optical and Photocatalytic Performance Studies", Mater. Chem Phys., **129** (2011) 810-815.
88. T. Venugopal and B.S. Murty, "Nanostructured materials by high energy ball milling", Encyclopedia of Nanoscience and Nanotechnology, **19** (2011) 1-41.
89. Avinash Chethan, Francisco Garcia-Moreno, Nella Wanderka, B.S. Murty and John Banhart, "Influence of Oxides on the Stability of Zinc Foam", J. Mater. Sci., **46** (2011) 7806-7814.
90. C.R. Das, S. Albert, A.K. Bhaduri and B.S. Murty "Characterisation of Ferrite in Tempered Martensite of Modified 9Cr-1Mo Steel using Electron Backscattered Diffraction technique" Metall. Mater. Trans. A, **42** (2011) 3849-3852.
91. Ajeet K. Srivastav, M. Sankaranarayana and B. S. Murty, "Initial-stage sintering kinetics of nanocrystalline tungsten", Metall. Mater. Trans. A., **42** (2011) 3863-3866.
92. Ramakrishna Rao Boda, A.K. Shah, Srinivas Meduri, Jatin Bhatt, A.S. Gandhi, and B.S. Murty, "On prediction of amorphous phase forming compositions in Iron rich Fe-Zr-B ternary system and their synthesis", Metall. Mater. Trans. A, **42** (2011) 3913-3920.
93. K.G. Prashanth, S. Kumar, S. Scudino, B.S. Murty and J. Eckert, "Fabrication and response of Al₇₀Y₁₆Ni₁₀Co₄ glass reinforced metal matrix composites", Mater. Manuf. Proc., **26** (2011) 1242-1247.
94. S. Vincent, D. R. Peshwe, B. S. Murty and Jatin Bhatt, "Thermodynamic Prediction of Bulk Metallic Glass Forming Alloys in Ternary Zr-Cu-X (X=Ag, Al, Ti, Ga) Systems", J. Non-Cryst. Sol., **357** (2011) 3495-3499.
95. Ajeet K. Srivastav and B.S. Murty, "Mechanically Milled/Alloyed Nanostructured Materials", Nanotech. Insights. **2**(4) (2011) 2-6.
96. V. Udhayabanu and B.S. Murty, "Synthesis of nanocrystalline α -Al₂O₃ from nanocrystalline boehmite derived from high energy ball milling of gibbsite", Trans. Ind. Inst. Metals, **64** (2011) 535-540.
97. Rajeev K. Gupta, Kris S. Darling, R.K. Singh Raman, K.R. Ravi, Carl C. Koch, B.S. Murty, R.O. Scattergood, "Synthesis, characterization and mechanical behaviour of an in situ consolidated nanocrystalline FeCrNi alloy", J. Mater. Sci. **47** (2012) 1562-1566.
98. B. Karthik, G. Sai Gautam, N.R. Karthikeyan, and B.S. Murty, "Analysis of mechanical milling in Simoloyer: an energy modeling approach", Metall. Mater. Trans., **43** (2012) 1323-1327.
99. K.R. Ravi, A. Murugesan, V. Udhayabanu, R. Subramanian and B.S. Murty, "Microstructure and Mechanical Property of Fe-Al₂O₃ nanocomposites synthesized by reactive milling followed by spark plasma sintering", Mater. Sci. Forum, **710** (2012) 291-296.
100. S. Praveen, B.S. Murty and Ravi S. Kottada, "Alloying Behavior in Multi-Component AlCoCrCuFe and NiCoCrCuFe High Entropy Alloys", Mater. Sci. Eng. A, **534** (2012) 83-89.

c) In Proceedings of National Conferences:

d) In Proceedings of International Conferences:

1. Fabrication of Metal Particles Embedded Aluminum Matrix Composite by Friction Stir Processing (FSP) Devinder Yadav, Ranjit Bauri AMPT 2010, Paris, American Institute of Physics (AIP) Proceedings, CP1315 pp 51-56, (2011)
2. P. Ramesh, E. Nandha Kumar and G.D. Janaki Ram, Microstructural characterization of friction surfaced austenitic stainless steel AISI 316L coatings, Proceedings of the International Conference of the International Institute of Welding on Global Trends in Joining, Cutting and Surfacing Technology, Chennai, July 2011, 111-116
3. N. Krishna Murthy, G.D. Janaki Ram, B.S. Murty, G. Madhusudhan Reddy and T.J.P. Rao, Enhancing ballistic performance of armor steel welds: A novel approach, Proceedings of the International Conference of the International Institute of Welding on Global Trends in Joining, Cutting and Surfacing Technology, Chennai, India, July 2011, 322-329.

4. K. Manohar, J.J.S. Dilip, G.D. Janaki Ram, Friction stir processing of magnesium alloy ZM21, Proceedings of the International Conference of the International Institute of Welding on Global Trends in Joining, Cutting and Surfacing Technology, Chennai, India, July 2011, 139-146
5. K. Paithankar, D. Barbadikar, D.R. Peshwe, A.S. Gandhi, "Synthesis and characterization of mullite coatings", TMS Annual Meeting, 2, 91-98 (2011).

Distinguished Visitors to the Department:

Sl.No.	Name of the visitor and Designation	Date of visit	Purpose of visit
1	Dr. Joydip Joardar, ARCI Hyderabad	May 26-28, 2011	Conducted a workshop on Rietveld Method for the students
2	Dr. Kumar Sadayappan, Senior Research Scientist,CANMET, Materials Technology Laboratory, Hamilton, ON, Canada.	July 4, 2011	Presented IIM Seminar Talk "Development of materials for energy efficient transportation"
3	Rajan Ambat, Associate Professor Materials and Surface Engineering, Department of Mechanical Engineering Technical University of Denmark, DK 2800 Kgs. Lyngby, Denmark	July 6, 2011	Presented IIM Seminar Talk "Climatic reliability of micro- electronics, aluminium alloys, and functionalized surfaces"
4	Dr. T.P.D. Rajan, Scientist, Materials Division, National Institute for Interdisciplinary Science and Technology, Council of Scientific and Industrial Research, Industrial Estate PO, Trivandrum – 695 019, INDIA	July 13, 2011	Presented talk "Functionally Graded Composite Materials: Processing and Applications" for Material Advantage Student Chapter
5	Ms. Anna Badstuber, Ohms-Hochschule, Nuernberg, Germany	August 1 – September 30, 2011	Student intern sponsored by DAAD-RISE programme visiting Dr. N.V. Ravi Kumar
6	Prof. Christopher Berndt, President of ASM International	February 14, 2012	Visited to inaugurate two day course and presented a talk
7	Prof. Raju V. Ramanujam, Nanyang Technological University, Singapore	February 15, 2012	Presented IIM Seminar Talk
8	Dr. Sai V. Raj, NASA Glenn Research Center, USA	March 23, 2012	Visited and presented the ASM-IIM Visiting lecture

4.14.6 Other Activities of the Department/Centre:

a) International collaboration achievements by the Department

Student visit:

- Mr. Pramod SL, Ph.D student visited Ryerson University, Toronto, Canada, under Canadian Commonwealth Scholarship
- Mr. Gautham Prakash, M.Tech student visited Deaken University for carrying out part of his M.Tech. project.

4.15 DEPARTMENT OF OCEAN ENGINEERING

4.15.1 Introduction:

The Department offers following academic programs:

1. B. Tech and B. Tech (Hons) (Naval Architecture and Ocean Engineering)
2. Dual Degree (Naval Architecture and Ocean Engineering)
3. M. Tech (Ocean Engineering)
4. M. Tech (Ocean Technology and Management) – User Oriented Program by NIOT
5. M. Tech (Petroleum Engineering)
6. M. Tech (Offshore Structural Engineering) – User Oriented Program by L&T
7. M. S. (Ocean Engineering)
8. M.S. (Petroleum Engineering)
9. Ph. D (Ocean Engineering)
10. Ph.D. (Petroleum Engineering)

The major areas of teaching and research at the Department are:

1. Offshore structures
2. Ship structures
3. Port and harbour structures
4. Deepwater technology
5. Subsea engineering
6. Ships and underwater vehicles
7. Ship design
8. Marine hydrodynamics
9. Marine robotics
10. Coastal engineering
11. Ocean energy
12. Marine instrumentation
13. Ocean and underwater acoustics
14. Ocean optics
15. Oil and gas exploration and production
16. Reservoir engineering
17. Seismic data collection, processing and interpretation
18. Gas hydrates
19. Drilling technology
20. Health, safety and environment in ocean and petroleum engineering
21. Enhanced oil recovery

4.15.2 Academic Programs:

a) New discipline/branch introduced:

- A User Oriented Program on M. Tech in Offshore Structural Engineering for L&T.

b) New Courses introduced:

1	PE6311	Well Logging and Formation Evaluation	Rajesh R. Nair
2	OE 6001	Materials and Fabrication of Offshore Structures	S. Nallayarasu
3	OE 6002	Installation of Offshore Structures	S. Nallayarasu
4	OE 6004	Numerical Modeling of Offshore Structures	S.K. Bhattacharyya S. Nallayarasu

c) New lab(s) established:

1. Natural gas hydrate and flow assurance lab : Jitendra S. Sangwai
2. Dynamics Lab (Established, experiments are under preparation) : Deepak Kumar
S. Chandrasekaran

3. HSE Lab is introduced as a part of the lab course PE 6100 : S. Chandrasekaran

4. Current generation facility is installed in the glass flume with PIV : S. Nallayarasu
S.K. Bhattacharyya

Students on roll:

Program	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	34	37	25	23	6	125
Dual Degree	19	18	14	10	9	70
M.Tech	42	35	1	0	0	78
M.S.	21	17	13	1	0	52
Ph.D.	21	16	13	5	5	60
Total	137	123	66	39	20	385

OE- Ocean Engineering PE- Petroleum Engineering

Endowment prize instituted:

1. Prof. M.S. Ananth Prize – Instituted by ICDT (International Conference on Drilling Technology), Department of Ocean Engineering, IIT Madras, India.
2. ICDT Award – Instituted by ICDT (International Conference on Drilling Technology), Department of Ocean Engineering, IIT Madras, India.

Names of Student/Scholar who attended Conference/ /Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
Abroad:					
1	K.V. Anand	OE11O002	International Conference on Asian and Pacific Coasts (APAC 2011), Hong Kong, China,	14-16 Dec, 2011. Hong Kong, China,	IC & SR
2	Arunjith. A	OE11S002	International Conference on Asian and Pacific Coasts (APAC 2011), Hong Kong, China,	14-16 Dec, 2011. Hong Kong, China,	IC & SR
3	Vivek R	PE10M012	Internship Simulation of CO ₂ migration in the overburden of a CO ₂ storage site	15 Jan - 15 Mar, 2012 Univ of Tromso, Norway	University of Tromso, Norway
4	Gopu R Sekhar	OE08S006	30 th International Conference on Ocean, Offshore and Arctic Engineering, OMAE 2011	19-24, June 2011, Rotterdam, The Netherlands	OMAE Conference Scholarship
5	S. Sudhakar	OE07D003	30 th International Conference on Ocean, Offshore and Arctic Engineering, OMAE 2011	19 – 24, June 2011, Rotterdam, The Netherlands	Institute & Consultancy Projects, DDF
6	Abhishek Joshi	PE10M001	International conference on Enhanced Oil Recovery	Kuala Lumpur - Malaysia 19 th – 20 th July 2011	ONGC
India					
1	K.V. Anand	OE11D002	8 th International conference on Coastal and Port Engineering in Developing Countries IITM	20-24 Feb 2012	Conference funds
2	Arunjith. A	OE11S002	8 th International conference on Coastal and Port Engineering in Developing Countries IITM	20-24 Feb 2012	Conference funds
3	Sheela Nair	OE08D003	8 th International conference on Coastal and Port Engineering in Developing Countries IITM	20-24 Feb 2012	Conference funds

4	R. Karthikeswaran	OE11D013	The 11th Asian International Conference on Fluid Machinery and The 3rd Fluid Power Technology Exhibition 2011	Chennai	IIT Madras
5	M H Nizamuddin	PE10M066	International Conference on Mechanical Engineering Technology 2012	Kerala	Personal funds
6	Nimmy Thankom Philip	OE09S005	Royal Institution of Naval Architects (RINA) Conference on Marine CFD	18-19 Nov 2011 IITM	Sponsored Project funds
7	R Manikandan	OE11D004	Swarm, Evolutionary, and Memetic Computing: Second International Conference, SEMCCO	19-21 Dec 2011 Visakhapatnam	IIT Madras
8	Mohana Sundaram		3 rd International Geography Congress (INTGC-2011)	Kozhikode May 2011	IIT-M
9	Mohana Sundaram		4 th International Groundwater Conference (IWGC-2011)	Sep 27-30, 2011 Madurai	IIT-M
10	M Berlin		4 th International Groundwater Conference (IWGC-2011)	Sep 27-30, 2011 Madurai	IIT-M
11	M. Vasudevan		4 th International Groundwater Conference (IWGC-2011)	Sep 27-30, 2011 Madurai	IIT-M
12	M. Berlin		International Conference on Modeling & Simulation in Civil Engineering (ICMSC-2011)	Dec 8 – 10, 2011 Kollam	IIT-M
13	Swapnadip De Chowdhury		8 th International conference on Coastal and Port Engineering in Developing Countries	20-24 Feb 2012 IITM	Conference funds

Names of students/scholars who won outside prizes and awards:

Sl.No.	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1	Atheendra	NA07B006	Best B. Tech project	Class NK
2	Abhishek Joshi and Kranthi Godhishala	PE10M001	1 st Prize (oral presentation)	International Seminar on Talent Crisis in Global Oil and Gas Industry
3	Jaykaren William and Anu Sebastian	PE11M001	3 rd prize (poster presentation)	International Seminar on Talent Crisis in Global Oil and Gas Industry
4.	Swapnadip De Chowdhury		Best paper award	8 th International conference on Coastal and Port Engineering in Developing Countries

Name of Students/Scholars who won Institute Convocation/Institute Day Prize:

Sl.No.	Name of the Student/Scholar	Roll No.	Name of Prizes	Name of Donor
1	Abhishek Joshi	PE10M001	Prof. M.S. Ananth Prize	ICDT 2010

4.15.3 Faculty and their activities:

Faculty:

Name and Qualifications

Emeritus Professor
C.P. Vendhan

Professors

V. Anantha Subramanian
S.K. Bhattacharyya

V. Sundar

Major Area of Specialization

Analysis and design of ocean structures, Structural dynamics, Dynamics of floating bodies

Computer aided ship design, Ship hydrodynamics and CFD applications. Computer aided structural analysis, Analysis of motion characteristics of floating bodies, Model studies.

Wave-structure interaction, Coastal protection, port & harbour structures, Fluid flow problems.

K. Ganesh Babu	Analysis and design of ocean structures, Behaviour of materials in ocean environment.
V.G. Idichandy	Experimental Hydrodynamics, Underwater instrumentation & Physical Modelling
R. Sundaravadivelu	Computer aided analysis, Design and experimental studies of coastal and offshore structures, Port and harbour structure.
S.A. Sannasiraj	Wind-wave generation, Data assimilation, Breaking wave simulation and its dynamics, Wave-structure interaction, Dynamics of floating bodies.
J.S. Mani	Coastal engineering, wave hydrodynamics
K. Murali	Numerical modelling of coastal hydrodynamics; Sediment transport & pollutant transport. CFD modelling for pollutant transport. CFD application to ship and underwater hydrodynamics.
P. Krishnankutty	Wave-structure interaction, ship maneuvering and motions, high-speed vessel passenger comfort, wave wash study
S. Surendran	Naval Architecture, Marine towing, Non-linear dynamics, Ship motion dynamics control, Ship maneuvering, Ship Structural Analysis and Dredging

Associate Professors

S. Nallayarasu	Analysis and design of offshore structures, Wave-structure interaction, Reliability in offshore structural design.
Srinivasan Chandrasekaran	Offshore structural dynamics, Structural health monitoring; wave energy; structural reliability; seismic analysis and design
G. Suresh Kumar	Reservoir Engineering and Simulation Enhanced Oil Recovery Contaminant Hydrogeology
R. Panneer Selvam	Floating body dynamics, Nonlinear dynamics, System identification.
P. Shanmugam	Satellite oceanography, Ocean optics.

Assistant Professors

Rajiv Sharma	Design of deepwater drilling solutions and floating structures; Computer aided geometric design, computational geometry, visualization, and their applications in design, robotics and manufacturing; Dynamic data driven forecasting systems
Jitendra S. Sangwai	Gas Hydrates, Enhanced Oil Recovery, Rheology of complex fluids, Polymer Science and Engineering
Rajesh R. Nair	Geophysics, Seismic AVA inversion and interpretation
Deepak Kumar	Structural dynamics, Random vibrations, Structural control and stability
Nilanjan Saha	Offshore wind and wave energy. Extreme value statistics and fatigue. Nonlinear methods in ocean engineering. Offshore soil-structure interaction. Stochastic processes, filtering and identification
Abdus Samad	Turbomachinery, Heat Transfer, Computational Fluid Dynamics, Multi-Disciplinary Optimization, Artificial Lift

Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1	V. Sundar S.A. Sannasiraj	8 th International conference on Coastal and Port Engineering in Developing Countries	20-24 Feb 2012
2	S.K. Bhattacharyya P. Krishnankutty	Royal Institution of Naval Architects (RINA) Conference on Marine CFD	18-19 Nov 2011
3	S. K. Bhattacharyya Rajiv Sharma V. Anantha Subramanian P. Krishnankutty	First International Conference on Submarine Technology and Marine Robotics (STaMR 2012)	14-15 Jan 2012
Seminar:			
1	Abdus Samad Jitendra S. Sangwai	International Seminar on Talent Crisis in Oil and Gas Industry	16-17 Mar 2012
Workshop:			
1	R. Sundaravadivelu S. Chandrasekaran S.K. Bhattacharyya	Repair and Rehabilitation of Marine structures (For FOSROC)	28.11.2011
2	S. Chandrasekaran	Pre-conference workshop on Risk Assessment and Management in offshore and petroleum industries , International Conference on Asia Pacific HSE Forum on Oil, Gas and Petrochemicals, Fleming Gulf Conferences, 22-24 th Sep 2011, Kualaumpur, Malaysia,	22-24 Sep 2011
3	S. Chandrasekaran	Post-conference workshop on Offshore Drilling Rigs, Intl. Conf on Offshore Drilling Rigs, IBC Asia, Singapore	24-29 July 2011
4	Indumathi Nambi (Civil Engg) Ravi Krishna (Civil Engg) G Suresh Kumar	Onshore (Inland) Petroleum Spills Case Studies in India and the Way Forward	7 th Feb 2012
Short term Course:			
1	V. Sundar S.A. Sannasiraj	Coastal Dynamics for Coastal Engineers, Port & Harbor Planning/Engineering and Dredging	18-19 Feb 2012
2	R.Sundaravadivelu	Water Quality & Management	9-11 Dec 2011
3	S.K. Bhattacharyya	Hydrodynamics in Ship Design (with DNV Academy, India)	12-16 Dec 2011
4	Rajesh R. Nair G. Suresh Kumar	New insights of scales in Geodata analysis to Seismic interpretation AICTE/OILIndia Limited Sponsored	10-14 Oct 2011
5	Rajesh R. Nair G. Suresh Kumar	On Integrating Geo-Engineering workflows for hydrocarbon reservoirs ONGC Sponsored	10-12 Jan 2012
6	S. K. Bhattacharyya Rajiv Sharma V. Anantha Subramanian P. Krishnankutty	Submarine Design and Engineering	9-13 Jan. 2012
7	S. Nallayarasu	Offshore Structural Engineering	02-06 May 2011
8	S. Nallayarasu	Offshore Structural Engineering for FPSO Topsides (For Technip)	05-09 Sep 2011
9	R. Sundaravadivelu P. Shanmugam G Suresh Kumar	Water Quality and Management	8 – 10 Dec 2011
10	S.K. Bhattacharyya	Naval Architecture and Shipbuilding (with DNV Academy, India)	8-12 Aug, 2011
11	S.K. Bhattacharyya	Ship Structural Design Concepts (with DNV Academy, India)	27-29 Feb, 2012
12	Prof. M.J.F. Stive	Coastal Dynamics for Coastal Engineers	18 Feb, 2012
13	John Headland	Port and Harbour Planning/Engineering	19 Feb, 2012 (Half-day)
14	Prof. C. Van Rhee	Dredging	19 Feb, 2012 (Half-day)

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1	Abdus Samad	Computational Methods in Heat and Fluid Flow	Aligarh Muslim University	18-19 Feb 2012
2	Abdus Samad Jitendra S. Sangwai	Industry –Academia workshop	ONGC- Rajahmundry	26-29 Mar 2012
3	P. Shanmugam	Water quality and management	IIT Madras	8-10 Dec 2011
4	Nilanjan Saha	Workshop on Water Waves and Floating Bodies	IIT Kharagpur	25-26 Nov 2011
5	G Suresh Kumar	Technology Imperatives for Exploration and Production of Oil & Gas	ONGC	26 – 29 March 2012
Seminar:				
1	Jitendra S. Sangwai Abdus Samad	International Seminar on Talent Crisis in Global Oil and Gas Industry	IIT Madras	16-17 Mar 2012
2	V. G. Idichandy	Marine Hydrodynamics	College of Engg. Trivandrum	3 Feb, 2012
Symposia:				
	Rajiv Sharma G Suresh Kumar	PETROTECH Annual Convention	ISM - Dhanbad	10 – 15 March 2012
Conference:				
1	V. Sundar	8 th International conference on Coastal and Port Engineering in Developing Countries	IIT Madras	20-24 Feb 2012
2	Abdus Samad	The 11th Asian International Conference on Fluid Machinery and The 3rd Fluid Power Technology Exhibition 2011	IIT Madras	21-23 Nov 2011
3	Abdus Samad	International Conference on Mechanical Engineering Technology 2012	St Joseph College of Engineering and Technology, Kerala	21 Jan 2012
4	Abdus Samad	8 th International conference on Coastal and Port Engineering in Developing Countries	IIT Madras	19-24 Feb 2012
5	Rajiv Sharma	Second International Conference on Emerging Technological Trends in Advanced Engineering Research (ICETT-2012)	BMCE, Kollam, India.	20-21 Feb. 2012.
6	Rajiv Sharma	International Conference on Systemics, Cybernetics and Informatics (ICSCI - 2012)	PRCPL, Hyderabad, India.	15-18 Feb. 2012
7	Rajiv Sharma	International Conference on Ship and Offshore Technology – India (ICSOT (India)-2011)	IIT Kharagpur, India.	8-9 Dec. 2011.
8	K. Murali	8 th International conference on Coastal and Port Engineering in Developing Countries	IIT Madras	20-24 Feb 2012
9	P. Shanmugam	Water quality in Pentha village, Odisha	IIT Madras	8-10 Dec. 2011
10	Nilanjan Saha	8 th International conference on Coastal and Port Engineering in Developing Countries	IIT Madras	20-24 Feb 2012
11	S.Chandrasekaran R.Panneer Selvam	30 th International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2011)	Rotterdam, The Netherlands	19-24 June 2011
12	P.Krishnankutty R Panneer Selvam	EWEA OFFSHORE 2011	Amsterdam The Netherlands	27 Nov – 02 Dec 2011

13	P Krishnankutty R.Panneer Selvam	8 th International conference on Coastal and Port Engineering in Developing Countries	IIT Madras	20-24 Feb 2012
14	S.A. Sannasiraj	8 th International conference on Coastal and Port Engineering in Developing Countries	IIT Madras	20-24 Feb 2012
15	S.A. Sannasiraj	Coasts and Ports 2011	Perth, Australia	28-30 Sep. 2011
16	V. G. Idichandy	Ocean Society of India OSCICON 11 (Inaugural address)	NIOT, Chennai	13-15 July, 2011
17	V. G. Idichandy	International conference on modeling and simulation in civil engineering (Keynote address)	UTP, Malayasia	8-10 Dec, 2011
Training:				
1	Jitendra S. Sangwai	Technology Imperatives for Exploration and Production of Oil & Gas	Petrofed	26 -29 March 2012
Short term Course:				
1	K. Murali	Coastal Dynamics for Coastal Engineers, Port & Harbor Planning/Engineering and Dredging	IIT Madras	18-19 Feb 2012
2	Rajesh R.Nair	Modern practices in Petroleum Exploration at ONGC Dehradun	ONGC Dehradun	5 -9 Sep 2011
3	V. Sundar	Coastal Dynamics for Coastal Engineers, Port & Harbor Planning/Engineering and Dredging	IIT Madras	18-19 Feb 2012
4	G. Suresh Kumar	Modern practices in Petroleum Exploration at ONGC Dehradun	ONGC Dehradun	5 -9 Sep 2011

Special Lectures delivered by the faculty in other Institutions:

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1	V. Sundar	Physical modeling of coastal structures	Nanyang Tech. University	25.02.2011
2	V. Sundar	Coastal tructures and their behavior in the littoral zone – case studies	NIOT Campus	18.01.2011
3	V. Sundar	Tsunami effects, mitigation measures and recent research	Obukhov Institute for physics of Atmosphere of the Russian Academy of Sciences	12.07.2011
4	J.S. Mani	Environmental parameters associated with the coastal zone and types of protective structures adopted world wide	Shri Krishna College of Engineering, Coimbatore	15.03. 2012
5	J.S. Mani	Protection of NPP against external flooding -coastal sites/tsunamis	BARC Mumbai	06.01. 2012
6	R. Panneer Selvam	An overview of floaters of offshore wind turbine	Centre for Wind Energy C-WET, Chennai	23.08.2011
7	Rajesh R. Nair	“ Modern practices in Petroleum Exploration at ONGC Dehradun	ONGC Dehradun	5-9 Sep 2011
8	Abdus Samad	DESIGN AND OPTIMIZATION OF SYSTEMS VIA CFD	Aligarh Muslim University	18.02.2012
9	Rajiv Sharma	Keynote talk on ‘Swarm Intelligence in Marine Robotics’	ICETT-2012, Kollam, India	21.02.2012
10	Rajiv Sharma	Keynote talk on ‘CAD for Heterogenous Objects (HOs)’	ICSCI-2012, Hyderabad, India	18.02.2012
11	K. Murali	Offshore Foundation Design	Newcastle University, UK	03-06 Jan 2012
12	Nilanjan Saha	Workshop on Water Waves and Floating Bodies	IIT Kharagpur	25-26 Nov 2011

13	S. Chandrasekaran	Analysis and Design of offshore structures: Advancements and code compliance	Human Resource Development Center (HOPE) for Offshore and Plant Engineering, Changwon National University, South Korea	19-24 Dec 2011
14	S. Chandrasekaran	Invited seminar on Hazard identification and Management in Oil and Gas Industry, Human Resource Development Center (HOPE) for Offshore and Plant Engineering, Changwon National University, South Korea	Human Resource Development Center (HOPE) for Offshore and Plant Engineering, Changwon National University, South Korea	19-23 April , 2011 and Dec 2011
15	S.A. Sannasiraj	Altimeter measurements of waves	Obukhov Institute for Physics of Atmosphere of the Russian Academy of Sciences, Moscow	12 July 2011
16	S.A. Sannasiraj	Wave data assimilation using buoy and altimeter measurements	Obukhov Institute for Physics of Atmosphere of the Russian Academy of Sciences, Moscow	12 July 2011

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1	V. Sundar	Singapore	21-25 Feb 11	To participate in the workshop	IC & SR
2	V. Sundar	Sccezin, Poland	9-14 May 11	To participate in the International Coastal Symposium	Institute and IC & SR
3	V. Sundar	USA	15-27 May 11	To visit the Univ of California, Davis	Institute and IC & SR
4	V. Sundar	USA	28 May - 6 June 11	Univ of Illinois, Chicagao & Univ of Orgeon state	Institute and IC & SR
5	V. Sundar	Moscow, Russia	7-17 July 2011	Delivered invited lecture in Obukhov Institute for Physics of Atmosphere of the Russian Academy of Sciences	IC & SR
6	V. Sundar	Trondheim, Norway	16 Aug to 11 Nov 2011	Visiting Professor	IC & SR
7	V. Sundar	Sandiego, USA	20-24 Aug 2011	To participate in the Coastal Engineering practice conference	IC & SR
8	R.Sundaravadivelu	Shanghai, China	10-13 Nov 2011	5 th International Conference of the Port-city University- Paper Presentation	PCF
9	R. Sundaravadivelu	Shanghai Jiao University, China	7-9 Nov 2011	Brief visit to University	PCF
10	V. Anantha Subramanian	USA	22 May-08 June 2011	Visit to University of Wisconsin	PCF
11	P. Krishnankutty	The Netherlands	27 Nov - 02 Dec 2011	To Attend Conference on Offshore Wind Energy	CPDA, IITM
12	Rajesh R. Nair	China Beijing	31 Jul – 5 Aug 2011	Presented a paper "India's Unconventional Resources and Possible Geophysical Techniques for Its Exploration" at SEG Meeting, Beijing	IITM

13	Abdus Samad	UK	26 Jun -19 Sep 2012	India Distinguished Visiting Fellowship 2011	The University of Nottingham, UK
14	Jitendra S. Sangwai	Germany	15.05.2011	DAAD-IITM Faculty exchange	DAAD and IIT M
15	S. Nallayarasu	Malaysia	15-20 Jul.2011, 06-08 Jun 2011, 28-30 Jul 2011, 06-09 Oct 2011, 11-13 Dec 2011, 08-09 Mar 2012,	Project Related Visits	From projects
16	S. Nallayarasu	Cyprus	15-17 Sep 2011	Project Related Visits	From Projects
17	Rajiv Sharma	Republic of Korea	19 June – 29 July 2011	Joint research with SNU, Republic of Korea	Republic of Korea
18	K. Murali	UK	27 Jul 11 to 26 Nov12	Sabbatical	
			31 Dec 11 -06 Jan 12	Visit to university of Newcastle	
			26-28 Mar. 2012	PUL Meeting at University of Southampton	IC & SR
19	Nilanjan Saha	NORWAY	10 Aug - 09 Sep 2011	Research on wind renewable energy	Research Council of Norway
20	S. Chandrasekaran R Panneer Selvam	Amsterdam, Netherlands	19 -24 June 2011	30 th International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2010)	IIT Madras, CPDA
21	S. Chandrasekaran	South Korea	19-24 Dec 2011	Changwon National University, South Korea	By invitation
22	S. Chandrasekaran	Kaulalumpur, Malaysia	22-24 Sep 2011	Fleming Gulf Conference series, Malaysia	By invitation
23	S. Chandrasekaran	South Korea	19-23 April 2011	Changwon National University, South Korea	By invitation
24	S. Chandrasekaran	Singapore	24-29 July 2011	IBC Asia, Singapore	By invitation
25	Rajesh R. Nair	China Beijing	31 Jul – 5 Aug 2011	Presented a paper India's Unconventional Resources and Possible Geophysical Techniques for Its Exploration at SEG Meeting, Beijing	IITM
26	R Panneer Selvam	Yichang, China	16-18 Sep 2011	Presented a paper "Feasibility studies on Free Floating Wave Energy Converter (FWEC)"	CPDF
27	S. K. Bhattacharyya	South Korea	19-23 April 2011	Changwon National University, South Korea	By invitation
28	S.A. Sannasiraj	USA	02-01-11 to 10-06-11	Fulbright-Nehru senior research fellowship	USIEF, USA
29	S.A. Sannasiraj	Australia	27-30 Sep. 11	Conference	CPDA
30	S.A. Sannasiraj	Singapore	16-17 Nov. 11	Joint Research project	Project funds

31	S.A. Sannasiraj	Russia	8-17 Jul. 11	Joint Research project	DST project funds
32	S Surendran	US	Aug 9-14	Conference	CPDA
33	S Surendran	Sharjah UAE	Dec 11-14	Conference	CPDA&project
34	R Panneer Selvam	The Netherlands	27 Nov - 02 Dec 2011	To Attend Conference on Offshore Wind Energy	CPDA, IITM
35	V. G. Idichandy	Malayasia	4-8 May, 2011	PhD viva and discussion on MoU at Univ. Tech. Petronas and Univ. Tech Malayasia	CPDA

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
i. Honours:					
1	V. Sundar	Fellow, Indian Society for Hydraulics, India			
2	V. Sundar	Member of the Executive council of Indian Society of Hydraulics.			
3	Jitendra S. Sangwai	DAAD fellowship	DAAD	DAAD-IITM Faculty exchange	March 2012
4	Abdus Samad	India Distinguished Visiting Fellowship 2011	The University of Nottingham, UK	Short term research	June 2011
5	R. Sharma	SNU Visiting Professor	SNU, Republic of Korea	Collaborative research	June – July, 2011
6	V.G. Idichandy	Deputy Director IITM	till 30th June 2011		
7	V.G. Idichandy	Officiating Director, IITM	30th July to 24th Sept 2011		
8	V.G. Idichandy	Chairman, BOG of College of Engineering, Barton Hill, Trivandrum	From 2011 onwards		
9	V.G. Idichandy	Member, Governing Council, NIOT			
10	V.G. Idichandy	Member, Review and technical committee of seakeeping and maneuvering basin of NSTL, Vizag			
11	V.G. Idichandy	Co-chairperson of RAC, DRDO			
12	C.P. Vendhan	Chairman, Hydrodynamics panel of NRB			
ii. Awards:					
1	Abdus Samad	Inventor Award	Intellectual ventures Asia Pvt Ltd	Inventing a Novel Progressive cavity Pump	January 2012
2	Abdus Samad	Inventor Award	Intellectual ventures Asia Pvt Ltd	Inventing a power take-off mechanism for wave energy device.	March 2012
3	Rajiv Sharma	Best paper award	ICSCI-2012	“Computer Methods for Solutions of Systems of Nonlinear Polynomial Inequalities and Equations”, authored by Manipriya Sankar and R. Sharma	17.02.2012.

4	Rajiv Sharma	Certificate of appreciation	SNAME, USA	"Conceptual development of structured bill of material (BOM) for the logic based product lifecycle management (LBPLM) system for shipbuilding industries", authored by R. Sharma, Boram Kim and Tae-wan Kim	.Sept. 2011.
5	Nilanjan Saha	Hari Om Ashram Perit Award	Sardar Patel Renewable Energy Research Institute	Renewable energy for the period 2008-2011	24.03.2012

Books, Monographs authored/co-authored/edited:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1	R. Sundaravadivelu	Kadar Porieyar KalaiChorkal(Mini Encyclopedia for Ocean Engineering in Tamil)	International Institutes of Tamil Studies	R.Ramasamy SP. Subramanian
2	J.S. Mani	Coastal Hydrodynamics	PHI Learning Pvt. Ltd. New Delhi. ISBN 978-81-203-4429-7	-
3	Rajiv Sharma S. K. Bhattacharyya V. Anantha Subramanian P. Krishnankutty (eds)	Advances in submarine technology and marine robotics	IIT Madras, India.	S. K. Bhattacharyya, V. Anantha Subramanian and P. Krishnankutty
4	S. Chandrasekaran S.K. Bhattacharyya	Analysis and Design of Offshore structures with illustrated examples ISBN: 978-89-963915-5-5	Changwon University Press, South Korea	
Monographs:				
1	Abdus Samad	Turbomachinery Design and Optimization	LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany	
2	S. K. Bhattacharyya Rajiv Sharma V. Anantha Subramanian P. Krishnankutty (eds.)	Monograph on Submarine Design and Engineering ISBN: 978-93-80689-07-4	IIT Madras India	

Fellowships of Academies and Professional Societies:

Sl. No.	Name of faculty	Year of admission
1	V.Anantha Subramanian – Fellow Royal Institution of Naval Architects, London,	2010 March
INAE:		
1	R. Sundaravadivelu	2006
Others:		
1	Fellow of Royal Institution of Naval Architects, London - P. Krishnankutty	2011
2	India Distinguished Visiting Fellowship 2011 – Abdus Samad	2011
3	S. Chandrasekaran Member, American Society of Civil Engineers	2011-2012
4.	S.A. Sannasiraj, Member, PIANC	2011
5	V. G. Idichandy Member, American Society of Mechanical Engineers	2011-2012

Journal Editorial Boards:

Sl.No.	Name of faculty	Position (Editor/Member)	Journal Name
1.	V. Sundar	Associate Editor	Journal of Hydro-Environment Research
		Associate Editor	Ocean Engineering journal (International)
		Member	International Journal of Ecology and Development on Coastal and Estuarine Environment
		Member	Journal of Engineering for the Maritime Environment
		Member	international journal(s) on Engineering and Mechanics
		Member	International Centre for urban water hydro informatics Research and Innovation (ICUH)
		Member	Indian Society of Hydraulics Journal
		Member	Indian Journal of Marine Sciences
2	V.Anantha Subramanian	Member Editorial Board	Journal of Ship Technology, India
3	S.K. Bhattacharyya	Member Editorial Board	Journal of Ship Technology, India
4	Rajiv Sharma	Member	International Journal of CAD/CAM
5	S Surendran	Editorial Board member	Intl. Journal of Ships and Offshore Structures

4.15.4 Design and Development Activities:

Brief and specific details of Process/Instruments/Equipment/ Software designed and developed:

1. Jitendra S. Sangwai

- Developed equipment for gas hydrate studies, enhanced oil recovery studies

2. Srinivasan Chandrasekaran

- Computer program coding developed for risk analysis of offshore drilling rigs
- 2. Computer program developed for nonlinear dynamic analysis of perforated offshore tension leg platforms
- Analysis and Design of Multi-legged articulated towers with tuned mass dampers

3. V.G. Idichandy

- Instrumentation for remote data acquisition during the impact of a falling object in water for ISRO
- Development of a Underwater Propeller Dynamometer for NSTL, Vizag

New facilities added or major equipment procured:

Sl. No.	Name of faculty	Name of Equipment	Value (Rs. In Lakhs)
1	V. Anantha subramanian	Motion Reference Unit	6.0
2	Rajesh R. Nair	Paradigm awarded the extension of Seismic data analysis software's (Echos, Seis Earth, Reservoir Geophysics, Seismic Tomography) to IIM, Petroleum Engineering program for the year 2011-2012 based on Academia licenses Procurement in progress: GPR 100 MHz antenna with fibre optic cables, Laser Doppler Vibrometer, Schlumberger Petrel, Eclipse, Geomod (MOU signed between IITM and Schlumberger for grand of 5 Network licenses)	10.0
3	Jitendra S. Sangwai	Developed equipment for gas hydrate studies	4.0
		Enhanced oil recovery studies	6.8
4	Deepak Kumar	Shake Table (Unidirectional, Sinusoidal)	1.1
5	P. Shanmugam	Conductivity-Temperature-depth sensors, Attenuation and absorption spectrometers, Backscattering sensors, Fluorometer, Turbidity sensor, . Above-water and under-water radiometers, Many accessories for the above sensors	96.0

Patents:**Patents filed:**

Sl.No	Name of faculty	Topic of patent
1	Abdus Samad	Progressing cavity pump rotor
2	Jitendra S. Sangwai	Patent on rheological measurement (in process)
3	S. Chandrasekaran (2107/CHE/2010)	Oscillating arm for double acting ocean wave energy converter
4	S. Chandrasekaran (2482/CHE/2010)	Power generation using mechanical wave energy converter

Patents awarded:

Sl. No.	Name of faculty	Topic of patent
1	Rajesh R. Nair along with PhD Scholar (R.K.Reddy) Registration no: SW-5016/2012, dated 19 th January 2012	New approach for estimation of Strong Ground motion and information dissemination during an Earthquake

4.15.5 Research and Consultancy:**Sponsored Research Projects:**

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	Flow Visualisation and Measurement around Damping Elements for Floating Bodies in Waves	31.08.2009 to 30.08.2012	Naval Research Board	31.13	S. Nallayarasu S. K. Bhattacharyya
2	Sloshing and slamming of liquid in Tuned Liquid Damper	Mar2011-Mar 2014	IITM (NFSC)	10.0	Deepak Kumar
3	Assessment of functional performance of groin field along the north of Chennai harbor	31.08.2010 to 31.03.2012	ICMAM	91.87	V. Sundar S.A. Sannasiraj K. Murali
4	Investigations on functional performance of coastal structures	12.04.2010 to 11.04.2013	National Institute of Ocean Technology	59.69	V. Sundar K. Murali
5	Detection and classification of algal blooms in Indian coastal waters using OCM-2 data	Nov 2009-Oct 2012	ISRO-IITM Cell	19.7	P. Shanmugam
6	Development of a new atmospheric correction algorithm for geostationary ocean color satellite sensor	Jul 2010-Jun 2011	Korea Ocean Research and Development Institute, Seoul, Korea	11.7	P. Shanmugam
7	Development of algorithms for monitoring and forecasting hazardous algal blooms in Indian waters using OCM-2 data	Aug 2010- Jul 2013	INCOIS, Hyderabad	40.0	P. Shanmugam
8	Development of new inversion model for retrieving coloured dissolved organic matter from IRS OCM-2 data	Jan 2009-Dec 2011	Space Application Centre, Ahmedabad	20.0	P. Shanmugam
9	Measuring and monitoring of 3d characteristics of underwater light field in coastal waters	Sep 2011- Aug 2014	Naval Research Board	105.5	P. Shanmugam S.K. Bhattacharyya
10	Studies and modeling of occurrence of bioluminescence in coastal waters	Jan 2012- Dec 2014	Naval Research Board	98.0	P. Shanmugam
11	Blooms and Plumes	Jan 2013-Dec 2015	INCOIS, Hyderabad	96.0	P. Shanmugam
12	Feasibility of fixed and floating wind turbines through numerical modeling	Mar 2012 - Mar 2014	National Institute of Ocean Technology	17.82	Nilanjan Saha

13	Development of Simulation Strategies and Scaled Experimental Models for Offshore Wind Turbines In Parked Conditions	22-Oct-2010 To 21-Oct-2012	IITM (NFSC)	5.0	Nilanjan Saha
14	Interaction of ships with basins, entrance and approach channel	2008-2011	Ministry of Shipping	32.77	R. Sundaravadivelu
15	Hydrodynamic response of perforated cylinders and their applications in offshore structures	2011-2013	NRB	31.02	S. Chandrasekaran
16	Structural Health Monitoring of Offshore structures - Capstone design project	Aug2011-Mar2012	Human Resource Development Center for offshore and Plant Engg, Changwon University, South Korea	US\$ 5000	S. Chandrasekaran S.K. Bhattacharyya
17	Aerodynamic analysis of offshore triceratops - Capstone design project	Aug2011-Mar2012	Human Resource Development Center for offshore and Plant Engg, Changwon University, South Korea	US\$ 5000	S. Chandrasekaran S.K. Bhattacharyya
18	Dynamic analysis of perforated tension leg platforms - Capstone design project	Aug2011-Mar2012	Human Resource Development Center for offshore and Plant Engg, Changwon University, South Korea	US\$ 5000	S. Chandrasekaran S.K. Bhattacharyya
19	"Distinguishing between storms/tsunamis based on subsurface records in Indian coasts	Aug2012 - Aug2015	IITM (NFSC)	15.0	Rajesh R. Nair
20	Multiphase Downhole Pump Design and Optimization for Oil and Gas Field Application	2010-2012	IIT Madras	5.0	Abdus Samad
21	Studies on gas hydrates	1.5 yrs	NIOT	26.0	Jitendra S. Sangwai
22	Investigations into vortex induced oscillations of a spring mass systems	30.09.2009 to 29.09.2012	Naval Research Board	31.81	V. Sundar K. Murali
23	Enhancing wave forecasting capabilities in Indian ocean using body and altimeter derived wave data	09.11.2008 to 10.09.2011	INCOIS, Hyderabad	25.0	V. Sundar S.A. Sannasiraj
24	Assimilation of satellite data to improve wave forecast	09.03.2009 to 08.03.2012	SAC, Ahmedabad	21.05	V. Sundar S.A. Sannasiraj
25	Coupled dynamic sloshing of liquid in a container and the barge	31.08.2009 to 30.08.2012	Naval Research Board	22.42	V. Sundar S.A. Sannasiraj
26	Wave scattering in heterogeneous media using the finite element method	22.03.2012 to 21.03.2015	Asian Office of Aerospace R&D, US Air Force, Tokyo	US\$ 70000	C P Vendhan S.K Bhattacharyya Nilanjan Saha Deepak Kumar
27	Study on the Non-Linear Effects of Free Surface Waves on Fixed and Floating Structures	Jan 2008 to Jan 2012	Naval Research Board	18.168	P Krishnankutty C P Vendhan

28	The changing risks posed by petroleum hydrocarbons in groundwater environments: multiphase fluid dynamics coupled to multispecies biodegradation	Oct 2011 – Oct 2014	DST	39.26	Indumathi Nambi (Civil Engg.) Ravi Krishna (Civil Engg.) G Suresh Kumar
29	The coastal inundation risk map study for Singapore	Nov.11-Oct.13	National University of Singapore	14.0	S.A. Sannasiraj
30	Interaction of ships with basin, entrance and approach channels	2009-2012	Min. of Shipping, New Delhi	27.78	S. Surendran, R Sundaravadivelu
31	Development of Computer Aided Tutorials and Lecture Notes for Training Scientists and Engineers in Ocean Acoustics	2010-2012	National Institute of Ocean Technology	15.0	S.K. Bhattacharyya C.P. Vendhan
32	Low Frequency Acoustic Propagation in Shallow Water Ocean With Seabed Effects	2008-2012	National Institute of Ocean Technology	17.04	S.K. Bhattacharyya C.P. Vendhan
33	National Program in Marine Hydrodynamics	2008-2012	Naval Research Board	450.0	V.G. Idichandy S.K. Bhattacharyya
34	Hydrodynamic coefficients	2011-2012	Petronas at Univ. Tech. Petronas, Malaysia	Nil (visits only)	V.G. Idichandy
35	Study of an energy exchange between wind and waves and variability of their climate characteristics in the Indian Ocean	09.08.2010 to 08.08.2012	Indo-Russia project sponsored by DST, India and Russian Academy of Sciences, Russia at Obukhov Institute for Physics of Atmosphere	11.77	S.A. Sannasiraj V.Sundar

Industrial Consultancy projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1	K. Murali	Shore protection along adjacent coastal stretches of cochin port due to deepening of navigation channel	Cochin Port Trust	29.47
2	K. Murali	DPR for Kanakesanturai harbor project at Srilanka	Port and Water Resources Rites Limited	22.06
3	K. Murali	Consultancy for development of fishing harbor at Cutbona (Sal River) and at Chapora (River Chapora) in the state of Goa	West Bengal Fisheries Corporation Ltd.,	16.55
4	K. Murali	Investigation of shoreline stability against coastal erosion at Bhadreswar	OPG Power Gujarat Pvt. Ltd.	12.13
5	K. Murali	Suggesting a suitable scheme	Bhel Pem, New Delhi.	6.45
6	K. Murali	Detailed project report for jetty facility to import coal for proposed power project, Mumbai	Mahagenco , Mumbai	11.03
7	K. Murali	Sea water intake & Discharge system study for thermal power plant at village Palavalasa, Visakhapatnam District	Hinduja National Power Corporation Ltd, Mumbai	30.0
8	R. Sundaravadivelu	Fishing Harbour at Rajakamangalam Thurai	Rajakamangalam Thurai fishing harbour pvt. ltd	6.0

9	R. Sundaravadivelu	Development of 13th Multipurpose cargo berth at Kandla Port	Kandla Port Trust, Gandhidham	72.0
10	R. Sundaravadivelu	Design of marine jetty and diaphragm wall for DGNP at Visakhapatnam	Naval Project, Naval Base, Visakhapatnam	19.3
11	R. Sundaravadivelu S. Chandrasekaran	Consultancy service for assessing structural stability of Matsya Dock for provision of two additional 210 Ton EOT crane	Naval Dockyard, Visakhapatnam	8.27
12	R. Sundaravadivelu	Checking Technical viability of Oil Jetties for handling 13m/14m draught vessel	Kandla Port Trust, Gandhidham	9.92
13	S. Chandrasekaran	Consultancy services for Repair/Replacement of mooring at DG range Naval Dockyard, Visakhapatnam	Naval Dockyard, Visakhapatnam	6.61
14	R. Sundaravadivelu	Construction of Approach Trestle & Jetty for NOCI cargoes at Tiruchopuram at Vax Consultants Pvt. Ltd.	Vax Consultants Pvt. Ltd., Chennai	5.0
15	R. Sundaravadivelu	Proof checking of design & drawings of quay structure for Modular Fabrication facility at Larsen & Toubro Limited, Chennai	Larsen & Toubro Ltd, Chennai	5.51
16	R. Sundaravadivelu	Repair of IOCL Jetty at Kandla	Indian Oil corporation, Ahmedabad	13.23
17	S. Chandrasekaran	Consultancy for repairs of CG Dry at Naval Dockyard Mumbai	Naval Dockyard, Mumbai	16.54
18	R. Sundaravadivelu	Study of Construction of Additional Oil Jetties at Old Kandla	Kandla Port Trust, Gandhidham	8.82
19	R. Sundaravadivelu S. Chandrasekaran	Consultancy for SBW Jetty for Installation of new portal crane for Naval Dockyard, Mumbai	Naval Dockyard, Mumbai	8.27
20	S. Chandrasekaran	Consultancy for undertaking feasibility study for enhancing crane capacity at covered shed at Jetty'X'	The project Director, Naval Project	7.5
21	R. Sundaravadivelu	Construction of 3rd Stage Breakwater at Androth Island of Lakshadweep	Lakshadweep Harbour works, Kavaratti	11.22
22	R. Sundaravadivelu	Development of North Cargo Berth – II, preparation of design and drawing	Tuticorin coal terminal pvt ltd	31.98
23	R. Sundaravadivelu	Recording initial, final levels and computation of quantity for the desilting and de-weeding work of Ansupa lake	Chilika Development Authority	6.61
24	R. Sundaravadivelu S.A. Sannasiraj S.R.Gandhi P. Shanmugam Rajesh R. Nair	Site selection for geotube installation at Pentha village, Kendrapara, Odisha.	Chilika Development Authority	66.0
25	R. Sundaravadivelu	Consultancy for strengthening of existing berths WQ-1, WQ-2 and WQ-3 in the Northern arm of inner harbour to cater to 14.00m draft vessels (-16.10m dredged depth)	Visakhapatnam Port Trust	11.03
26	V. Anantha Subramanian S.A. Sannasiraj K. Murali	Conducting model studies and concept design of SFBW & TFBW for the proposed floating breakwater development" at Agathi Island of Lakshadweep	Lakshadweep harbour works, Kavaratti	40.00
27	R. Sundaravadivelu	Consultancy work for extension of coast guard jetty at Port Blair	Military Engineering Services, Port Blair	14.73
28	R. Sundaravadivelu S.R.Gandhi Nilanjan saha	Review Consultancy for Bangalore Metro Rail Corporation	M/s. Bumi Geo Engineering Ltd.	11.03
29	R. Sundaravadivelu	Proof Checking of Foundation design and drawing for Piers for Bridge across River Ganga at Bakthiyarpur	Navayuga Engineering Company	1.2
30	R. Sundaravadivelu	Construction of Fish Landing Centre, at Nagore in Nagapattinam District	Fisheries Department	3.55
31	R. Sundaravadivelu	Review & Approve the project reports, adequacy of engineering investigations, proof checking of design, calculation & working drawings	Gopalpur Port, Odisha	97.06

32	S. Chandrasekaran R. Sundaravadivelu	Consultancy service for assessing structural stability of Dry Dock at DGNP, Mumbai	Naval Project, Naval Base, Mumbai	16.0
33	S Chandrasekaran R. Sundaravadivelu	Consultancy services for Repair/Replacement of N1, N2 Jetties of DG range Naval Dockyard, Visakhapatnam	Naval Dockyard, Visakhapatnam	8.0
34	S Chandrasekaran R. Sundaravadivelu	Consultancy for repairs of CG Dry at Naval Dockyard Mumbai	Naval Dockyard, Mumbai	8.0
35	R. Sundaravadivelu S Chandrasekaran	Consultancy for SBW Jetty for Installation of new portal crane for Naval Dockyard, Mumbai	Naval Dockyard, Mumbai	8.0
36	S. Nallayarasu	Verification of roof structure for Oil tank storage at Chittoor	Geomarine Consultants Pvt. Ltd., Chennai	1.0
37	S. Nallayarasu	Project Technical review services for SPM design for NOCL Marine terminal project	DNV, Chennai	13.5
38	S. Nallayarasu	Structural Design/Review of GSPC-PLQP Platform Project	Aker Solutions, Malaysia	40.0
39	S. Nallayarasu	Geotechnical advice for outer ring road project at Chennai	GMR Infrastructure Limited, Chennai	5.0
40	S. Nallayarasu	CP System Design for Sheet piles	GMR Energy Limited, Bangalore	5.0
41	S. Nallayarasu	Structural design of fishing harbour at Mangalore and Malpe.	Port and Fisheries Division, Udupi	20.0
42	S. Nallayarasu	Structural design of P2, P5 and C2 module for Cendor FPSO Project	Aker solutions Malaysia	40.0
43	S. Nallayarasu	Mooring Analysis for Oil Jetty at Cuddalore	VAX Consultants Chennai	5.0
44	S. Nallayarasu	Feasibility Study for Barge mounted Power Plant at Cyprus	GMR Energy Limited Bangalore	5.0
45	S. Nallayarasu	Design review and assistance for Petronet LNG Jetty at Dahej	Afcons Infrastructure Limited, Mumbai	12.0
46	S. Nallayarasu	Engineering Consultancy Services for Construction of jetty head structures at DAHEJ LNG TERMINAL	Dahaj Standby Jetty Project Undertaking	44.0
47	S. Nallayarasu	Pile Drivability Analysis Of D1-CJACKET	Aker Solutions Mumbai	3.0
48	S. Nallayarasu	Inspection for accessing the stability & the condition of existing BC 307 belt conveyor	DCW limited	0.5
49	S. Nallayarasu	Consultancy for offshore structural analysis using sacs	Aryatech Marine and Offshore Services Pvt. Ltd., New Delhi	10.0
50	S. Nallayarasu	Design review of Desalination plants in Amini, Androth, Chetlat, Kadamat, Kalpeni And Kiltan Islands Of At Lakshadweep	Kirloskar Construction And Engineers Ltd , Chennai	36.0
51	S. Nallayarasu	Collaborative Project on "Analysis of Guyed Tower platform for Marginal field"	IEOT, Mumbai	5.0
52	S. Nallayarasu	Vibration analysis of P2 module	Aker Solutions, Malaysia	6.0
53	S. Nallayarasu	Augmenting seawater supply to solar salt works at Vedaranyam	GHCL limited	1.0
54	V Anantha Subramanian P Krishnankutty	Resistance, sea keeping and anti-roll tests for geotechnical offshore vessel	Modest infrastructure ltd., mumbai	10.47
55	V. Anantha Subramanian P Krishnankutty	Model Test Services For 90t Ahts	Win Marine Engineering Services, Dubai	3.0
56	V. Anantha Subramanian P Krishnankutty	Essar projects (india) limited., mumbai	Essar projects (india) limited., mumbai	7.0
57	V. Anantha Subramanian P Krishnankutty	Iczmp project., Odisha	Technical support for vessels under iczmp-odisha	27.85
58	V. Anantha Subramanian P Krishnankutty	Consolidated construction ltd., chennai	Consolidated construction ltd., chennai	2.2

59	V. Anantha Subramanian P Krishnankutty	Model test services for ro-ro barge	Navgathi marine design and constructions pvt ltd., kochi	3.0
60	V. Sundar	Measurement of uplift pressure on a concrete pavement over the crest of the Krishnapatnam port breakwater	Krishnapatnam port	4.51
61	V. Sundar	Shore protection along adjacent coastal stretches of cochin port due to deepening of navigation channel	Cochin Port Trust	29.47
62	V. Sundar	DPR for Kanakesanturai harbor project at Srilanka	Port and Water Resources Rites Limited	22.06
63	V. Sundar	Consultancy for development of fishing harbor at Cutbona (Sal River) and at Chapora (River Chapora) in the state of Goa	West Bengal Fisheries Corporation Ltd.,	16.54
64	V. Sundar	Investigation of shoreline stability against coastal erosion at Bhadreshwar	OPG Power Gujarat Pvt. Ltd.	12.13
65	V. Sundar	Improvement and widening to four land with both sides roads of Ennore Expressway from km1/600 to 7/538	Coastal SPL-JV	8.27
66	V. Sundar	Investigation of shoreline stability along the coastal stretch in the vicinity of coromandel International Ltd., Chennai	Coromandel International Ltd.	7.72
67	V. Sundar	Technical Assistance for the construction of a coastal road with necessary shore protection along the sea shore from M/s. Suraj Agro Industries to old Harbour Entrance in Chennai port	Chennai Port Trust	11.91
68	S.K. Bhattacharyya	Floater design	Ship Building Centre, Vizag	6.0
69	S.K. Bhattacharyya S. Vengadesan (Applied Mechanics) P. Chandramouli (Mechanical Engg.)	Flow noise in turbulent boundary layer	NPOL, Kochi	6.0
70	S.K. Bhattacharyya	Interface of EWS to FEM	DRDL, Hyderabad	30.0
71	S.A. Sannasiraj	Economical hydraulic model study works for construction of jetty on Mahanadi river	Indian farmers fertilizer co-operative ltd., Odisha	20.0
72	S.A. Sannasiraj	Evaluation of Construction of seawall, Gujarat	Garware wall ropes ltd., Pune	0.27
73	S.A. Sannasiraj	Technical feasibility study for selection of port for establishing fsru/lng terminal	Andhra pradesh gas distribn corp ltd., Hyderabad	8.824
74	S.A. Sannasiraj	Review of DPR for Subarnarekha port	M/s. Subarnarekha port	5.515
75	S.A. Sannasiraj	Sindya power generating company pvt ltd., 2*660 mw coastal thermal power project	Sindya power generating company private ltd	16.545
76	S.A. Sannasiraj	Stability of vcw pipeline support	DCW ltd Tuticorin Tamilnadu	1.28
77	S.A. Sannasiraj	Design of sea water intake and outfall systems for 4*660mw Thoothukudi	vainateya power private limited., Hyderabad	31.987
78	S.A. Sannasiraj	Design review and advisory services onshore protection works	OECP	1.65
79	K. Ganesh Babu	Advise on critical project works	NOCL	20.0

RBIC projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. in lakhs)
1	K. Murali	Fairings for Cables	NPOL	8.44
2	S. Chandrasekaran	Consultancy for Development of new offshore macro-algae cultivation systems	Sea6 Energy Pvt Ltd, Chennai	2.30

3	C P Vendhan P Krishnankutty S K Bhattacharyya	Development of Computer Program for Slosch Analysis Using FEM	ISRO	9.92
4	S Surendran	Model testing of fishing boats	CIFT, Kochi	5.35
5	S Surendran	Ship navigation simulation for port Subarnarekha	L&T Ramboll, Chennai	3.3
6	V. G. Idichandy S.K. Bhattacharyya S. Vengadesan	Drag studies on axisymmetric underwater bodies	DRDL, Hyderabad	19.0
7	V. G. Idichandy	Design and development of an underwater propeller dynamometer	NSTL, Vizag	9.9
8	V. G. Idichandy C.P. Vendhan S.K. Bhattacharyya	Water impact studies of a 3-ton class capsule	VSSC, Trivandrum	21.9

Exchange program with other Universities including Institutions/Universities under MOU

1. MoU with University of Naples Italy 2010-2015- Champion Operator on behalf of IIT Madras: S. Chandrasekaran
2. MoU with Human Resource Center for offshore and Plant Engg, Changwon National University, South Korea. Champion Operators on behalf of IIT Madras: S.K.Bhattacharyya and S. Chandrasekaran

Faculty members participation with other institution under MoU:

Sl.No.	Name of faculty	Participation details	Name of University/Institution which has MoU
1	K. Murali	Joint Ph. D Student	University of Western Australia
2	S. Chandrasekaran	Joint Ph. D student	University of Naples Federico II, Italy
3	S. Chandrasekaran	Joint Ph. D Student	Anna University, Coimbatore
4	S. Chandrasekaran	Exchange Fellow for thesis work	DAAD Fellow under RISE Program, Germany
5	V.G. Idichandy	Visit for MoU implementation	Univ. Technology Petronas, Malayasia

Research Publications of the faculty members & research scholars:

- a. Total No. of papers published in Refereed National Journals - 03
- b. Total No. of papers published in Refereed International Journals - 30
- c. Total No. of papers presented in National Conferences - 04
- d. Total No. of papers presented in International conferences - 58

a. In Refereed National Journals:

1. Vijayalakshmi, R, and Panneerselvam, R., (2011) "Hydrodynamic performance of Non Ship Hull Shaped FPSO vessel with keel plate" Journal of Ship Technology, vol-7, No-2, 45-62.
2. Vijayalakshmi, R, and Panneer Selvam, R., (2011) "Static and Dynamic Analysis of Barge type Floaters for an Offshore Wind Turbine in Indian Coastal Waters" Journal of Ship Technology, vol-7, No-2, 9-21 (ISSN : 0973:1423)
3. G. D. Gosain and R. Sharma (2011), "Conceptual Design of an Ultra-Low Motion New-age Semi-Submersible Platform", Journal of The Institution of Engineers (India) in Marine Engineering [MR], Vol. 92, 3-10.

b. In Refereed International Journals:

1. Vijayalakshmi, R. and R. Panneer Selvam (2012) Response of non-ship shaped FPSO vessel with damping plate. Journal of Marine Science and Technology, Online First, 25 February 2012, DOI 10.1007/s00773-012-0162-5.
2. Mayilvahanan, A.C. and R. Panneer Selvam (2011) Time domain response analysis of Barge floater supporting an Offshore wind turbine The International Journal of Ocean and Climate Systems, Volume 2, Numer 4, December, Pg 303-314 Journal of Marine Science and Technology, DOI 10.1007/s00773-012-0162-5.

3. Srinivasan Chandrasekaran, Luciano Nunziante, Giorgio Serino, Federico Carannante (2011), "Curvature ductility of RC sections based on Euro Code: Analytical procedure", *Journal of Civil Engineering, Korean Society of Civil Engineers, Springer*, Vol. 15, No. 1, 131-144.
4. Srinivasan Chandrasekaran, Gaurav, Giorgio Serino and Salvatore Miranda (2011). Springing and Ringing response of Triangular TLPs, *International Shipbuilding Progress*, Vol. 58 (2-3), pp. 141-163.
5. Srinivasan Chandrasekaran and Harinder (2012), "Power generation using Mechanical Wave Energy Converter", *International J. Ocean and climate systems, Multi-Science Publishing*, Vol. 3, No. 1, 57-70.
6. Virag Mishra, S. Vengadesan and S.K. Bhattacharyya (2011), Translational added mass of axisymmetric underwater vehicles with forward speed using computational fluid dynamics, *Journal of Ship Research*, 55, 3, 185-195.
7. R. Sakthivel, S. Vengadesan and S.K. Bhattacharyya (2011), Application of non-linear κ - ϵ turbulence model in flow simulation over underwater axisymmetric hull at higher angle of attack, *Journal of Naval Architecture and Marine Engineering*, 8(2), 149-163.
8. Rajesh R. Nair, Yudhvir Singh, Deshraj Trivedi, Suresh Kandal, Anisotropy in the flexural response of Indian Shield, *Tectonophysics*, Volumes 532–535, 6 April 2012, Pages 193–204
9. S. Nallayarasu, Experimental investigation on wave slam and slap coefficients for array of non-circular section of offshore platforms, *Journal of Ships and Offshore Structures*, March 2012, Volume 0, Issue 0, pages 1-14.
10. R. Sharma, Tae-wan Kim, Richard Lee Storch, Hans (J.J.) Hopman and Stein Ove Erikstad (2012), "Challenges in computer applications for ship and floating structure design and analysis", *Computer-Aided Design, Special issue on "Computer Applications in Ship and Floating Structure Design and Analysis"*, ISSN: 0010 - 4485, Vol. 44, issue 3, 166–185.
11. Myeong-Jo Son, Sang Chul Lee, Ki-Chang Kwon, Tae-wan Kim and Rajiv Sharma (2011), "Configuration estimation method for preliminary cost of ships based on engineering bill of material", *Journal of Marine Science and Technology*, Vol. 16, no. 4, 367–378.
12. R. Sharma and O. P. Sha (2011), "Subdivision Algorithms and Convexity Analysis for Rational Bernstein-Bézier Triangular Patches", *International Journal of Computational Mathematics and Numerical Simulation*, Vol. 4, no. 1, 71-98.
13. Aswathy Senan and P.Krishnankutty (2012), A study on non linear wave forces and motion responses of a tri-hull carrier vessel *Journal of Engineering for the Maritime Environment*, , 226(1), 3-14.
14. Henrik S. Toft, Arvid Naess, Nilanjan Saha and J.D. Sorensen, Response load extrapolation for wind turbines during operation based on average conditional exceedance rates', *Wind Energy Journal Vol-14(6)*, 749-766.
15. Manikandan, R. and Nilanjan Saha, Soft computing based optimum parameter design of PID controller in rotor speed control of wind turbines, *Springer Lecture Notes in Computer Sciences*, Vol-7077, pp.191-200. doi: 10.1007/978-3-642-27242-4_23.
16. Noarayanan. L, K. Murali and V. Sundar, (2012) "Performance of flexible emergent vegetation in staggered configuration as a mitigation measure for extreme coastal disasters, *Natural Hazards*, vol 52(1), 2012.
17. Noarayanan. L, K. Murali and V. Sundar, (2012) "Effect of flexible vegetation on the forces with Keulegan Carpenter number on structures due to long waves", *Journal of Marine Science application*, vol 11(1), 24-33
18. Noarayanan, L, K. Murali and V. Sundar, (2012). Attenuation of Runup due to Regular and cnoidal Waves by Seaward Vegetation, *Journal of Coastal Research*, vol. 28(1A), 123–130.
19. Seebai T. and Sundaravadivelu R. (2012): Response analysis of spar platform with wind turbine, *Ships and Offshore Structures*, DOI:10.1080/17445302.2012.661172
20. Shanmugam, P., 2012. CAAS: an atmospheric correction algorithm for the remote sensing of complex waters, *Annales Geophysics*, 30, 203–220.
21. Shanmugam, P., 2011. New models for retrieving and partitioning the colored dissolved organic matter in the global ocean: Implications for remote sensing. *Remote Sensing of Environment*, 115, 1501–1521.
22. Sudhir Kumar, C., C.S. Yang, K. Ouchi, and P. Shanmugam, 2012. Ship Recognition by Integration of SAR and AIS. *The Journal of Navigation*, 65, 323–337.
23. Gopu R Sekhar and S. Nallayarasu, Experimental Investigation of Wave Slam and Slap coefficients for array of non-circular section of offshore platforms, *Ships and Offshore Structures*, Available online from 21st March 2012.

24. Suresh Kumar. G., V. Renu., and N. Natarajan. (2011) "Numerical Modeling and Spatial Moment Analysis on the Sensitivity of Decay Mechanism under simultaneous Matrix Diffusion and Non-Linear Sorption in a Coupled Fracture-Matrix System". *International Journal of Environmental Engineering Science* (International Science Press) vol. 2(2), 213-224.
25. Natarajan, N., and G. Suresh Kumar. (2011) "Numerical Modeling of Bacteria Facilitated Contaminant Transport in Fractured Porous Media". *Colloids and Surfaces A: Physicochemical and Engineering Aspects* (Elsevier Publications), vol. 387, 104-112.
26. Natarajan, N., and G. Suresh Kumar. (2012) "Colloidal Transport in a Coupled Fracture Skin Matrix System with Sinusoidal Fracture Geometry". *International Journal of Geology* (NAUN Publications), vol. 6(1), pp. 1-7.
27. Natarajan, N., and G. Suresh Kumar. (2012) "Aperture Variation and Pressure Change due to Thermal Stress and Silica Precipitation/Dissolution accompanied by Colloidal Transport in a Coupled Fracture-Skin-matrix System". *International Journal of Energy and Environment* (NAUN Publications), vol. 6(1), pp. 1-15.
28. Anand, K.V., Sundar, V. and Sannasiraj, S.A. 2011. Hydrodynamic characteristics of curved-front seawall models compared with vertical seawall under regular waves. *Journal of Coastal Research*, 27 (6), 1103-1112.
29. Sudhir Kumar, C., C.S. Yang, J.H. Song, K. Ouchi and P. Shanmugam, 2011. Retrieval of Spherical Ocean Wave Parameters Using RADARSAT-2 SAR Sensor Observed at Chukk, Micronesia. *Korean Journal of Remote Sensing*, 27, 213-223.
30. Min, J.E., J.H. Ryu., Y.H. Ahn., P. Shanmugam., P.Y. Deschamps., and Z.P. Lee., 2011. Atmospheric and BRDF Correction Method for Geostationary Ocean Color Imagery (GOCI). *Korean Journal of Remote Sensing*, 26, 175-188.

c. In Proceedings of National Conferences:

1. Yenduri Anurag and Deepak Kumar, A study on response control of multi storey structures using tuned liquid damper, Int. Conference on modeling and simulation in Civil Engg, dept of Civil Engg, TKM College of ENGG, Kerala, 9th Dec'2011 to 11th Dec'2011
2. R.Sundaravadivelu, Coastal zone management, Coastal Zone Management and its protection arranged by Sri Krishna college of Technology, Coimbatore, 15th March 2012
3. R. Sundaravadivelu, Application of geosynthetics on coastal erosion control, Coastal Zone Management and its protection arranged by Sri Krishna college of Technology, Coimbatore, 15th March 2012
4. Sasikala, N. and Sannasiraj, S.A. 2011. An implementation of optimal interpolation for wave height analysis over Indian waters. OSICON'11, NIOT, 14-16 Jul.

d. In Proceedings of International Conferences:

1. Srinivasan Chandrasekaran, R Sundaravadivelu, R. Panner Selvam, Seeram Madhuri and Shyamala Varthini (2011) "Experimental Investigations of Offshore Triceratops Under Regular Waves" in Proc. 30th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2011-49826, June, Rotterdam, the Netherlands.
2. R Saravanan, S.K. Bhattacharyya, R. Panneer Selvam and S. Chandrasekaran (2011) "Hydrodynamic Analysis of Semisubmersibles for a Large Scale Desalination Plant" in Proc. 30th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2011-49840, June, Rotterdam, the Netherlands.
3. R. Panneer Selvam, S.A. Sannasiraj, Vimal doss Jesudhas (2011) "Feasibility studies on the Free Floating Wave Energy Converter (FFWEC) Concept", The International Workshop on New Energy Techniques and Applications (NETA 2001) as a special workshop within ICECE 2011, Yi Yichang, China, Sep 16-18, 2011
4. Srinivasan Chandrasekaran (2011), "Hazard identification and Management in oil and gas industry using Hazop", Proc. of seminar on Human Resource Development for Offshore and Plant Engineering (HOPE), Changwon University, South Korea, April 2011, pp. 1-10.
5. Srinivasan Chandrasekaran (2011), "Quantitative risk assessment of Group Gathering Station (GGS) of oil exploration and production", Proc. of seminar on Human Resource Development for Offshore and Plant Engineering (HOPE), Changwon University, South Korea, April 2011, pp. 11-22.
6. Srinivasan Chandrasekaran (2011), "Health, Safety and Environmental Management in petroleum and offshore engineering", Proc. of seminar on Human Resource Development for Offshore and Plant Engineering (HOPE), Changwon University, South Korea, April 2011, pp. 23-28.

7. Srinivasan Chandrasekaran and Harinder (2011), "Design and efficiency analysis of Mechanical Wave Energy converter", Proc. 30th International Conf. on Ocean, Offshore and Arctic Engg, OMAE 2011, Rotterdam, The Netherlands, 19-24th June, 2011, OMAE 2011-49830.
8. Srinivasan Chandrasekaran, R. Sundaravadivelu, R. Pannerselvam and S. Madhuri (2011), "Experimental investigations of offshore triceratops under regular waves", Proc. 30th International Conf. on Ocean, Offshore and Arctic Engg, OMAE 2011, Rotterdam, The Netherlands, 19-24th June, 2011, OMAE2011-49826.
9. Srinivasan Chandrasekaran and S. Parameswara Pandian (2011), "Response behavior of perforated cylinders in regular waves", Proc. 30th International Conf. on Ocean, Offshore and Arctic Engg, OMAE 2011, Rotterdam, The Netherlands, 19-24th June, 2011, OMAE 2011-49839.
10. Srinivasan Chandrasekaran (2011), "Strategic Rig Project Commissioning and Risk Management", Post Conf. Workshop on Intl. Conf on Offshore Drilling Rigs, IBC Asia, Singapore, 24-29th July 2011.
11. Srinivasan Chandrasekaran (2011), "Risk Assessment and Management in offshore and petroleum industries", Pre-conference workshop on International Conference on Asia Pacific HSE Forum on Oil, Gas and Petrochemicals, Fleming Gulf Conferences, 22-24th Sep 2011, Kuala Lumpur, Malaysia, pp. 81.
12. Karuppiyah, J.S.Mani ,A Study On The Approach Channel Of Ennore Port To Cater 2,50,000 Dwt Vessels 8th International Conference On Coastal And Port Engineering In Developing Countries, Copedec 2012, IIT Madras, Chennai, INDIA. 20-24 Feb. 2012
13. Mullai Vendhan, M.V. Ramanamurthy, J.S.Mani , Wave pressures on a sea water intake system at Agatti island, India.10th International Conference on Hydroscience and Engineering (ICHE), November 4-7, 2012 in Orlando, Florida.
14. Bharathi, Manju and J.S.Mani , Performance Of Cage Breakwaters,10th International Conference on Hydroscience and Engineering (ICHE), November 4-7, 2012 in Orlando, Florida.
15. Abdus Samad, Leakage Analysis of Progressive Cavity Pump, AICFM 12, Chennai, 21-23 November, 2011
16. Abdus Samad, Jet Pumps For Pumping Oil Wells – A Review, ICOMET 12, Kerala, 21 Jan, 2012
17. Jitendra S. Sangwai, Investigations on Gas Trapping Phenomena for Different EOR Water Alternate Gas Injection Methodologies, SPE Petroleum Technology Conference (IPTC), Bangkok, Thailand, 7- 9 February, 2012.
18. Jitendra S. Sangwai, A Strategic Approach for the Development of Next Generation Reservoir Simulator, SPE OGIC, Mumbai, India, 28-30 March 2012
19. Jitendra S. Sangwai, Diminishing The Gap Between Mathematics And At Present Reservoir Simulators Towards A Next Generation Simulator: A Strategic Approach, North Africa Technical Conference and Exhibition, Cairo, Egypt, 20-22 February 2012
20. S. Nallayarasu, Wave Slam/Slap Loads on Structural Members in the Air-Gap, OMAE 2011, 19-24 June 2011
21. S. Nallayarasu, Influence of Heave Plate on Hydrodynamic Response of Spar, OMAE 2011, 19-24 June 2011
22. S. Nallayarasu & S. K. Bhattacharyya, CFD Simulation of Flow around Damping Elements for Floating Bodies in Waves, ICMCFD 2011, 18-19, November 2011
23. Manipriya Sankar and R. Sharma (2012), "Computer Methods for Solutions of Systems of Nonlinear Polynomial Inequalities and Equations", in the Proceedings of the International Conference on Systemics, Cybernetics and Informatics (ICSCI - 2012), Editor: Rajan, E. G.; Vol. 1, pp. 198-205.
24. Patel and R. Sharma (2011), "Design and development of an integrated CAD+CFD model for simulation based ship hydrodynamic optimization problems", in Proceedings of the International Conference on Ship and Offshore Technology – India (ICSOT (India)-2011), ISBN: 978-1-905040-94-0, pp. 217-224.
25. M. Sharma, Boram Kim, R. Sharma and Tae-wan Kim (2011), "A component-based software framework for the information management of PLM for shipbuilding industries", in Proceedings of the International Conference on Ship and Offshore Technology – India (ICSOT (India)-2011), ISBN: 978-1-905040-94-0, pp. 151-161.
26. R. Sharma, Boram Kim and Tae-wan Kim (2011), "Conceptual development of structured bill of material (BOM) for the logic based product lifecycle management (LBPLM) system for shipbuilding industries", in Proceedings of the 2011 SNAME Annual Meeting and Ship Production Symposium, pp. 217-232.
27. Deepak Kumar and Ahsan Kareem, Dynamic response of tall building with embedded dampers in the structural system and multiple TMDs, ICWE13 (International conference on wind Engg), Amsterdam, Netherlands, 10th July 2011 to 15th July 2011

28. P.Krishnankutty, Estimation of Second-order Wave Forces on Marine Structures Using Finite Element Method, 8th International Conference On Coastal And Port Engineering In Developing Countries, Copedec 2012, IIT Madras, Chennai, INDIA. 20-24 Feb. 2012
29. Nilanjan Saha and Sannasiraj SA, A Monte Carlo based method for estimation of extreme wave heights, 8th International Conference on Port and Coastal Engineering in Developing Countries, IIT Madras, Chennai, 20-24 Feb 2012
30. Nilanjan Saha, Zhen Gao, Torgeir Moan, Sampling uncertainty of simulated stochastic waves and response process of a vertical cylinder fixed to sea-bed Proceedings of the 8th International Conference on Structural Dynamics, EURO DYN 2011 Leuven, Belgium. Eds. G. De Roeck, G. Degrande, G. Lombaert, G. Müller., 4 to 6 July 2011
31. K. Murali, Simulation Of Free Surface Benchmark Problems Using Level Set And Sph Methods, OMAE 2011, Jun. 19-20, Rotterdam.
32. K. Murali, Investigation on harmonic generation of submerged elastic plate using wave flume experiments. Eighth International conference on Coastal and Port Engineering in Developing Countries, IIT Madras, Feb 20-24, 2012
33. R. Sundaravivelu, Static and Dynamic slope stability analysis after dredging in KANDLA port, 8th International Conference On Coastal And Port Engineering In Developing Countries, Copedec 2012, IIT Madras, Chennai, INDIA. 20-24 Feb. 2012
34. R. Sundaravivelu, Experimental and numerical study of Mobile offshore berth, 8th International Conference On Coastal And Port Engineering In Developing Countries, Copedec 2012, IIT Madras, Chennai, INDIA. 20-24 Feb. 2012
35. Chaturvedi, S.K., C.S Yang, P. Shanmugam, J.H. Song, and K. Ouchi (2011) Preliminary technique to integrate SAR and AIS for ship detection and identification. Asia Pacific International Conference on Synthetic Aperture Radar (APSAR), Republic of Korea, September 26-30.
36. Thayapraha, M., Murali.K and Subramanian, V.A., "Investigation On Harmonic Generation Of Submerged Elastic Plate Using Wave Flume Experiments". 8th International Conference On Coastal And Port Engineering In Developing Countries, Copedec 2012, IIT Madras, Chennai, INDIA. 20-24 Feb. 2012
37. V. Sundar, "Wave induced pressures on crown wall of KOLOS armoured breakwater 6th International Conference on Asian and Pacific Coasts (APAC 2011), Dec 14-16, Hong Kong, China
38. V. Sundar, 'Littoral transport estimate from the field measurement along north chennai coast of Tamil Nadu, 6th International Conference on Asian and Pacific Coasts (APAC 2011), Dec 14-16, 2011, Hong Kong, China
39. V. Sundar, "Simulation of shoreline evolution and estimation of alongshore sediment transport" Proc. Solutions to Coastal disasters conf, ASCE, Anchorage, June 26-29, 2011 Alaska
40. V. Sundar, "Hydrodynamic performance of breakwater armour units 'KOLOS', Eighth International conference on Coastal and Port Engineering in Developing Countries, IIT Madras, Feb 20-24, 2012.
41. V. Sundar, "Dynamic pressures on curved front seawall models under random waves, Eighth International conference on Coastal and Port Engineering in Developing Countries, IIT Madras, Feb 20-24, 2012
42. V. Sundar, Shoreline management plan for a placer mining beach of the southwest coast of India, Eighth International conference on Coastal and Port Engineering in Developing Countries, IIT Madras, Feb 20-24, 2012
43. Mohanasundaram. S., G. Suresh Kumar., and Balaji Narasimhan. (2011). "Groundwater Recharge Discharge Zone Delineation Using GIS and Analytical Hierarchical Process (AHP)". 3rd International Geography Congress (INTGC-2011) held at Kozhikode, Kerala during May 2011, page 84.
44. Abhishek Joshi., and G. Suresh Kumar. (2011) "Numerical Simulation of Oil Recovery by Gravity Drainage during Immiscible and Miscible CO₂ Injection in a Fractured Reservoir", SPE 143516, International conference on "Enhanced Oil Recovery" held at Kuala Lumpur - Malaysia during 19th – 20th July 2011.
45. Mohanasundaram. S., G. Suresh Kumar., and Balaji Narasimhan. (2011). "A study on the effect of South-West and North-East Monsoon on Water Level Fluctuations of Coastal Aquifers in Chennai District. 4th International Groundwater Conference (IWGC-2011) held at Madurai, Tamil Nadu between Sep 27 – 30, 2011, IGWC - TS-1-30 - Page 27.
46. Berlin, M., G. Suresh Kumar., and Indumathi M Nambi. (2011). "Flow and Transport Model for the Noyyal River Basin Using Groundwater Modeling System". 4th International Groundwater Conference (IWGC-2011) held at Madurai, Tamil Nadu between Sep 27 – 30, 2011, IGWC - TS-4-18 - Page 81.

47. Vasudevan, M., Indumathi M Nambi. and, G. Suresh Kumar. (2011). "Simulating Biodegradation at a Petroleum Spill Site For Assessing Natural Attenuation". 4th International Groundwater Conference (IGWC-2011) held at Madurai, Tamil Nadu between Sep 27 – 30, 2011, IGWC - TS-4-11 - Page 76.
48. Suresh Kumar G. (2011) "A Review on Numerical Modeling of Fluid Flow and Contaminant Transport in a Fractured Formation at the Scale of a Single Fracture". 4th International Groundwater Conference (IGWC-2011) on "The Impact of Climate Change on Groundwater Resources with Special Reference to Hard Rock Terrain" held at Madurai, TamilNadu, India between September 27-30, 2011, IGWC - TS-4-04 - Page 70.
49. Berlin, M., G. Suresh Kumar., and Indumathi M Nambi. (2011). "Numerical Modeling of Nitrate Transport and Transformation in an Unsaturated Sub-Surface System". International Conference on Modeling & Simulation in Civil Engineering (ICMSC-2011) held at Kollam, Kerala during Dec 8 – 10, 2011, Proceedings, pp. 31-38.
50. S.A. Sannasiraj. 2011. Statistical properties of the wave field in the Indian Ocean and its climate variability. WISE 2011, China, 22-27 May.
51. S.A. Sannasiraj. 2011. Numerical modelling of tsunami impact pressure on a vertical wall. Coasts and Ports 2011, Perth, Australia, 28-30 Sep.
52. Swapnadip, De Chowdhury and Sannasiraj, S.A. 2011. SPH simulation of sloshing due to horizontal tank excitation. Second International Conference on Particle-based methods. Barcelona, Spain. 26-28, Oct.
53. Sannasiraj, S.A. 2011. Numerical modelling of breaking wave impact pressure on a vertical wall. APAC 2011, 14-17, Dec., Hongkong.
54. Swapnadip, D.C. and Sannasiraj, S.A. 2012. Numerical simulation of 2D sloshing using SPH method. COPEDEC 2012, IIT Madras, 20-24 Feb.
55. Manjula, R. and Sannasiraj, S.A. 2012. Breaking wave impact on elastic cylindrical members. COPEDEC 2012, IIT Madras, 20-24 Feb.
56. S. Surendran, 2011, Scope of inclusion of MAESTRO package in BTech and Dual Degree curriculum, DRS Training and Control systems, Annapolis, USA, Aug. 10-12, 2011.
57. S. Surendran, 2011. Design & Analysis of Composite for Impact loads in Marine Environment, Middle East Alumni of Ship Tech., Sharjah, UAE, Dec12-13, 2011.
58. Sreedevi Radhakrishnan, S. Vengadesan and V.G. Idichandy ""Numerical Simulation of a Fin at Varying Angle of Attack".International conference on Computational Fluid Dynamics (ICCFD 2011). 776 – 783, July 27-29, 2011, Paris, France

Distinguished Visitors to the Department:

Sl.No	Name of the visitor and Designation	Date of visit	Purpose of visit
1	Brian Evans , Head , Dept of Petroleum Engineering, Curtin University, Australia	09-12 Jan 2012	Short term program " On integrating Geo Engineering workflows for petroleum reservoirs"
2	Badarinath, Director, Schlumberger Doll Research, Boston, USA.	10-12 Jan 2012	Short term program "On integrating Geo Engineering workflows for petroleum reservoirs"
3	T.S. Ramakrsishna, Chief Scientist and project Director, Schlumberger Doll research, Boston, USA	10-12 Jan 2012	Short term program " On integrating Geo Engineering workflows for petroleum reservoirs"
4	Shri S. Rath, Director, OIL India Limited	10-14 Oct 2011	Short term program on " New insights of scales in Geodata analysis to Seismic interpretation"
5	Lakshmi Narasimhan, Department of Computer Science, East Carolina University, USA	8.03.2012	Expert lecture on cloud computing
6	Prof. Martin Renilson Renilson Marine Consulting Pty Ltd., Australia	Jan 8-10, 2012	Expert lecture on submarine design and engineering
7	Dr. James Ross McFarlane International Submarine Engineering Ltd. Canada	Jan 9-15, 2012	Expert lecture on submarine design and engineering

8	Prof. Paul Frieze PAFA Consulting Engineers, UK	Jan 9-15, 2012	Expert lecture on submarine design and engineering
9	Dr. Volker Bertram Germanischer Lloyd, Germany	Jan 9-15, 2012	Expert lecture on submarine design and engineering
10	Prof. Tae-wan Kim Seoul national University South Korea	Jan 9-15, 2012	Expert lecture on submarine design and engineering
11	Prof. E.G. Rajan Pentagram Group of Companies Hyderabad	Jan 12-13, 2012	Expert lecture on submarine design and engineering
12	Commodore P.K. Mishra Director, Naval Research Board	Jan 9, 2012	Expert lecture on submarine design and engineering
13	Dr. Prahlada Vice Chancellor, Defence Institute of Advanced Technology, Pune	Jan 14, 2012	Chief guest's Lecture on submarine technology and marine robotics conference
14	Jawad Azeem Regional Manager and Principal Consultant (Asia and Africa), Calsep FZ-LLC, Dubai, UAE.	7th September, 2011	Invited lecture on workflow to develop Equation of State (EoS) Model for Enhanced Oil (EOR) gas injection projects
15	Prof. M. Ravindran, The Chairman, NRB, DRDO, India.	18 th Nov. 2011	Keynote talk in Royal Institution of Naval Architects (RINA) Conference on Marine CFD
16	Dr. Sekhar Majumdar, Professor, NMIT, Bangalore, India.	18 th Nov. 2011	Keynote talk in Royal Institution of Naval Architects (RINA) Conference on Marine CFD
17	Mr. Trevor Blakeley, CEO, Royal Institution of Naval Architects	17-19th Nov. 2011	Royal Institution of Naval Architects (RINA) Conference on Marine CFD
18	Dr. Gary Mocke M/s. Worley Parsons, South Africa	3-8 May 2011, 15-22 Feb 2012	Member of International Organizing Committee, COPEDEC
19	Ir. Freedy Wens, Secretary, c/o. Flander Hydraulics	5-8 May 2011 6 Jan. 2012 & 18-24 Feb. 2012	Secretary, International Organizing Committee, COPEDEC
20	Dr. Ranjit Galappatti, Srilanka	5-8 May 2011 6 Jan. 2012 & 18-24 Feb. 2012	Chairman, International Organizing Committee, COPEDEC
21	Prof Ir. Kees d'Angremond, Delft Hydraulics, The Netherlands	3-5 May 2011, 20-24 Feb 2012	Chairman, Paper selection committee, COPEDEC

4.15.6 Other Activities of the Department/Centre:

a) Socially relevant activities carried out by the Department

A Tamil language book, titled "Kadar Porieyar Kalai Chorkal" (Mini Encyclopedia for Ocean Engineering) is written by R. Sundaravadivelu, R.Ramasamy and SP. Subramanian and the book is published by International Institutes of Tamil Studies.

b) International collaboration achievements by the Department

(i) Student visits

Sl No.	Student (level) [Faculty in-charge]	From	Visited	Period	Scheme
1	Max Pitschke (UG) [P. Krishnankutty]	University of Applied Sciences, Bremen, Germany	IIT Madras	Aug-Dec, 2011	MoU
2	Jannes Hangen (UG) [V. Anantha Subramanian]	University of Applied Sciences, Bremen, Germany	IIT Madras	Jan-July, 2012	MoU

3	R. Vivek (M. Tech, PE) [Rajesh R Nair]	IIT Madras	University of Tromso, Norway	Jan 15 to March 15, 2012	Research Internship
4	Kwon Giyeon [S Chandrasekaran & S K Bhattacharyya]	Changwon National University, South Korea	OED, IIT Madras	Aug 2011 to May 2012	MoU
5	Park Jangwoo [S Chandrasekaran & S K Bhattacharyya]	Changwon National University, South Korea	OED, IIT Madras	Jan 2011 to Dec 2011	MoU
6	Shim Min Seob [S Chandrasekaran & S K Bhattacharyya]	Changwon National University, South Korea	OED, IIT Madras	Aug 2011 to Dec 2011	MoU
7	Liberato Aliberti, [S Chandrasekaran]	University of Naples Federico II, Italy	OED and Civil Engg Dept, IIT Madras	Jan to May 2011	MoU
8	Biagio Perraca [S Chandrasekaran]	University of Naples Federico II, Italy	OED and Civil Engg Dept, IIT Madras	Jan to May 2011	MoU
9	Andrea Corbo [S Chandrasekaran]	University of Naples Federico II, Italy	OED and Civil Engg Dept, IIT Madras	Jan to May 2011	MoU
10	Andrea [S Chandrasekaran]	University of Naples Federico II, Italy	OED IIT Madras	Jan 2011 till Sep 2011	MoU

(ii) International projects:

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	Development of a new atmospheric correction algorithm for geostationary ocean color satellite sensor	Jul 2010-Jun 2011	Korea Ocean Research and Development Institute, Seoul, Korea	11.7	P. Shanmugam
2	Structural Health Monitoring of Offshore structures - Capstone design project	Aug2011-Mar2012	Human Resource Development Center for offshore and Plant Engg, Changwon University, South Korea	US\$ 5000	S. Chandrasekaran S.K. Bhattacharyya
3	Aerodynamic analysis of offshore triceratops - Capstone design project	Aug2011-Mar2012	Human Resource Development Center for offshore and Plant Engg, Changwon University, South Korea	US\$ 5000	S. Chandrasekaran S.K. Bhattacharyya
4	Dynamic analysis of perforated tension leg platforms - Capstone design project	Aug2011-Mar2012	Human Resource Development Center for offshore and Plant Engg, Changwon University, South Korea	US\$ 5000	S. Chandrasekaran S.K. Bhattacharyya
5	Wave scattering in heterogeneous media using the finite element method	22.03.2012 to 21.03.2015	Asian Office of Aerospace R&D, US Air Force, Tokyo	US\$ 70000	C P Vendhan S.K Bhattacharyya Nilanjan Saha Deepak Kumar
6	The coastal inundation risk map study for Singapore	Nov.11-Oct.13	National University of Singapore	14.0	S.A. Sannasiraj
7	Hydrodynamic coefficients	2011-2012	Petronas at Univ. Tech. Petronas, Malaysia	Nil (visits only)	V.G. Idichandy
8	Study of an energy exchange between wind and waves and variability of their climate characteristics in the Indian Ocean	09.08.2010 to 08.08.2012	Indo-Russia project sponsored by DST, India and Russian Academy of Sciences, Russia at Obukhov Institute for Physics of Atmosphere	11.77	S.A. Sannasiraj V. Sundar

4.16 DEPARTMENT OF PHYSICS

4.16.1 Introduction:

The Department of Physics was established in the year 1959 and now has Ph.D., M.Tech. M.Sc., Dual Degree programmes in M.S. and B.S., and B.Tech (Engg. Physics) programme. In addition department teaches various core and elective courses in physics to B.Tech students. The Physics department also undertakes a large number of sponsored research and consultancy projects.

4.16.2 Academic Programmes:

Engg. Physics (B.Tech), M.Sc, Dual Degree programmes in M.S. and B.S., M.Tech. (Solid State Technology) and Ph.D.

Students on roll:

Programme	I year	II Year	III Year	IV Year	V Year & others	Total
B.Tech.	29	22	21	21	3	96
Dual Degree	8	6	10	-	-	24
M.Sc.	39	36	-	-	-	75
M.Tech.	8	9	-	-	-	17
Ph.D.	21	24	19	11	27	102
Total	105	97	50	32	30	314

Endowment prize instituted:

- Ms. Lakshmi Ravikumar Memorial Prize
- Ms. Latha & Sampath Srinath Prize
- Prof. J Sobhanadri Prize
- Sri. Krishnamurthy Sundarambal Prize

Names of Student/Scholar who attended Conference/ Seminar and Symposia Abroad/India:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of the Conference/ Seminar / Symposia / Workshop	Date and Venue	Financial Assistance from
India					
1.	Narisimha Murthy Madugula	PH11D002	International Workshop on Highly Charged ions, 2012	March, 28-31, 2012	Physics Dept, IITM
2.	Sandeep Sathyan	PH10C027	International Workshop on Highly Charged ions, 2012	March, 28-31, 2012	Physics Dept, IITM
3.	Minakshi Nayak	PH09D026	SERC-EHEP School 2012, VECC, Kolkata	June- 06 – July 07, 2011	SERC-VECC
4.	Sreenath V	PH10D004	School on Cosmology and Gravitational Waves	December 1-11, 2011, IUCAA, Pune	IITM, IUCAA
5.	Sreeja K	PH10D008	School and conference on Unifying concepts in materials. 30-01-12 – 8-02-12	JNCASR, Bangalore	Conference organizers
6.	Madhusmita Tripathy	PH10D029	School and conference on Unifying concepts in materials. 30-01-12 – 8-02-12	JNCASR, Bangalore	Conference organizers
7.	Syed Akbar Ali	PH08D006	Optics and applications, Bardhaman	Dec 2011	IITM
8.	Raman Namboodiri.K	PH10D013	Laser symposium, Chennai	Jan 2012	UGC
9.	Raman Namboodiri	PH10D013	India-JSPS symposium, Trivandrum	AUG 2011	UGC

10.	Basanth Kalanoor	PH07D027	India-JSPS symposium, Trivandrum	AUG 2011	IITM
11.	Pavana Mocherla	PH10D030	International conference on advanced materials ICAM 2012	Dec 12-17 2011	IITM
12.	Pavana Mocherla	PH10D030	DAE-BRNS National workshop on materials chemistry (FUN-MAT, 2011)	Dec 7-8, 2011	IITM
13.	A.V. Radhamani	PH10D032	DAE-BRNS National workshop on materials chemistry (FUN-MAT, 2011)	Dec 7-8, 2011	IITM
14.	Deepak Bhat	PH10D022	Unsolved Problems in Noise and Fluctuations (Upon2012)	Feb 20-24, 2012 SINP, Kolkata	IITM
15.	Prashant Dabas	PH08D025	Electronic absorption studies on Co ²⁺ doped lithium phosphate glasses	9 th National conference on Solid State Ionics, IIT, Noida Dec (2011)	IITM
16.	Jemseena V	PH10D027	Indo-US bilateral workshop on 'Modeling Electrical Activity in Physiological Systems', organized by IISER Mohali	March 05-09, 2012, Agra	Organizer
Abroad					
17.	N. Ramakrishnan	PH06D017	School and conference on the physics and mathematics of soft and biological matter	May 2-13, 2011	ICTP, Trieste, Italy
18.	Ajay Deep Kachhava	PH07D009	International Conference on Complex System (ICCS 2011), USA	June 26 – July 1, 2011	IITM
19.	M. Krishna Surendra	PH07D013	ICMAT 2011, Suntec, Singapore	June 26 – July 1, 2011	IITM
20.	C. Kumaran	PH07D035	ICMAT 2011, Suntec, Singapore	June 26 – July 1, 2011	IITM
21.	V. Eswaraiah	PH07D033	Short-term exchange research scholar internship under IUSSTF, USA	Jan 15 – Feb 26, 2012	IUSSTF
22.	S. Radhu	PH08D021	Singapore, Part of research work under Indo-NUS programme	Jan 02 – June 30, 2012	Indo-NUS programme
23.	Manish Chandran	PH07D008	22 nd European Conference on Diamond	Sept 04-08, 2011	IITM
24.	R. Pradheesh	PH06D015	56 th Annual Conf. Mag. Materials, Arizona, USA	Oct 30 – Nov 03, 2011	IITM

Names of students/scholars who won outside prizes and awards:

Sl. No.	Name of the Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1	Prashant Dabas	PH08D025	Best oral presentation	9 th National conference on Solid State Ionics
2	Akshya Krishna (E P B. Tech)	*****	Gold Medal	5 th International Olympiad

Name of Students/Scholars who won Institute Convocation/Institute Day Prize:

Sl.No.	Name of the Student/Scholar	Roll No.	Name of Prizes	Name of Donor
1.	Sripoorna Paniyadi Krishna Bharadwaj	EP07B017	Institute Merit Prize	
2.	Sumeet Soni	PH09M009	Institute Merit Prize	

3.	Kaumudi Hassan Prabhakara	PH09C016	Prof. Chilukuri Ramasastry Memorial Prize	
4.	Benson K Money	PH04D012	Prof. A L Laskar Prize	Joint Winners
5.	Imran Jafri R	PH06D003	Prof. A L Laskar Prize	
6.	Anjan Dwaraknath	EP08B004	Institute Merit Prize	

4.16.3 Faculty and their activities:

Faculty:

Name and Qualifications	Major area of specialization (only 3 areas)
Professors:	
G.Markandeyulu, Ph.D [Head] IIT, Madras	Magnetism and magnetic materials
Arul Lakshminarayan, Ph.D SUNY Stony Brook, USA	Quantum chaos, Quantum information theory, Chaos and transport
P.C. Deshmukh Ph.D Nagpur Univ., Nagpur	Atomic and Molecular Physics
K.Hariharan, Ph.D IIT, Madras	Solid State Ionics/Electronics
S. Kasiviswanathan, Ph.D IIT, Madras	Thin Films
M.P.Kothiyal, Ph.D IIT, Madras	Applied Optics: Interferometry, Optical Instrumentation, holography and speckles
Lakshmi Bala S., Ph.D Madras Univ.	Classical and quantum dynamical systems, Nonlinear dynamics and chaos, Chaos in gauge theories, Quantum information theory
Murthy V. R. K., Ph.D IIT, Madras	Microwave physics and materials
Natarajan T. S., Ph.D IIT, Madras	Conducting polymers, Molecular electronics, Instrumentation
Neelima M. Gupte, Ph.D SUNY Stony Brook, USA	Dynamical systems, Statistical Physics
Prem B. Bisht, Ph.D Kumaun Univ., Nainital	Ultrafast laser optics and spectroscopy
Ramachandrao Rao M. S. Ph.D IIT Kharagpur	Electronic and Magnetic Materials: Oxide Electronics, Thin films and Nanostructures, ZnO nanostructures for light emission, nanocrystalline diamond for mechanical and electronic applications, Magnetic nanoparticles, Nanoparticles for photovoltaic applications, Magnetoelectric coupling in oxides, Magnetotransport, and SPINTRONICS.
S. Ramaprabhu, Ph.D IIT, Madras	Nanomaterials, hydrogen energy, fuel cells
V.Sankaranarayanan, Ph.D IIT, Madras	Low temperature physics, Cryogenics, Thermal and Electrical properties
M.V.Sathyanarayana, Ph.D IMSc. Madras	Quantum optics, Laser Physics, Photonics
K.Sethupathi, Ph.D Moscow State Univ., Russia	Low Temperature Physics, Superconductivity and Magnetic materials
V.Srinivas, Ph.D. IIT Bombay	Magnetic materials, Electronic Properties, Low dimensional materials
Subrahmanyam A., Ph.D. IIT, Kharagpur	Semiconductor devices, Photovoltaics
Sunil Kumar P. B. Ph.D. RRI, Bangalore	Complex Fluids, Biological Physics and Statistical Mechanics
Suresh Govindarajan, Ph.D. U.Penn., Philadelphia	Theoretical physics, Quantum field theory string theory, Solitons and D-branes
C.Vijayan, Ph.D IIT, Madras	Photonics, Nonlinear Optics Non-linear Optics

Associate Professors:	
A.R.Ganesan, Ph.D IIT, Madras	Adaptive Optics, Vision Science, Laser Instrumentation, Interferometry, Holography and Optical metrology
Harish Kumar N., Ph.D, University of Hyderabad	Superconductivity, Novel magnetic materials, Instrumentation and automation
C.V. Krishnamurthy, Ph.D IIT, Madras	Modeling and simulation of electromagnetic, acoustic, elastic wave propagation and scattering; Nonlinear ultrasonic wave propagation in liquids and solids; Modeling and simulation of heat transport in micro- and nanoscale structures; Infrared thermography;
James Libby, Ph.D Univ. of Oxford	Experimental particle physics, CP-violation and flavour physics
Narayanan, Rajesh	Condensed Matter Theory: Quantum Field Theories applied to condensed matter systems, Quantum Phase Transitions, Strong disorder physics
Santhosh P. N., Ph.D, National Chemical Laboratory	Magnetism in Condensed Matter Physics, Electroceramics, Magnetic Materials, Low Temperature Characterization of Advanced Materials
Subramanian V., Ph.D, IIT Madras	Microwave and Dielectrics, Semiconductors
Sriramkumar L . Ph.D. IUCAA, Pune	Inflationary cosmology and the cosmic microwave background, Semi-classical gravity
Assistant Professors: Simha, Aditi, Ph.D IISc, Bangalore	Non-Equilibrium Statistical Physics: Heat Conduction, Drifting Flux Lattices, Sedimental suspensions, Sheared Complex Fluids, 'Active' Matter, Transition rates in some nonequilibrium steady states.
Aravind G., Ph.D TIFR, Mumbai	Photoelectron spectroscopy, Photoabsorption studies on Biomolecules and Reactions involving trapped ions to study the constituents and dynamics of the Inter-Stellar Medium (ISM)
Jain M. K., Ph.D IIT Delhi	Semiconductor Physics Semiconductor, Photovoltaics, Chemical Sensors
Gopalakrishnan, Manoj, Ph.D IMSc. Madras	Theoretical Biophysics, Stochastic Processes, Non-equilibrium Statistical Mechanics
Murugavel P. Ph.D IISc, Bangalore	Physics of dielectric, ferroelectric and magnetoelectric oxide materials in Bulk, Film and Nanocrystalline forms
R. Nirmala, Ph.D IIT, Madras	Rare earth intermetallics
Pattabiraman M., Ph.D IIT, Madras	Experimental Atomic Physics, Quantum Optics and Magnetometry
Padhan, Prahallad, Ph.D IIT Kanpur	Experimental Condensed Matter Physics
Tripathy, Prasanta, Ph.D Utkal University (IOP, Bhubaneswar)	String Theory
Sudakar Chandran, Ph.D IISc, Bangalore	Defect-structure property correlations, Materials for memory and energy applications; Oxides and Nitrides, Spectroscopic techniques (such as Raman, XPS, UV-Vis, IR)
Manu Jaiswal, Ph. D IISc, Bangalore	Graphene, Carbon Nanotubes, Conducting Polymers
Dillip Kumar Satapathy, Ph. D Humboldt University, Berlin	Complex fluids in confinement, Physics of complex oxide heterostructures, X-ray and Neutron scattering
Sunethra Ramanan, Ph. D Iowa State University, USA	Nuclear Structure, Cold atoms, Computational many body physics
Birabar Ranjit Kumar Nanda Ph. D, IIT Bombay	Condensed Matter Theory and Computational (Electronic Structure of Crystals)
Somnath Chanda Roy, Ph.D. IIT Delhi	Thin Films, Materials Science, TiO ₂ nanotubes and Photocatalysis
Visiting Faculty: Prafulla Kumar Behera, Ph.D. Utkal University (Supported by KEK, Japan)	Experimental particle physics

Emeritus Scientist/ Emeritus Professor: Balakrishnan V., Ph.D, Brandeis Univ. Scientific Officers / Engineers: Krishna Mohan. N., Ph.D IIT Madras	Dynamical Systems , Quantum Dynamics and Stochastics
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Short-term Courses/ Workshops/ Seminars/ Symposia /Conferences organized by the faculty members:

Sl. No.	Coordinator(s)	Title	Period
Conference:			
1.	N. Harish Kumar	National conference on Magnetic Materials and Applications (MagMA 2012), MAGMA-2012	March 12-13, 2012
Symposia:			
1	M. S. R. Rao	IITM-JAPAN Symposium on ZnO Nanocrystals and Allied Materials	Jan 09-10, 2012
Short term Course:			
1	G. Aravind and C. Vijayan	Refresher course in Expt. Physics	July 11-27, 2011

Short-term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the faculty members in Academic institutions and Public Sector Undertakings:

Sl. No.	Name of faculty	Title	Institution	Period
Workshop:				
1.	G. Aravind	International Workshop on Highly Charged Ions, 2012	TIFR, Mumbai	March 28-31, 2012
2	P. B. Sunil Kumar	Physics of Biological membranes	University of Southern Denmark	September, 22-23, 2011
3	P. B. Sunil Kumar	Interdisciplinary approach to soft and biological matter	IACS/SINP Kolkata	December, 5-6, 2011
4	James F Libby	Belle Analysis, Workshop	TIFR, Mumbai	January 01-28, 2012
5	Prem B Bisht	TCSPC	NIH Maryland	Nov 10-11, 2011
Seminar:				
1	L. Sriram Kumar	Indo-UK Scientific Seminar: Confronting Particle-Cosmology with Planck and LHC	IUCAA, Pune	August 10-12, 2011
2	L. Sriram Kumar	Astro-Cosmo @ Trivandrum	IISER, Thiruvananthapuram	November 18, 2011
3	L. Sriram Kumar	Discussion Meeting on Cosmology	IMSc, Chennai	February 14, 2012
Symposia:				
1	Manu Jaiswal	India-Singapore Joint Physics Symposium (invited talk)	IIT Delhi	February, 20-22, 2012
2	P. B. Sunil Kumar	Understanding the Organization of the Intracellular region	University of Memphis, USA	June, 23-24, 2011
3	Prem B Bisht	India-JSPS symposium, Trivandrum	Sri chitra tirunal Trivandrum	Aug, 2011
4	Sudakar Chandran	IITM-Japan topical symposium "ZnO Nanocrystals and Allied Materials"	IITM	January 9-10, 2012
Conference:				
1	V. Srinivas	Giant magnetic effects in materials	KIIT, Bhubaneswar	January, 03-07, 2012
2	L. Sriram Kumar	The Seventh International Meeting on Gravitation and Cosmology	Goa	December, 14-19, 2011

3	Sudakar Chandran	International conference on advanced materials ICAM 2011	PSG Tech	12-17 Dec 2011
4	B. R. K. Nanda	International conference on advanced materials ICAM 2011	PSG Tech	12-17 Dec 2011
5	B. R. K. Nanda	MagMA-2012	IITM	March 12-13, 2012
6	L. Sriram Kumar	Int. Conference on Gravitation and Cosmology	Goa	Dec 14-19, 2011
7	Arul Lakshminarayan	Intl. School and Conf. On quantum info.	Bhubaneswar	Dec 19-21, 2011
8	K. Hariharan	Key note address as president of ISSSI	Delhi	Dec 14-17, 2011
9	R. Nirmala	UGC-DAE-CSR Project Proposal Presentation	IGCAR, Kalpakkam	07/07/11
10	R. Nirmala	UGC-DAE-CSR Project Proposal Presentation	BARC, Mumbai	10/07/2011 - 19/07/2011
11	R. Nirmala	Visit to Low temperature Physics group	TIFR, Mumbai	10/07/2011 - 19/07/2011
Short term Course:				
1	P. B. Sunil Kumar	SERC school on Non-linear Dynamics	IISER Pune	22-December-2011

Special Lectures delivered by the faculty in other Institutions:

SI.No.	Name of faculty	Topic of Lecture	Institution	Date
1	S. Ramaprabhu	Carbon based nanomaterials for space applications	Department of Space, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram	March, 19, 2012
2	S. Ramaprabhu	Synthesis and Applications of Carbon nanomaterials	Workshop on Emerging Materials and Applications, Aarupadai Veedu Institute of Technology, Chennai	February, 28, 2012
3	S. Ramaprabhu	Phenomena at Nanoscale	Science City, Chennai	February, 28, 2012
4	S. Ramaprabhu	CNT, graphene and its applications", in Frontiers in Nanoscience and Technology	VIT university, Chennai	February, 18, 2012
5	S. Ramaprabhu	Synthesis of Carbon based Nanomaterials	NITTTR, Chennai	February, 14, 2012
6	S. Ramaprabhu	Applications of Carbon based Nanomaterials	NITTTR, Chennai	February, 14, 2012
7	S. Ramaprabhu	Nanomaterials and applications	Madras University, Chennai	February, 01, 2012
8	S. Ramaprabhu	Recent advances in applications of nanomaterials I. (21.01.2012).	Indo-US S&T Forum (IUSSTF), Hotel Taj Deccan, Hyderabad	January, 21, 2012
9	S.Ramaprabhu	Energy related applications of CNT and graphene	ICONSAT 2012, Hotel Taj Deccan, Hyderabad	January, 22, 2012
10	S.Ramaprabhu	Applications of nanomaterials	Anna University, Chennai	December, 16, 2011
11	S.Ramaprabhu	Processing of carbon based nanocomposites and their biomedical applications	9th International Symposium on Bioscience and Nanotechnology, Toyo University, Japan	December, 10, 2011
12	S.Ramaprabhu	Applications of carbon based Nanomaterials	University of Madras	November, 21, 2011
13	S.Ramaprabhu	Nanomaterials for Energy	Workshop on Nanoscience and Nanotechnology, Science City, Chennai	October, 20, 2011

14	S.Ramaprabhu	Synthesis and characterization of Graphene based composites	IITM-DUBIN UK meet, IITM, Chennai	September, 23, 2011
15	S.Ramaprabhu	Synthesis and applications of Graphene based composites	Asia Pacific International Conference, Anna University	September, 23, 2011
16	S.Ramaprabhu	Nanomaterials for Industrial Wastewater Treatment	INDO-UK Workshop National Institute of Technology, Tiruchirappalli, India	August, 29, 2011
17	S.Ramaprabhu	Nanomaterials for renewable energy and lubricant applications	Conference on Application of Nano Materials in Manufacturing, Confederation of Indian Industry (SR), Hotel Sheraton Park, Chennai	September, 14, 2011
18	S.Ramaprabhu	Nanomaterials and applications	NCNTE – 2011, Sriram Engineering College, Chennai	August, 25, 2011
19	S.Ramaprabhu	Carbon nanotubes and graphene:- synthesis and applications	NCNN-2011, Madras university, Chennai	August, 26, 2011
20	S.Ramaprabhu	CNT:- Synthesis, Characterization and applications	SN College, Chennai	August, 26, 2011
21	S.Ramaprabhu	CNT and Graphene:- synthesis and applications	University of Bayreuth, Germany	July, 13, 2011
22	S.Ramaprabhu	Energy and Environmental Applications of nanomaterials	Vivekananda college, Tiruchengode	June, 02, 2011
23	S.Ramaprabhu	Synthesis of nanomaterials	Vivekananda college, Tiruchengode	June, 01, 2011
24	S.Ramaprabhu	Synthesis of nanomaterials	Madras University, Chennai	May, 12, 2011
25	S.Ramaprabhu	Applications of nanomaterials	Madras University, Chennai	May, 12, 2011
26	G. Aravind	Photodissociation pathways and lifetimes of protonated peptides and their dimers	TIFR, Mumbai	March 30, 2012
27	P. C. Deshmukh	An Odessey in Atomic Physics	IIT Roorkee	Feb, 25, 2012
28	P. C. Deshmukh	Which way will the photoelectrons go?	IIT Roorkee	Feb, 26, 2012
29	C. Vijayan	Strategies for Effective Science Education in the Present Century	NCERT, New Delhi	April, 2011
30	C. Vijayan	Nonlinear Optical Response of Nanophotonic Materials	ICN-2012, Kottayam, Kerala	January, 2012
31	C. Vijayan	Laser-induced Processes in Nanophotonic Materials	NLS-20 Chennai	January, 2012
32	M. Jaiswal	Graphene and its environment	IIT Delhi	February, 20, 2012
33	M. Jaiswal	Magnetotransport in nanodiamond decorated Graphene	IIT Madras	March, 12, 2012
34	M.Jaiswal	Graphene: rich physics at the tip of a pencil	IIT Madras	December, 24, 2012
35	M.P. Kothiyal	Laser Metrology	Calcutta University	January, 01, 2012
36	James F Libby	Flavour Physics (3 lecture course at SERC-HEP school 2012)	VECC, Kolkata	June 30 – July 07, 2011
37	L Sriram Kumar	The scalar bi-spectrum in the Starobinsky model	IUCAA, Pune	August 12, 2011
38	L Sriram Kumar	Features in the primordial spectrum and associated non-Gaussianities	IISER, Thiruvananthapuram	November 18, 2011
39	L Sriram Kumar	Distant supernovae and the accelerating universe	Stella Maris College, Chennai	January 27, 2012

40	L. Sriram Kumar	Distant supernovae and the accelerating universe	Hindustan Institute of Technology and Science, Chennai	February 10, 2012
41	L Sriram Kumar	1. Essentials of inflation and cosmological perturbation theory 2. Primordial feature and non-Gaussianities	In "Discussion Meeting on Cosmology" at IMSc, Chennai	February 14, 2012
42	P. B. Sunil Kumar	Effects of in-plane order on membrane morphology	University of Pennsylvania	27-June-2011
43	P. B. Sunil Kumar	Modeling morphological changes in membranes	Brandies University	28-June-2011
44	Prem B Bisht	Fluorescence microscopy and Nonlinear optical studies on newly synthesized multiphoton emitters	National Institute of Health, Maryland, USA.	Nov. 17, 2011
45	Prem B Bisht	Time-resolved studies and whispering gallery modes	Department of Physics and Astronomy, MSU, Michigan, USA	Nov. 15, 2011
46	Prem B Bisht	Effect of whispering gallery modes of single micro-particles on FRET as studied under TCSPC	5 th Fall Workshop on Advanced TCSPC Techniques, Bathesda, USA.	Nov. 11, 2011
47	Prem B Bisht	Experiments on whispering gallery modes of micro-cavities: Current status and future prospects	Colloquium, Physics Dept., IIT, Kanpur.	Sept. 23, 2011
48	Prem B Bisht	Modern Lasers, Plasmonics, Microscopy and Sensor Technology	National Institute of Technology, Trichy.	Aug. 26. 2011
49	Prem B Bisht	Tunable lasers, attosecond time-resolved spectroscopy and high harmonic generation	National Physical Laboratory, New Delhi	July 23, 2011
50	Sudakar Chandran	Multifunctional Nanostructured Oxides: Materials engineering and energy applications	Fuel Chemistry Division, IGCAR, Kalpakkam	July 07, 2011
51	Harish Kumar. N	Delivered lectures (including a physics demo) as a "Resource Person" in the Indian Academy of Science sponsored "Refresher course on Experimental Physics"	Department of Physics, IITM	July 11-27, 2011
52	Harish Kumar. N	Lecture on Physics – DST - Inspire Internship Science Camp 2011	Vel Tech Technical University	Oct 04, 2011
53	Harish Kumar. N	"Spintronics" – National Seminar on "Materials for Electromagnetic Applications	Christ College, Irinjalakuda	Nov 29, 2011
54	Harish Kumar. N	Physics Lecture-Demonstration - Vigyan 2011- Science Awareness camp	Amrita School of Engineering, Coimbatore	Dec 02, 2011
55	Harish Kumar. N	Lecture on Physics – DST - Inspire Internship Science Camp 2011	Sri Venkateswara University, Tirupati	Dec 10, 2012
56	Harish Kumar. N	Magnetic Materials – Training programme for faculty on Engineering Physics	MIT Campus, Anna University	Jan 05, 2012

Visits abroad by faculty:

Sl. No.	Name of faculty	Country Visited	Date	Purpose of visit	Funding from
1.	S. Ramaprabhu	Japan	Dec, 10, 2011	MOU signing	-
2.	P. C. Deshmukh	Canada	Aug, 2011- Jan, 2012	Sabbatical	University of Western Ontario
3	P. B. Sunil Kumar	USA	10-June-2011 1-July-2011	Symposium and visits to universities	CPDA for travel and symposium
4	P. B. Sunil Kumar	Denmark	22-September-2011 to 27-09-2011	Workshop on Physics of Biological membranes	CPDA
5	P. B. Sunil Kumar	Denmark	11-January-2012 – 18-January-2012	Ph.D. Defense of Mr. Bastein Loubert at SDU, Denmark	SDU, Denmark
6	Prem B Bisht	USA	Nov. 10-18, 2011	Invited lectures	IITM
7	P. K. Tripathy	France	Aug 27 – Sept 04, 2011	Invited talk at the international workshop of 41 st summer institute	-
8	R. Narayanan	Hongkong, USA	Aug 23, 2011	Sabbatical	Organizer
9	V. Subramanian	USA	May 16 – June 26, 2011	Collaborative research	-
10	M. S. R. Rao	France	May 16 – June 25, 2011	Visit University of Rennes and attended CEFIPRA project review meeting	-
11	T. S. Natarajan	USA	May 15 – Oct 31, 2011	Sabbatical	Organizer
12	A. Subrahmanyam	Germany, USA	May 06 – July 29, 2011	Visit Technical University and presented a paper at 6 th Symposium on functional and surface coating	-
13	A. Subrahmanyam	France	20/03/12	Discussion on Saint Gobain research	Organizer
14	A. Subrahmanyam	Germany	March 22-23, 2012	Conference	
15	T. S. Natarajan	Malaysia	Nov 01, 2011 – Sept-01, 2012	Visiting professor at Univ. Malaysia	Univ. Malaysia
16	A. Subrahmanyam	Austria	Dec 01-02, 2011	EU-India S&T Cooperation days	INDIGO NPP Project
17	M. S. R. Rao	Japan	De 04-11, 2011	Collaborative research	Project
18	Arul Lakshminarayan	France	Dec 05- 11, 2011	Visit Univ. Paris, Orsay	--
19	Neelima M Gupte	Germany	Sept 12-16, 2011	Dynamics Days Europe 11 Conference	--

Honours and Awards obtained by faculty:

Sl. No.	Name of faculty	Name of Award	Awarded by	Awarded for	Date of award
ii. Awards:					
1	M. Pattabiraman	Young Faculty Recognition Award	ITM	Faculty recognition	July-Aug, 2011

Books, Monographs authored/co-authored:

Sl. No.	Name of faculty	Title	Publisher	Author/ Co-author
Books:				
1	G. Aravind	Atomic and Molecular Physics, Introduction to Advanced Topics (Book Chapter)	Narosa Publishing House	Co-Author
2	P. C. Deshmukh	Hartree-Fock Self-Consistent Field Method for Many-Electron Systems (Book Chapter)	Narosa Publishing House	Co-Author
3	P. C. Deshmukh	Atomic Photoionization in the Born Approximation and Angular Distribution of Photoelectrons (Book Chapter)	Narosa Publishing House	Co-Author
4	P. C. Deshmukh	Symmetry in Electron-Atom Collision and Photoionization Processes (Book Chapter)	Narosa Publishing House	Co-Author
5	L. Sriramkumar	Vignettes in Gravitation and Cosmology (Editor)	World Scientific, Singapore, 2012	T. R. Seshadri (co-editor), University of Delhi, Delhi

Fellowships of Academies and Professional Societies:

Sl. No.	Name of faculty:	Year of admission
Others:		
1.	Dr. M. P. Kothiyal, Elected Fellow, Optical Soc. Of America	2011

Journal Editorial Boards:

Sl. No.	Name of faculty	Position (Editor/Member)	Journal Name
1.	P. C. Deshmukh	Associate Editor	Journal of Atomic & Molecular Science
2.	A.R. Ganesan	Member	International Journal of Holography and Speckle
3.	M.S Ramachandra Rao	Editorial Board Member	Journal of Physics
4.	M. P. Kothiyal	Member	Journal of Optics
5.	P. B. Sunil Kumar	Member	Advances in Planar Lipid Membranes and Liposomes (Elsevier)

4.16.4 Design and Development Activities:

Brief and specific details of Process/Instruments/Equipment/ Software designed and developed:

New facilities added or major equipment procured:

Sl. No.	New facilities	Value (Rs. in lakhs)
1	B-H loop tracer	26
2	Cryostat (65 K-500 K) with temp. controller	3
3	DC Resistivity measuring setup (Automated)	11
4	AC susceptibility set up	3

Sl. No.	Name of Equipment	Value (Rs. In lakhs)
1.	Fluorescence microscope	10
2.	Pulse laser for fs laser	20

Patents:

Patents filed:

Sl. No.	Name of faculty	Topic of patent
1.	Prem B Bisht	Enhancement of Raman scattering signal by using photonic nanojet of a single microsphere

Patents awarded:

SI.No	Name of faculty	Topic of patent
1	S. Ramaprabhu	Electrode and/or capacitor formation (US Patent (2011))(IN-811963)
2	S. Ramaprabhu	Polyaniline-graphite nanoplatelets as cost effective CO2 solid adsorbent (2011)(IN-814028)
3	S. Ramaprabhu	MnO2 nanotube based Nanofluids as coolants for electronic circuits and fuel cells (2011) (IN-813955)
4	S. Ramaprabhu	Production of Graphene using electromagnetic radiation (2011) (IN-813948)

4.16.5 Research and Consultancy:

Sponsored Research Projects:

SI. No.	Title	Period	Funding Agency	Amount (Rs. In lakhs)	Co-ordinators
1.	Development of Novel Graphene Nanocomposite Anode Electrode for Li-ion Battery	2011	DRDO	34	S. Ramaprabhu
2.	Mind the Gap - jumping the hurdles limiting polymer fuel cell performance and commercialization	2011	DST (INDO-UK)	112.9	S. Ramaprabhu
3.	Study of Magnetic ordering and magnetic field induced effects in rare earth intermetallic compounds and oxides by powder neutron diffraction	2011-14	UGC-DAE-CSR	1.05	R. Nirmala
4.	Studies of size effect on the physical properties of phase separated electron doped manganites and other novel oxides	2011-14	UGC-DAE-CSR	4.79	R. Nirmala
5.	Understanding the Role of Competing magnetic interactions on the magnetic and magneto-transport properties of Rare earth intermetallic compounds	2010-2013	DST	20.4	R. Nirmala
6.	Rare earth intermetallic compounds for magnetic cooling/heating applications	2010-2013	DAE-BRNS	12.66	R. Nirmala
7.	Cyclotron Project at IIT Madras	2010-2013	Alumni Association	25	P. C. Deshmukh, Faculty at IITM
8.	Electron impact single ionization studies of atoms	2011-2013	CSIR	12	P. C. Deshmukh, Yugal Khajuria
9.	Towards a Laser Source Platform for Next Generation Extreme - UV Lithography (EUVL) : Theoretical and Experimental Spectroscopic Studies at 6.X nm	2011-2013	DST	International Travel & PerDeim	P.C.Deshmukh (PI), John Costello (Dublin City University) and Hari R Varma (IIT Mandi)
10.	Development of Soft Magnetic Materials from Nano Dispersion of Magnetic Particles for High Frequency Applications.	2010-2013	DRDO/ARMR EB	36.56	V. Srinivas
11.	Investigation of electronic properties of Heusler alloys for the development of environmentally friendly thermoelectric materials.	2010-2013	DST	32.38	V. Srinivas

12.	Investigation of particle size and inter-particle interaction effects on magneto-transport behavior in self assembled granular materials	2011-2014	CSIR	15	V. Srinivas
13.	Studies on giant electrical transport anomalies induced by magnetic instability in Fe-Rich intermetallics	2011-2014	UGC-DAE-CSR (IGCAR colaborative)	7	V. Srinivas
14.	Up gradation of diode pumped solid state laser and its characterization	2010-2011	DRDO	32.5	M. P. Kothiyal
15.	Model based investigation of Non-destructive Techniques of Thick and Multilayered Composites	3 years 15.03.2010 30.07.2013	DRDO, Hyderabad	49.75	PI: Dr Krishnan Balasubramaniam (Dept. of Mech. Engg.) Co-PI: Dr C.V.Krishnamurthy (Dept. of Physics)
16.	Development of a Near Field Ultrasonic Nanoscopy under a Project to set up a centre for Nano-electromechanical Systems (NEMS) and Nanophotonics at IITM, Chennai	5 years (sanctioned on March 30, 2011)	Nanotechnology Initiative Division, Ministry of Communications & Information Technology, Department of Information Technology, Govt. Of India	4946.50 (total)	PI: Dr Krishnan Balasubramaniam (Dept. of Mech. Engg.) Co-Pis: Dr C.V.Krishnamurthy (Dept. of Physics) Dr B.K.Das (Dept. Of EE) Dr. Enakshi Bhattacharya (Dept. Of EE)
17.	Indian-based neutrino observatory	July 2010-July 2012	DST	10	Dr N. Krishnapurna (EE), Dr. N. Chandrachoodan (EE), Dr. A. Prabhakar (EE) and JL (PH)
18	Mediated interaction between charged membranes- towards understanding the coagulation of RBC	3-3-11 to 2-3-14	DST	3.5	P. B. Sunil Kumar
19	Rheology of ionic polymers near gelation	12-11-09 to 11-11-12	DST	40	A. P. Deshpande, P. B. Sunil Kumar
20	Equilibrium and Dynamical properties of polyelectrolytes	9-2-09 to 29-02-12	CSIR	15	P. B. Sunil Kumar
21.	Synthesis of oxide based magnetic nanoparticles for bio-compatibility studies, magnetic 380icrosystems and MRI applications	3 Years	DST	22.68	Dr. M. S Ramachandra Rao
22	Study of nanomaterials for photonic applications	2010-13	DST	27.70	Prem B Bisht
23	Whispering gallery modes radioactive rate of molecules	2010-13	CSIR	10.76	Prem B Bisht
24.	Synthesis of novel.....nonlinear optics	2009-12	DRDO	29.84	Prem B Bisht & I.S. Aidhen
25	TiO2 Nanotubes based gas sensors for the detection of greenhouse gases	2011-2014	DST	27.6	Somnath C Roy
26	Capacitive gas sensors based on TiO2 nanotube arrays	2011-2014	IC and SR, IIT Madras (Seed Grant)	16	Somnath C Roy
27	In-situ electrical and optical probes for vacuum and controlled atmosphere measurements of wide bandgap semiconducting oxide thin films	2011-13	IIT Madras seed grant	18.5	Sudakar Chandran

28.	Development of Lithium Fluorophosphate-Carbon Based Cathode and Silicon-Carbon Based Anode Materials for Lithium Ion Batteries	2011-14	Nissan Research Support Program"	8.99	Sudakar Chandran
29	Mathematical Modelling of bacteria chemotaxis: from single cell to collective behavior	2010-2013	DST	17	M. Gopalakrishnan
30	Cutting edge research in front line areas at Department of Physics	2011-2013	Alumni Association	3	S. Kasiviswanathan
31	Studies on high-efficient nano-Tungsten oxide solid state electrochromic devices for possible applications as BioMedical Detectors	2011-2013	DST	45.38	A. Subrahmanyam M. K. Jain
32	Development of a 3D numerical forward model for impact echo testing of concrete structures with complex configurations: Applications to sodium burn studies	2011-2013	IGCAR	18.93	C. V. Krishnamurthy K. Balasubramanian
33	Electrospinning geometry optimization for preparation of core-sheath nanofibres and conversion of nanofibres into yarns	2011-2013	DST	7.5	T. S. Natrajan
34	Construction of Shack Hartmann Aberrometer...	2011-2014	DST	27.66	A. R. Ganesan
35	Testing of active RPC detector elements...	2011-2012	India based Nutrino Observatory	30.69	P.K. Behera James F Libby
36	Development of advanced NDE techniques for enhanced sensitivity, reliability and reduced inspection time for detection and characterization of defects in nuclear components - Phase III'	2011-2012	BRNS	460	C. V. Krishnamurthy
37	Development of smart optical materials based on nonlinear absorption	2009-2012	DRDO	40	C. Vijayan
38	Design of hybrid organometallic coordination complex materials for nonlinear optics	2012-2015	DST (Indo-Australian)	4	C. Vijayan

RBIC projects:

Sl. No.	Name of faculty	Title	Industry	Amount (Rs. In lakhs)
1	S. Ramaprabhu	Mind the Gap - jumping the hurdles limiting polymer fuel cell performance and commercialization	*****	18
2	S. Ramaprabhu	Development of novel nano-composites for Hydrogen Storage	*****	75

Exchange programme with other Universities including Institutions/Universities under MOU;

- One M.Tech. student was under DAAD Sandwich System to Germany during 01.09.2011 to 31.05.2012.
- One student presently working under Indo_NUS Joint Ph. D program (January 2012 onwards)

Faculty members' participation with other institution under MoU:

Sl. No.	Name of faculty	Participation details	Name of University/Institution which has MoU
1	S. Ramaprabhu	Joint collaboration	Toyo University
2	P. C. Deshmukh	Adjunct Professor	IIT Mandi

Research Publications of the faculty members & research scholars:

- a. Total No. of papers published in Refereed National Journals - 3
- b. Total No. of papers published in Refereed International Journals - 127
- c. Total No. of papers presented in National Conferences - 12
- d. Total No. of papers presented in International conferences - 14

a. In Refereed National Journals:

1. S. Ramaprabhu, Investigations of hydrogen storage in palladium decorated graphene nanoplatelets, Transactions of the Indian Institute of Metals, 64, 169 (2011)
2. M. P. Kothiyal, Comparative study of Time average and Stroboscopic illumination Techniques for Vibration fringe analysis, Journal of Optics, 40, 184 (2011)
3. M. P. Kothiyal, Red-Green-Blue wavelength Interferometry and TV holography for surface metrology, Journal of Optics, 40, 176 (2011)

b) In Refereed International Journals:

1. S. Ramaprabhu, One-pot synthesis of conducting graphene polymer composites and their strain sensing application, Nanoscale, 4, 1258 (2012)
2. S. Ramaprabhu, Restricting charge transfer in dye-graphene system Chemical Physics Letters, 521, 130–133 (2012)
3. S. Ramaprabhu, Carbon nanotube bottles for incorporation, release and enhanced cytotoxic effect of Cisplatin Carbon, 50, 1625 (2012)
4. S. Ramaprabhu, Polyaniline-Multiwalled carbon nanotubes nanocomposite- an excellent reversible CO₂ capture candidate, RSC Advances, 2, 1746 (2012)
5. S. Ramaprabhu, Catalytic activity of platinum-cobalt alloy nanoparticles decorated functionalized multiwalled carbon nanotubes for oxygen reduction reaction in PEMFC, International Journal of Hydrogen Energy, 37, 412 (2012).
6. S. Ramaprabhu, Palladium nanoparticles decorated Graphite nanoplatelets for room temperature carbon dioxide adsorption, Chemical Engineering Journal, 187, 10 (2012)
7. S. Ramaprabhu, The role of functionalized multi walled carbon nanotubes based supercapacitor for arsenic removal and desalination of sea water, Journal of Experimental Nanoscience, 7, 85 (2012)
8. S. Ramaprabhu, Optical nonlinearity of silver decorated grapheme Journal of the Optical Society of America B, 29, 669 (2011)
9. S. Ramaprabhu, Surfactant free graphene nanosheets based nanofluids by in-situ reduction of alkaline graphite oxide suspensions, Journal of Applied Physics, 110, 124326 (2011)
10. S Ramaprabhu, Graphene based engine oil nanofluids for tribological applications, ACS Applied Materials & Interfaces, 3, 4221 (2011)
11. S. Ramaprabhu, Solar exfoliated graphene-carbon nanotube hybrid nano composite as efficient catalyst support for proton exchange membrane fuel cells, Journal of Material Chemistry, 21, 18199 (2011)

12. S. Ramaprabhu, Facile and simultaneous production of metal/metal oxide dispersed graphene nano composites by solar exfoliation, *Journal of Material Chemistry*, 21, 17094 (2011)
13. S.Ramaprabhu, Polyaniline-MnO₂ nanotube hybrid nanocomposite as supercapacitor electrode material in acidic electrolyte, *Journal of Material Chemistry*, 21, 17601 (2011)
14. S. Ramaprabhu, Carbon nanocoils for multi-functional energy applications *Journal of Material Chemistry*, 21, 16103 (2011)
15. S. Ramaprabhu, Surfactant Free Magnetic Nanofluids based on Core - Shell type nanoparticles decorated Multiwalled Carbon Nanotubes, *Journal of Applied Physics*, 110, 064325 (2011)
16. S. Ramaprabhu, Carbon dioxide adsorption in graphene sheets, *American Institute of Physics Advances*, 1, 032152 (2011)
17. S. Ramaprabhu, Wrinkled Graphenes: A Study on the Effects of Synthesis Parameters on Gaso-thermal Exfoliation-reduction of Graphite Oxide, *The Journal of Physical Chemistry C*, 115, 17660 (2011)
18. S Ramaprabhu, Investigation of Structural stability, Dispersion, Viscosity and Conductive Heat Transfer properties of Functionalized Carbon Nanotubes based nanofluids, *The Journal of Physical Chemistry C*, 115, 16737 (2011)
19. S Ramaprabhu, Facile synthesis of one dimensional graphene wrapped carbon nanotube composite by chemical vapour deposition, *Journal of Material Chemistry*, 21, 15179 (2011)
20. S Ramaprabhu, Functionalized graphene reinforced thermoplastic nanocomposites as strain sensors in structural health monitoring, *Journal of Material Chemistry*, 21, 12626 (2011)
21. S. Ramaprabhu, Effect of Metal Nanoparticles Decoration on Electron Field Emission Property of Graphene Sheets, *Nanoscale*, 3, 4170 (2011)
22. S.Ramaprabhu, Investigation of Hydrogen Spillover in Palladium Decorated Hydrogen Exfoliated Functionalized Graphene, *The Journal of Physical Chemistry C*, 115, 15679 (2011)
23. S. Ramaprabhu, Functionalized Graphene Based Nanocomposites for Supercapacitor Application, *Journal of Physical Chemistry C*, 115, 14006 (2011)
24. S. Ramaprabhu, Graphene-multi walled carbon nanotube hybrid electrocatalyst support material for direct methanol fuel cell, *international Journal of Hydrogen Energy*, 36, 7284 (2011)
25. S. Ramaprabhu, Field emission properties of metal encapsulated and metal-oxide dispersed multi walled nanotube nanocomposites, *Journal of Nano Energy and Power Research*, 1, 57, (2011)
26. S. Ramaprabhu, Thermally exfoliated graphene based counter electrode for low cost dye sensitized solar cells *J. Appl. Phys.*, 109, 124308 (2011)
27. S. Ramaprabhu, Correlated conformation and charge transport in multiwall carbon nanotube-conducting polymer nanocomposites, *J. Phys.: Condens Matter*, 23, 265303 (2011)
28. S. Ramaprabhu, Cold Field Emission from Hydrogen Exfoliated Graphene composites, *Applied Physics Letters*, 98, 18311 (2011)
29. S. Ramaprabhu, Synthesis and nanofluid application of silver nanoparticles decorated graphene, *Journal of Material Chemistry*, 21, 9702 (2011)
30. S. Ramaprabhu, Synthesis and Transport Properties of Metal Oxide Decorated Graphene Dispersed Nanofluids, *The Journal of Physical Chemistry C*, 115, 8527 (2011)
31. S Ramaprabhu, Synthesis and thermal transport studies of nanofluids based on metal decorated photochemically oxidized multiwalled carbon nanotubes, *Journal of Nanoscience and Nanotechnology*, accepted (2011)
32. S Ramaprabhu, Top down method for Synthesis of Highly Conducting Graphene by Exfoliation of Graphite Oxide using Focused Solar Radiation, *Journal of Materials Chemistry*, 21, 6800 (2011)

33. S Ramaprabhu, Functionalized graphene-PVDF foam composites for EMI shielding, *Macromolecular Materials and Engineering*, 296, 894 (2011)
34. S. Ramaprabhu, Magnetite decorated graphite nanoplatelets as cost effective CO₂ adsorbent, *Journal of Materials Chemistry*, 21, 7467 (2011)
35. S Ramaprabhu, A cholesterol biosensor based on gold nanoparticles decorated functionalized graphene nanoplatelets, *Thin Solid films*, 519(16), 5667 (2011)
36. S. Ramaprabhu, Enhanced convective heat transfer using graphene dispersed nanofluids, *Nanoscale Research Letters*, 6, 289 (2011)
37. S. Ramaprabhu, Experimental investigation of thermal transport properties of carbon nanohybrid dispersed nanofluid, *Nanoscale*, 3, 2208 (2011)
38. S. Ramaprabhu, Non-enzymatic amperometric glucose biosensor with zinc oxide nanoparticles decorated multi walled carbon nanotubes, *Journal of Nanoscience and Nanotechnology*, 11, 4684 (2011)
39. S. Ramaprabhu, Cerium oxide dispersed multi walled carbon nanotubes as cathode material for flexible field emitters, *Journal of Nanoscience and Nanotechnology*, accepted (2011)
40. S Ramaprabhu, Noble metal dispersed multiwalled Carbon nanotubes immobilized ss-DNA for Dopamine detection, *Sensors Actuators B Chemical*, 155(2), 679 (2011)
41. S.Ramaprabhu, Hydrogen storage properties of Pd decorated nitrogen doped graphene nanoplatelets, *Journal for Nanoscience and Nanotechnology*, 64, 169 (2011)
42. R. Nirmala, Size effect on the structural, magnetic and magnetotransport properties of electron doped manganite La_{0.15}Ca_{0.85}MnO₃, *Journal of Applied Physics*, 111, 07D209 (2012)
43. R. Nirmala, Observation of spin glass state in weakly ferromagnetic Sr₂FeCoO₆ double perovskite, *Journal of Applied Physics*, 111, 053905 (2012)
44. R. Nirmala, Structural and magnetic properties of Fe₂P-type R₆TX₂ compounds (R = Zr, Dy, Ho, Er, T = Mn, Fe, Co, Cu, Ru, Rh, X = Sb, Bi, Te), *Intermetallics*, 19, 1250 (2011)
45. R.Nirmala, Magnetotransport study of the magnetic superconductors GdSr₂Ru_{1-x}Cu_{2+x}O₈ *Superconductor Science and Technology*, 24, 095001 (2011)
46. R. Nirmala, Magnetic ordering of anti-Th₃P₄-type R₄X₃ and Th₃P₄-type R₃X₄ compounds (R = Ce, Pr, Nd, Sm, X = Ge, Sb, Te), *Intermetallics*, 19, 1794 (2011)
47. R. Nirmala, Magnetization and neutron diffraction studies on Sr₂TiMnO₆, *Journal of Applied Physics*, 109, 07E329 (2011)
48. R. Nirmala, Giant magnetoresistance and table-like magnetocaloric effect in double perovskite oxide PrSrMnCoO₆, *Journal of Applied Physics*, 109, 07E319 (2011)
49. G. Aravind, Photodissociation pathways and lifetimes of protonated peptides and their dimers, *Journal of Chemical Physics*, 136, 014307 (2012)
50. G. Aravind, Autoionization resonances in the Argon iso-electronic sequence, *Canadian Journal of Physics*, 2012 (in press)
51. P. C. Deshmukh, Scattering of electrons by multi-walled cylindrical potentials, *J. Comput. Theor. Nanosci.* 8, 2321 (2011)
52. P. C. Deshmukh, Valence photodetachment of Li⁻ and Na⁻ using relativistic many-body techniques, *Phys. Rev. A* 83, 053419 (2011)
53. P. C. Deshmukh, Cooper minima: a window on nondipole photoionization at low energy, *J. Phys. B: At. Mol. & Opt. Phys. (Fast Track)* 44, 201001 (2011)
54. P. C. Deshmukh, Room temperature ferromagnetism and optical limiting in V₂O₅ nanoflowers synthesized by a novel method. *J. Phys. Chem. C*, 115, 112 (2011)

55. C. Vijayan, Ultrafast nonlinear optical response of carbon nanotubes functionalized with water soluble porphyrin, *Optics Communications* 285(7), 1920 (2012)
56. C. Vijayan, Enhanced optical nonlinearity in β -AgVO₃ nanobelts on decoration with Ag nanoparticles, *Applied Physics Letters*, 100(12), 121119 (2012)
57. C. Vijayan, Room temperature ferromagnetism and optical limiting in V₂O₅ nanoflowers synthesized by a novel method, *Journal of Physical Chemistry C* 115(1) 112-117 (2011)
58. C. Vijayan, An efficient nanocomposite based on carbon nanotubes functionalized with a fluorescent ink for ultrafast optical limiting, *Materials Letters* 65(5) 915-917 (2011)
59. C. Vijayan, Efficient ultrafast optical limiting using single walled carbon nanotubes functionalized noncovalently with free base and metalloporphyrins, *Journal of Applied Physics* 109(11) 113101 (2011)
60. C. Vijayan, Single-and few-layer graphene growth on stainless steel substrates by direct thermal chemical vapor deposition, *Nanotechnology* , 22(16) 165701 (2011)
61. C. Vijayan, Observation of red emission in wurtzite ZnS nanoparticles and the investigation of phonon modes by Raman spectroscopy, *Materials Chemistry and Physics* , 129 (3) pp 1132-1137 (2011)
62. M. Jaiswal, Electronic Properties of Graphene decorated with Nanodiamonds, *ACS Nano*, (2012)
63. M. Jaiswal, Localized insulator-conductor transformation of graphene oxide thin films via focused laser beam irradiation, *Applied Physics A* (2011)
64. M. Jaiswal, Flow Sensing of Single Cell by Graphene Transistor in a Microfluidic Channel, *Nano Letters* (2011)
65. M. Jaiswal, Towards Wafer Scale Fabrication of Graphene Based Spin Valve Devices, *Nano Letters* (2011)
66. M. Jaiswal, Observation of Long Spin Relaxation Times in Bilayer Graphene at Room Temperature, *Physical Review Letters* (2011)
67. V. Srinivas, Enhanced non-metallic behaviour on the verge of magnetic instability in Fe₂V_{1-x}Nb_xAl Heusler alloys, *J. Magn. Mag. Mater* 324, 1071 (2012)
68. V. Srinivas, Observation of magnetic cluster phase above Curie temperature in Fe₂CrAl Heusler alloy, *J. Magn. Mag. Mater*, 324, 1296 (2012)
69. V. Srinivas, Enhanced magnetoimpedance and field sensitivity in microstructure controlled FeSiCuNbB ribbons, *J. Appl. Phys.* 110, 083918 (2011)
70. V. Srinivas, Role of polymer matrix in large enhancement of dielectric constant in polymer-metal composites, *Appl. Phys. Lett.* 99, 042905 (2011)
71. V. Srinivas, Microstructure, magnetic, and magnetoimpedance properties of electrodeposited NiFe/Cu and CoNiFe/Cu wire, *J. Appl. Phys.* 109, 073901 (2011)
72. V. Srinivas, Investigation of magnetoimpedance effect on electrodeposited NiFe/Cu wire using inductance spectroscopy *Physica B*406, 645 (2011)
73. V. Srinivas, Particle size dependence on magnetic and electrical properties of (Ni_{0.8}Fe_{0.2})₁₀C₉₀ granular composites, *Journal of nanoscience and nanotech.* 11, 2570 (2011)
74. V. Srinivas, Large enhancement of giant magnetoimpedance property in electrodeposited NiFe/Cu wire with copper additive in plating bath, *Solid. State Commun.*151, 1787 (2011)
75. M. P. Kothiyal, Characterization of micro-lenses based on single interferogram analysis using Hilbert transformation, *Optics Communications*, 284, 5084 (2011)
76. M. P. Kothiyal, TV Holography for 3-D Surface Shape Measurement, *Lasers in Engineering*, 21, 240 (2011)
77. James Libby, L. Martin *et al.* (CLEO Collaboration) [Search for the decay \$D_s^+ \rightarrow \omega e^+ \nu_e\$](#) , *Phys. Rev. D* 84, 012005 (2011)

78. James Libby, J. Yelton *et al.* (CLEO Collaboration) [Studies of \$D^+ \rightarrow \{\eta', \eta, \phi\} e^+ \nu_e\$](#) Phys. Rev. D 84, 032001 (2011)
79. James Libby, J. Y. Ge *et al.* (CLEO Collaboration), [Branching fractions for \$Y\(3S\) \rightarrow \pi^0 h_b\$ and \$\psi\(2S\) \rightarrow \pi^0 h_c\$](#) , Phys. Rev. D 84, 032008 (2011)
80. James Libby, S.-K. Choi *et al.* (The Belle Collaboration), [Bounds on the width, mass difference and other properties of \$X\(3872\) \rightarrow \pi^+ \pi^- J/\psi\$ decays](#), Phys. Rev. D 84, 052004 (2011)
81. James Libby, H. Sahoo *et al.* (Belle Collaboration) [First observation of radiative \$B_0 \rightarrow \phi K_0 \gamma\$ decays and measurements of their time-dependent CP violation](#), Phys. Rev. D 84, 071101 (2011)
82. James Libby, P. Chen *et al.* (Belle Collaboration) [Observation of \$B \rightarrow \rho \phi \Lambda D_0\$ at Belle](#) Phys. Rev. D 84, 071501 (2011)
83. James Libby, O. Seon *et al.* (Belle Collaboration) [Search for lepton-number-violating \$B^+ \rightarrow D^- \ell^+ \ell'^+\$ decays](#) Phys. Rev. D 84, 071106 (2011)
84. James Libby, X. L. Wang *et al.* (Belle Collaboration) [Search for charmonium and charmoniumlike states in \$Y\(2S\)\$ radiative decays](#) Phys. Rev. D 84, 071107 (2011)
85. James Libby, N. Lowrey *et al.* (CLEO Collaboration) [Analysis of the decay \$D_0 \rightarrow K S_0 \pi^+ \pi^0\$](#) , Phys. Rev. D 84, 092005 (2011)
86. James Libby, G. S. Adams *et al.* (CLEO Collaboration), [Amplitude analyses of the decays \$\chi_{c1} \rightarrow \eta \pi^+ \pi^-\$ and \$\chi_{c1} \rightarrow \eta' \pi^+ \pi^-\$](#) , Phys. Rev. D 84, 112009 (2011)
87. James Libby, T. K. Pedlar *et al.* (CLEO Collaboration), [Observation of the \$h_c\(1P\)\$ Using \$e^+e^-\$ Collisions above the \$DD \bar{\phi}\$ Threshold](#), Phys. Rev. Lett. 107, 041803 (2011) James Libby
88. V. Bhardwaj *et al.* (Belle Collaboration), [Observation of \$X\(3872\) \rightarrow J/\psi \gamma\$ and Search for \$X\(3872\) \rightarrow \psi' \gamma\$ in B Decays](#), Phys. Rev. Lett. 107, 091803 (2011)
89. James Libby, E. Won *et al.* (Belle Collaboration) [Observation of \$D^+ \rightarrow K^+ \eta'\(\prime\)\$ and Search for CP Violation in \$D^+ \rightarrow \pi^+ \eta'\(\prime\)\$ Decays](#), Phys. Rev. Lett. 107, 221801 (2011)
90. James Libby, I. Adachi *et al.* (Belle Collaboration), [First Observation of the P-Wave Spin-Singlet Bottomonium States \$h_b\(1P\)\$ and \$h_b\(2P\)\$](#) , Phys. Rev. Lett. 108, 032001 (2012) James Libby
91. James Libby, C.-T. Hoi *et al.* (Belle Collaboration), [Evidence for Direct CP Violation in \$B_{\pm} \rightarrow \eta h_{\pm}\$ and Observation of \$B_0 \rightarrow \eta K_0\$](#) , Phys. Rev. Lett. 108, 031801 (2012)
92. James Libby, M. Starič *et al.* (Belle Collaboration), [Search for CP Violation in \$D_{\pm}\$ Meson Decays to \$\phi \pi_{\pm}\$](#) Phys. Rev. Lett. 108, 071801 (2012) James Libby, A. Bondar *et al.* (Belle Collaboration), [Observation of Two Charged Bottomoniumlike Resonances in \$Y\(5S\)\$ Decays](#), Phys. Rev. Lett. 108, 122001 (2012)
93. L. Sriramkumar, Reheating in tachyonic inflationary models: Effects on the large scale curvature perturbations, Nuclear Physics B 852, 366 (2011) L. Sriramkumar, The scalar bi-spectrum in the Starobinsky model: The equilateral case, Journal of Cosmology and Astroparticle Physics 1201, 008 (2012)
94. P. B. Sunil Kumar, Anisotropic elasticity of fluid membranes, Macromolecular Theory and Simulations, 20, 446 (2011)
95. P. B. Sunil Kumar, Computer simulation of cytoskeleton-induced blebbing in lipid membranes, Phys. Rev. E. 84, 051906, (2011)
96. P.B. Sunil Kumar, Role of disclinations in determining the morphology of deformable fluid interfaces, Softmatter. 8, 3058 (2012)
97. Prem B Bisht, Optical nonlinearity of silver decorated graphene , J. Opt. Soc. Am. B 29 , 669 (2012)
98. Prem B Bisht, Restricting charge transfer in dye-graphene system, Chem. Phys. Letters 521, 130 (2012)
99. Prem B Bisht, Influence of whispering gallery modes (WGMs) on energy transfer, Chem. Phys. 388, 38 (2011)

100. Prem B Bisht, Enhancement of Raman scattering by two orders of magnitude using photonic nanojet of a microsphere, *J. Appl. Physics*, 109, 103103 (2011)
101. Prem B Bisht, Effect of nonlinear absorption in estimation of order of nonlinear optical process by fluorescence intensity, *J. Optics & Laser Tech.* 43, 1486 (2011)
102. Somnath Roy, Theory, Instrumentation, and Applications of Magnetoelastic Resonance Sensors: A Review, *Sensors*, 11 (2011)
103. Sudakar Chandran, Quantum Confinement Effects and Bandgap Engineering of SnO₂ Nanocrystals in MgO Matrix, *Acta Materialia* (2011)
104. *Sudakar Chandran*, Nanostructured high specific capacity C-LiFePO₄ cathode material for lithium-ion batteries, *Journal of Materials Research* (2011)
105. *Sudakar Chandran*, Discrepancy between different estimates of the hydrodynamic diameter of polymer coated iron oxide nanoparticles in solution, *Journal of Nanoparticle Research* (2011)
106. Sudakar Chandran, Magnetic Behavior of Gallium Doped Zn_{0.95}Co_{0.05}O Nanoparticles, *Nanoscience and Nanotechnology Letters* (2011)
107. Sudakar Chandran, Direct synthesis of partially ordered tetragonally structured FePt nanoparticles by polyol method for biomedical application, *International Journal of Nano Dimension* (2011)
108. N. Harish Kumar, Magnetic and transport properties of transparent SrSn_{0.9}Sb_{0.05}Fe_{0.05}O₃ semiconductor films, *J. Appl. Phys.* 109, 07C320 (2011)
109. N. Harish Kumar, Room temperature ferromagnetism in HfO₂ films, *J. Appl. Phys.* 109, 07C318 (2011)
110. Arul Lakshminarayan, Kolmogorov-Sinai entropy of many-body Hamiltonian systems, *Phys. Rev. E.* 84, 016218 (2011)
111. Arul Lakshminarayan, Entanglement optimizing mixtures of two-qubit states, *J. Phys. A.* 44, 345301 (2011)
112. Arul Lakshminarayan, Entanglement transitions in random definite particle states, *Phys. Rev. A.* 84, 032306 (2011)
113. Arul Lakshminarayan, Localised zero-energy modes in the Kitaev model with vacancy-disorder, *Phys. Rev. B* 85, 054204 (2012)
114. B. R. K. Nanda, Electronic phases and phase separation in the Hubbard-Holstein model of a polar interface, *Phys. Rev. B*, 83, 195114 (2011)
115. M. Gopalakrishnan, A first passage time theory of search and capture of chromosomes by microtubules in mitosis, *Bulletin of Mathematical Biology*, 73, 2483 (2011)
116. K. Hariharan, A dielectric relaxation study of nanocomposite polymer electrolytes, *Solid State Ionics* (2012) (In Press)
117. K. Hariharan, Mechanical milling: An alternative approach for enhancing the conductivity of SnF₂, *Materials Letters* (2012) (In Press)
118. K. Hariharan, Thermoanalytical, structural and ionic conductivity studies on 50Li₂O–45P₂O₅–5Nb₂O₅ glass, *Solid State Ionics* (2012) (In Press)
119. K. Hariharan, Lithium rich phosphate glass: Crystallization kinetics, structural and conduction characteristics, *Journal of Non-Crystalline Solids* 358, 252 (2012)
120. K. Hariharan, Influence of synthesis methodology on the ionic transport properties of BaSnF₄, *Materials Research Bulletin* 46 732 (2011)
121. K. Hariharan, Physicochemical properties of Na_xCoO₂ as a cathode for solid state sodium battery, *Solid State Ionics* 192, 360 (2011)

122. K. Hariharan, Devitrification kinetics of bulk and pulverized sodium metaphosphate glassy phase, *Solid State Ionics* 192, 672 (2011)
123. S. Govindrajan, BKM Lie superalgebras from counting twisted CHL dyons, *J. High Energy Physics*, 2011, 89 (2011)
124. S. Govindrajan, On the asymptotics of higher dimensional partitions, *J. Phys. A: Math. Theory* 45, 055001 (2012)
125. T. S. Natrajan, Optical, Bactericidal and water repellent properties of electrospun nano-composite membranes of cellulose acetate and ZnO, *Carbohydrate Polymer*, 87, 1065 (2011)
126. T. S. Natrajan, Development and Characterization of Electrospun Poly(propylene carbonate) Ultrathin Fibers as Tissue Engineering Scaffolds, *Advanced Engg. Materials*, 13, B1 (2011)
127. T. S. Natrajan, Non-universal behavior well above the percolation threshold and thermal properties of core-shell-magnetite-polymer fibers, *J. Appl. Phys.* 110, 113718 (2011)

c) In Proceedings of National Conferences:

1. S. Radhu, C. Vijayan, Suchand Sandeep, Reji Philip "Tunable Optical Limiting Action due to Non-linear Absorption in ZnO/Ag Nanocomposites" 55th DAE Solid State Physics Symposium Jan 2011
2. Brindha, Manas R. Parida, C.Vijayan "Fluorescence emission from a novel dendrimer-stabilized Ag:PbS nanocomposite" NANOS-2010, Gitam University, Vishakhapatam, Dec 17-19, 2010
3. Manas Ranjan Parida, C.Vijayan 'Optical Nonlinearity in V2O5 nanobelts synthesised by a hydrothermal method' NCTMR-2012, Rajasthan University, Jaipur, March 17-19, 2012.
4. V. Srinivas, Enhancement in power factor values of Sn substituted Fe₂VAl Heusler alloys, 56th DAE SSP symposium
5. V. Srinivas, Evolution ostructure and magnetic properties of encapsulated Ni from nanocrystalline Ni-B, 56th DAE SSP symposium
6. V. Srinivas, Electronic properties of Fe₂Cr_{1-x}V_xAl Heusler alloys, 56th DAE SSP symposium; SRM University
7. M. P. Kothiyal, Plenary talk: Interferometry with broadband light, XXXVI OSI Symposium on frontiers in Optics and Photonics, .IIT Delhi,
8. C. K. R. Namboodiri, P. B. Bisht and B. S. Reddy, B. Chandra., Mukkamala R., and I. S. Aidhen, Non Linear Optical Susceptibility and Excited state Dipole moment of a new Octupolar Molecule, Proc. National Laser Symposium, (NLS-20), Anna Univ. , Chennai, Jan. 9-12, 2012, A-03-020, p. 98. International
9. Sudakar Chandran, Morphology Control and Magnetic Properties of Transition Metal Doped ZnO Nanoparticles, IIT Madras, January 9, 2011
10. K. Hariharan, Fragility Index of Lithium Phosphate Binary Glasses, Proceedings of DAE Solid State Physics Symposium, AIP Conf. Proc. 1447 (In press)
11. K. Hariharan, Ionic Conductivity And Structural Relaxation Studies On Lithium Niobophosphate Glass, Proceedings of DAE Solid State Physics Symposium, AIP Conf. Proc. 1349, 533 (2011); doi: 10.1063/1.3605968
12. R. Ganesan, Adaptive Optics in Imaging and Vision Science", presented at the OSI conference on Frontiers in Optics and Photonics (FOP11), held at IIT Delhi, New Delhi, India, Dec 3-5, 2011

d) In Proceedings of International Conferences:

1. J. Jose, G. B. Pradhan, G. Aravind, P. C. Deshmukh, V. Radojević and S. T. Manson Effects of core correlation on the photodetachment of Cu-The 42nd Annual Meeting of the Division of Atomic, Molecular and Optical Physics (DAMOP 2011) of the American Physical Society, Atlanta, Georgia, 13-17 June 2011.
2. G. Pradhan, J. Jose, P. C. Deshmukh, S. T. Manson, L. A. LaJohn and R. H. Pratt Dramatic quadrupole effects in the low-energy photoionization of the 3s subshell of atomic Mg The 42nd Annual Meeting of the Division of

Atomic, Molecular and Optical Physics (DAMOP 2011) of the American Physical Society, Atlanta, Georgia, 13-17 June 2011.

3. L.A. Lajohn , R.H. Pratt , G. Pradhan , T. Banerjee , H. Varma , P.C. Deshmukh and S.T. Manson Location of low-energy zeroes in bound-free quadrupole matrix elements and their systematics in comparison to quantum defects and phase shifts The 42nd Annual Meeting of the Division of Atomic, Molecular and Optical Physics (DAMOP 2011) of the American Physical Society, Atlanta, Georgia, 13-17 June 2011.
4. J. Jose, G. B. Pradhan, V. Radojević, S. T. Manson, and P.C. Deshmukh Dipole and quadrupole photodetachment/photoionization studies of the Ar isoelectronic sequence XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC 2011) Belfast, Northern Ireland, UK, 27 July - 2 August 2011.
5. T Banerjee, Hari R Varma, P C Deshmukh, S T Manson Dipole and Quadrupole Photoionization of Intermediate Subshells of Atomic Mercury XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC 2011) Belfast, Northern Ireland, UK, 27 July - 2 August 2011.
6. J. George, Hari R.Varma, P. C. Deshmukh, S. T. Manson Effect of Interchannel Coupling and Confinement on the Photoionization of KrXXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC 2011) Belfast, Northern Ireland, UK, 27 July - 2 August 2011.
7. J.George, G.B.Pradhan, J.Jose, P.C.Deshmukh Autoionization resonances in the argon isoelectronic sequence XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC 2011) Belfast, Northern Ireland, UK, 27 July - 2 August 2011.
8. Radhu, S., Vijayan, C. , Sandeep, S., Philip, R. 'Tunable optical limiting action due to non-linear absorption in ZnO/Ag nanocomposites' AIP Conference Proceedings 1349 (A) pp 425-426 (2011)
9. Manas Ranjan Parida, C.Vijayan, P.C.Deshmukh "Nonlinear optical properties of PAMAM dendrimer based metal nanoclusters" SPIE-2010, San Diego, USA, Aug1-5, 2010
10. James Libby, Quantum correlated measurements related to the determination of γ / ϕ_3 , International Journal of Modern Physics: Conference Series, 2 127 (2011).
11. Basanth S. Kalanoor, Prem B. Bisht, Femtosecond pulse measurement using the technique of spatial splitting of laser beam, Proc. of Int. Conf. on Futuristic Science& Technology in Frontier areas , Aug. 5-6, 2011, Thiruvananthapuram, India, p. 101.
12. C. K. R. Nambodiri, V. R. Dantham, and P. B. Bisht, Enhancement of raman peaks by three dimensional confinement of light using single microspheres, Proc. of Int. Conf. on Futuristic Science& Technology in Frontier areas , Aug. 5-6, 2011, Thiruvananthapuram, India, p. 101.
13. S. Akbar Ali and P. B. Bisht, Characterisation of high repetition rate femtosecond pulses by sum frequency spectral phase interferometry, Proc. Int. Conf. Laser, Mat Sci. & Comm... University of Burdman, Dec. 7-9, 2011.
14. Sudakar Chandran, Magnetic Properties of Transition metal doped semiconducting oxides: Role of defects, surface and interface, interface disorders and clusters, ICAM-2011

Distinguished Visitors to the Department:

Sl.No.	Name of the visitor and Designation	Date of visit	Purpose of visit
1.	Prof. V. N. Mahajan	03/03/11	Lecture
2.	Prof. J. Narlikar	03/02/12	Extra Mural Lecture
3	Prof. Ratna Naik, Wayne State University	10-13 August 2011	Visiting the group and deliver a seminar
4	Prof. Vaman Naik, Univ. of Michigan-Dearborn	10-13 August 2011	Visiting the group and deliver a seminar
5	Bernard Piette, Scientific Officer, Durham University, UK	15-19 August 2011	Academic collaboration
6	Dr. Akin Wingerter, LPSC, Grenoble, France	12/08/11	Invited lecture
7	Dr. K. G. Arun, Chennai Math. Instiute	25/08/11	Invited Lecture
8	Prof. Deepak Dhar, TIFR Mumbai	02/05/11	Invited lecture
9	Dr. Dileep Jatkar, HRI, Allahabad	09/05/11	Invited lecture
10	Dr. V. S. Pandit	27/05/11	Cyclotron project
11	Dr. Xavier G. Viennot, CNRS, France	02/03/12	Invited seminar
12	Dr. V. N. Mahajan, Aerospace Corpn. USA	06/03/12	Invited seminar
13	Dr. A. K. Sood, IISc Bangalore	06/03/12	Invited seminar
14	Dr. Vidya Madhavan, Boston College, USA	16/03/12	Invited seminar

15	Dr. Michael A Lomholt, University of Southern Denmark	19/03/12	Invited seminar
16	Dr. Partha Guha, SN Bose center for basic sciences, Kolkata	02/02/12	Invited seminar
17	Dr. Jerome Martin, Institute d' Astrophysique de Paris, France	03/02/12	Invited seminar
18	Dr. S. Adams, NUS, Singapore	05/01/12	Invited seminar
19	Dr. Sanjib Agarwallah, CSIC, Spain	06/01/12	Invited seminar
20	Dr. Sridhara Rao Dasu, Wisconsin Madison, USA	09/12/11	Invited seminar
21	Dr. Suresh Doravari, LIGO Lab, USA	12/12/11	Invited seminar
22	Dr. Takashi Nakajima, Koyoto Univ. Japan	28/11/11	Invited seminar
23	Dr. Eric Laenen, Head, NIKHEF, Univ of Amsterdam	25/10/11	Invited seminar
24	Dr. Ozgur Karci, Nano Magnetics Instruments, Belgium	20/07/11	Invited lecture
25	Dr. Vasudeva Rao	05/01/11	Invited lecture
26	Dr. V. Balakrishnan, Harvard Univ.	15/09/11	Invited seminar
27	Mr. Mark Bernard Denys, Chief of R&D and Scientific Services, TATA Steel	22/09/11	Invited seminar

4.16.6 Other Activities of the Department/Centre:

- James F Libby, CLEO collaboration based at Cornell University, USA and the Belle/Belle-II collaborations based at KEK, Japan.

a. Results obtained in research work (from M.S. & Ph.D thesis) of the scholar/faculty (last year sample enclosed from Director's Speech)

a) Ph. D. Thesis 1 (by Manas Ranjan Parida)

- Nanoflowers of vanadium oxide are shown to exhibit large nonlinear absorption as well as magnetism. The temperature of synthesis and the pressure in the system is found to play crucial roles in determining the size and shape of oxide nanostructures
- Dendrimers are shown to be ideal hosts for stabilizing strongly confined metallic and semiconductor quantum dots
- Large nonlinear optical absorption leading to optical limiting in AgVO₃ is observed and the mechanisms are identified to be two photon absorption and saturation absorption.
- Large enhancement is found to occur in saturation intensity in AgVO₃ nanobelts decorated with Ag nanoparticles due to surface plasmon effect.

b) Ph. D. Thesis 2 (by Jyotsana Gupta)

- Functionalized carbon nanotubes (f-CNTs) with a commercial fluorescent ink incorporated into them are shown to exhibit the optical properties of the ink molecules, apart from rendering them water soluble.
- f-CNTs with porphyrins are shown to exhibit rich nonlinear optical behavior.
- Efficient, low threshold, ultrafast optical limiting is exhibited by f-CNTs.
- Porphyrin nanotubes are synthesized and demonstrated to be interesting nanosystems with potential for fundamental studies as well as applications.

b. Inter disciplinary group achievements of the Departments.

Collaborative work between Prof. Bisht and Prof. Indrapal Singh, Chemistry Department has resulted in 1 patent and 2 publications in the past 2 years.

Activities initiated

6.1 Major infrastructure development made in the Department



Fig. 1 (New) Facility for the development of Li ion battery coin cells



Fig. 2 (New) Facility for evaluating frictional characteristics of nanolubricants

5.1 SOPHISTICATED ANALYTICAL INSTRUMENT FACILITY

5.1.1 Introduction:

Sophisticated Analytical Instrument Facility (SAIF) established with financial support from the Department of Science and Technology provides sophisticated instrument and equipment facilities to Scientists / Faculties of Educational Institutions, National Laboratories, Industries and IIT Madras.

SAIF also undertakes on specific request, servicing of sophisticated instruments at other institution and also provide training for operation and maintenance.

Periodically SAIF conducts workshops, seminars and conferences to expose new trends in sophisticated instrumentation and methods. College students and school children visit us often for their education in and exposure to sophisticated instruments for analysis.

5.1.2 Faculty and their activities:

Faculty:

Name and Qualification

Major area of specialization (only 3 areas)

Professor: Dr. G.K.Suraishkumar (HEAD)

Scientific Officers :

Dr.M.S.Moni

Dr.Babu Varghese

Dr.R.Murugesan

NMR Spectroscopy

X-ray crystallography

Mass Spectroscopy

Short-term Courses/Workshops/Seminars/Symposia/Conferences organised by the faculty members:

Sl.No	Co-ordinators	Title	Perd & Venue
Workshop:			
1.	Dr. M.S. Moni and Dr. (Mrs.) C.Baby	Nuclear Magnetic Resonance (NMR) Spectroscopy	08.03.2012 to 10.03.2012 SAIF, I.I.T., Madras
2.	Mr. N. Sivaramakrishnan	One day workshop on FDAX/WDS	29.02.2012 SAIF, I.I.T., Madras
3.	Mr. N. Sivaramakrishnan	Workshop on VSM	15.09.2011 and 16.09.2011 SAIF, I.I.T., Madras

Short-term courses Workshops/Seminars/Symposia/Conference /Training attended by the faculty members in Academic institutions and Public Sector undertakings:

S.No	Name of faculty	Title	Period	Venue
Workshop:				
1.	Dr. Babu Varghese	National workshop on single crystal x-ray diffractometry	20.12.2011 & 21.12.2011	SAIF-STIC, Cochin University
2.	Dr. Babu Varghese	DST Sponsored national symposium on 'Emerging concepts and trends in Bio-Inorganic Chemistry	24.02.2011 & 25.02.2011	National College, Kovilpatti, Tamil Nadu
3.	Dr. Babu Varghese	Invited lecture (45 minutes) in national conference on Condensed Matter and Materials Physics(CMMP- 3)	03.03.2012 to 06.03.2012	Sardar Patel University, Vallabh Nagar, Gujarat.

Special Lectures delivered by the faculty in other Institutions:

S.No	Name of faculty	Topic of Lecture	Institution	Date
1.	Dr. Babu Varghese	National workshop on single crystal x-ray diffractometry	SAIF-STIC, Cochin University	20.12.2011 & 21.12.2011
2.	Dr. Babu Varghese	DST sponsored national symposium on 'Emerging concepts and trends in Bio-Inorganic Chemistry	National College, Kovilpatti, Tamil Nadu	24.02.2011 and 25.02.2011
3.	Dr. Babu Varghese	Imaging of molecules using x-ray diffraction' for the UGC sponsored national seminar on 'new optical materials	Sacred Hearts college, Chalakudi, Kerala	05.03.2011
4.	Dr. Babu Varghese	Invited lectures in national work shop on crystallography	SAIF-STIC, Cochin university, Cochin, Kerala	17.11.2011 to 19.11.2011
5.	Dr. Babu Varghese	National conference on Condensed Matter and Materials Physics(CMMP-3)	Sardar Patel University, Vallabh Nagar, Gujarat.	03.03.2012 to 06.03.2012
6.	Dr. Babu Varghese	2 UGC sponsored lectures (1 hour each) at department of Physics	Sardar Patel University, Vallabh Nagar, Gujarat	07.03.2012
7.	Dr. (Mrs.) C. Baby	Thermal Analysis Techniques	C Tech Environmental Laboratory, Chennai	15.03.2012
8.	Dr. (Mrs.) C. Baby	2D NMR Spectroscopy: Spectral Assignment and Applications	SAIF – IIT, Madras	10.03.2012
9.	Dr. (Mrs.) K.V. Rama	ICP-OES	C-Tech Laboratories, Chennai, INDIA	06.03.2012

Industrial Consultancy projects: (on going & new)

S.No.	Name of faculty	Title	Industry	Amount (Rs. In lakhs)
1.	Dr. R. Murugesan	IC1112SA1005AAAAMURU	Thirumalai Chemicals Ltd. Ranipet	Rs.64,734
2.	Dr. R. Murugesan	IC1112SA1006FENNMURU	Sundaram Fasteners Ltd. Chennai	Rs.27,575
3.	Dr. R. Murugesan	IC1112SA1003CMFRMURU	G.M.Pens Ltd. Chennai	Rs.25,000
4.	Dr. R. Murugesan	IC1112SA1004CHEDMURU	Cavincare Research Center, Chennai	Rs.10,000
5.	Dr. R. Murugesan	IC1112SA1001TPLXMURU	Thirumalai Chemicals Ltd. Ranipet	Rs.25,000
6.	Mr. N. Sivaramakrishnan	Analysis of Fuel components cell using HRSEM/EDAX	Renault – NISSAC	Rs.2,50,000
7.	Mr. N. Sivaramakrishnan	SEM Analysis on polymer membrane	Membrane HITEC	Rs.12,500

5.1.3 Research and Consultancy:

Research Publications:

No. of papers published in Refereed International Journals ... 12

In Refereed International Journals:

S. No	Name of Faculty	Title of the paper	Name of the Journal
1.	M. Muthu Tamizh, R. Karvembu, B. Varghese and Edward R. T. Tiekink	{4-Bromo-2[2- sulfidophenyl] iminomethyl] phenolato- η^3 S,N,O} (triphenylphosphane)nickel(II)	Acta Cryst. (2011). E67, m441
2.	Babu, G. Anandha; Chandramohan, A.; Ramasamy, P.; Bhagavannarayana, G.; Varghese, Babu	Synthesis, structure, growth and physical properties of a novel organic NLO crystal: 1,3-Dimethylurea dimethylammonium picrate.	Materials Research Bulletin (2011), 46(3), 464-468.
3.	Periakaruppan T. Manoharan, Balaji Sambandam, Ramamoorthy Amsarani, Babu Varghese, Chinnakonda S. Gopinath, Kiyoshi Nomura	Ligand dynamics controlled reverse spin cross over in bis pyrazolyl pyridine based Fe(II) complex cation with metallothiolato anions with an example of a ferromagnetic 2:1 cocrystal of mixed Ni(III)/Ni(II) oxidation states.	Inorganica Chimica Acta, Volume 374, Issue 1, 1 August 2011, Pages 586-600
4.	G. Anandha Babu, A. Chandramohan, P. Ramasamy, G. Bhagavannarayana, Babu Varghese	Synthesis, structure, growth and physical properties of a novel organic NLO crystal: 1,3-Dimethylurea dimethylammonium picrate	Materials Research Bulletin, Volume 46, Issue 3, March 2011, Pages 464-468
5.	Mathiselvem, M., Babu Varghese, Loganathan	D. Synthesis and X-ray crystallographic investigation of <i>N</i> -3-deoxy-3-acetamido- β -D-glucopyranosyl) alkanamides as analogs of <i>N</i> -glycoprotein linkage region.	Glycoconjugate J, 28, 573–580 (2011).
6.	Shubhankar Kumar Bose, K. Geetharani, Satyanarayan Sahoo, K Hari Krishna Reddy, Babu Varghese, Eluvathingal D Jemmis, Sundargopal Ghosh	Synthesis, Characterization, and Electronic Structure of New Type of Heterometallic Boride Clusters.	. Inorg Chem (2011) PMID 21875060
7.	Geetharani K, Bose SK, Sahoo S, Varghese B, Mobin SM, Ghosh S	Cluster expansion reactions of group 6 and 8 metallaboranes using transition metal carbonyl compounds of groups 7-9.	Inorg Chem 50(12):5824-32 (2011)
8.	Shubhankar Kumar Bose, K Geetharani, Babu Varghese and Sundargopal Ghosh	Condensed Tantalaborane Clusters: Synthesis and Structures of [(Cp*Ta) 2 B 5 H 7 {Fe(CO) 3 } 2] and [(Cp*Ta) 2 B 5 H 9 {Fe(CO) 3 } 4].	Inorg Chem 50(6):2445-2449 (2011)

9.	Sellamuthu Anbu, Muthusamy Kandaswamy, Babu Varghese	Phosphatase-like activity, DNA binding, DNA hydrolysis, anticancer and lactate dehydrogenase inhibition activity promoting by a new bis-phenanthroline dicopper(II) complex .	Dalton(2011)
10.	Srivastava, A., Babu Varghese, Loganathan, D.	X-Ray Crystallographic investigation of fully acetylated <i>N</i> -(2-deoxy-2-acetamido-β-D-glucopyranosyl)alkanamides as <i>N</i> -glycoprotein linkage region analogs	J. Carb Chem, 31 (1), 31-47 (2012).
11.	Subramaniam Sujatha, Sengottuvelan Balasubramanian, Babu Varghese, Mani Jayaprakashvel, Narayanasamy Mathivanan	Synthesis, Characterization and DNA interaction of Hexaaza macrotricyclic copper(II) complexes	Inorganica Chimica Acta, Available online 18 February 2012
12.	Karthikeyan, K. Velavan, Ranganathan Sathishkumar, Babu Varghese, and Bala. Manimaran	Self-Assembly of Manganese(I)-Based Molecular Squares: Synthesis and Spectroscopic and Structural Characterization.	Organometallics 2012, 31, 1953–1957

6.1 CENTRE FOR CONTINUING EDUCATION

6.1.1 Introduction

The Centre for Continuing Education (CCE) at IIT Madras was established in June 1986. The Centre facilitates faculty members towards meeting the following Mission of IIT Madras:

- To provide knowledge-based technological services to satisfy the needs of the society and the industry.
- To help in building national capabilities in science, technology, humanities, management, education and research.

The faculty effectively participates and contributes to the Institute's commitment of providing a broad base of learning opportunities through the following major activities:

- Academic Programmes (M.Tech & PhD) under the Quality Improvement Programme (AICTE Sponsored).
- Short Term Training Programme under QIP (AICTE- sponsored STTP).
- Curriculum Development Activities under CDC.
- Book Writing Scheme under CDC.
- Continuing Education Programmes (CEP) for Industry.
- User Oriented Programme (UOP).
- National Programme on Technology Enhanced Learning (NPTEL).
- Web Studio.
- Educational Technology Cell (ETC).
- Activities related to MBA budget.
- Conference Registration.
- ISBN number allotment.

6.1.2 Quality Improvement Programme (QIP)

The faculty development activities of AICTE funded by Ministry of Human Resources Development are geared to ensure quality, relevance, excellence and equity in Technical education by supporting activities under the QIP Scheme. Deputation to the academic programmes of the Institute viz., M.Tech & Ph.D facilitates career development of the faculty of AICTE approved technical institutions in the country.

Since inception, 464 faculty members from other institutions have obtained Ph.D degrees and 559 faculty members have obtained M.Tech degrees under this programme till 2009-10. The following table provides the data of the Engineering College Teachers benefited under QIP:

Items	Ph.D			M.Tech		
	Admitted	On roll	Awarded	Admitted	On roll	Awarded
2010-11	13	98	27	13	13	8
Since Inception	604	-	491	619	-	567

6.1.3 Short Term Training Programmes under QIP (AICTE-STTP)

Organisation of short-term courses under QIP for faculty in engineering institutions is supported by AICTE and it opens up avenues for sharing expertise of our faculty with rich experience in new and upcoming areas. Under this programme, 14 courses for a total duration of 14 weeks were conducted during 2010-11 and 411 teachers of Engineering Institutions as well as a few professionals from industries / R & D organizations have participated in these programmes. From 1970-71 to 2010-11, 288 programs have been held and 7061 teachers from various engineering colleges participated and benefited from these courses.

Programmes held during 2010-11 under AICTE-STTP

Sl.No.	Coordinator(s)	Title	Participants	Department	Date
1	Dr. T. Asokan Dr. M. Sreekumar, IIITDM	Robotics and Robot Applications	36	Engineering Design	21/06/2010 to 26/06/2010
2	Dr. Arun K. Tangirala	Time-Series Modelling & Spectral Analysis – Theory and Applications	37	Chemical Engineering	12/07/2010 to 17/07/2010
3	Dr. S.M. Shiva Nagendra Dr. S. Mohan	Environmental Impact Assessment: Guidelines & Procedures	35	Civil Engineering	19/07/2010 to 24/07/2010
4	Dr. S. Ramaprabhu	Energy, Environmental, and Biomedical Applications of Nanomaterials	24	Physics	20/09/2010 to 25/10/2010
5	Dr. Pramod S. Mehta Dr. Preeti Aghalayam Dr. Niket S. Kaisare	A short course on Automotive Emissions Control	23	Mechanical/ Chemical	04/10/2010 to 09/10/2010
6	Dr. Anil Prabhakar Dr. Bijoy K. Das, Dr. Deepa Venkitesh	Quantum Electronics and Lasers	17	Electrical Engineering	22/11/2010 to 26/11/2010
7	Dr. A. Arockiarajan Dr. M.S. Sivakumar	Introduction to Smart Materials and Structures	26	Applied Mechanics	4/01/2011 to 08/01/2011
8	Dr. K. Rajagopal Dr. V.B. Maji	Numerical Methods for Optimal Geotechnical Designs	28	Civil Engineering	17/01/2011 to 22/01/2011
9	Dr. R. Ravi Krishna Dr. Indumathi Nambi	Environmental Chemodynamics	23	Chemical/ Civil	17/01/2011 to 22/01/2011
10	Dr. Somashekhar S. Hiremath Dr. M. Singaperumal	Micromachining-Breakthrough Technology	30	Mechanical Engineering	31/01/2010 to 05/02/2011
11	Dr. T. Thyagaraj Dr. R.G. Robinson	Geotechnical Site Investigation	30	Civil Engineering	31/01/2011 to 05/02/2011
12	Dr. Balaji Narasimhan Dr. K.P. Sudheer	GIS and Remote Sensing Techniques for Water Resources Assessment	30	Civil Engineering	31/01/2011 to 05/02/2011
13	Dr. B.S.V. Prasad Patnaik	Introduction to Turbulent Flows and their Prediction	36	Applied Mechanics	19/03/2011 to 23/03/2011
14	Dr.P.V.Manivannan & Prof. M. Singaperumal	Mobile Robots and Sensor Network	36	Mechanical Engineering	28/3/2011 to 01/04/2011
		Total	411		

6.1.4 Curriculum Development Cell Activities (CDC)

To explore interesting avenues for innovation in design and delivery of courses, activities such as Course Structuring, Preparation of Instructional and Resource materials such as Monograph, Laboratory Manual, Problem Book etc., as well as development of Computer aided Instruction Packages; support is available under the CD Cell funded by AICTE. Curriculum Development Cell (CD Cell) caters to the needs of all Departments in the Institute. The materials developed under this activity can be made available for use by the various engineering institutes in the country. During the year under review the following programmes were conducted and about 71 faculty participants have benefited:

Sl.No.	Coordinator(s)	Title	Participants	Department	Date
1	Prof.Promod S Mehta	Faculty Development Program 2010	36	Mechanical Engineering	08/12/2010 to 10/12/2010
2	Prof.M.V.Satyanarayana	Workshop on Physics Education and Research	35	Physics	20/12/2010 to 25/12/2010
3.	Prof.K.Mangalasunder	Online and Video Supplemented Laboratory Instructions in Chemistry	For the IGNOU Students	Chemistry	Work is under progress

6.1.5 Book Writing Scheme (BWS)

The Book Writing Scheme is designed to encourage textbook writing by teachers. Fifty One books have so far been published by our faculty, under this scheme. During the year under review the following work is under progress:

S.NO.	Name of the Author	Department	Title of the Book
1.	Dr.Aysha	Humanities	City in Post-Liberalisation Cinema from India
2.	Prof.V.Jayashankar	Electrical Engineering	Book on Wave Energy

6.1.6 Golden Jubilee Book Writing Scheme (GJBWS)

A part of Golden Jubilee Celebrations, Golden Jubilee Book Writing Scheme is introduced. Under Golden Jubilee Scheme, 23 text books, including one e-book have been published. The following is the list of Books released under Golden Jubilee Book Writing Scheme:

S.NO.	Name of the Author	Department	Title of the Book
1	Dr. M.S. Sivakumar, Dr. Arun R. Srinivasa, Texas A&M	Applied Mechanics	Inelasticity of Materials: An Engineering Approach and a Practical Guide
2	Dr. K. Ramesh	Applied Mechanics	Experimental Stress Analysis (e-book)
3	Dr. Devdas Menon	Civil Engineering	Advanced Structural Analysis
4	Dr. Kamala Krithivasan Dr. R. Rama	Computer Science and Engineering	Introduction to Formal Languages, Automata Theory and Computation
5	Dr. Anjan Chakravorty Dr. Michael Schroter, University of Dresden, Germany	Electrical Engineering	Compact Hierarchical Bipolar Transistor Modelling with HICUM
6	Dr. Shreesh Chaudhary	Humanities and Social Sciences	Foreigners and Foreign Languages in India - A Sociolinguistic History
7	Dr. Aysha Iqbal Viswamohan	Humanities and Social Sciences	English for Nurses
8	Dr. S. Ponnusamy	Mathematics	Foundations of Mathematical Analysis
9	Dr. Arindama Singh	Mathematics	Elements of Computation Theory
10	Dr. Ch. Srinivasa Rao, Dr. P.L. Sachdev, IISc (Retd)	Mathematics	Large Time Asymptotic for Solutions of Nonlinear Partial Differential Equations
11	Dr. M. Thamban Nair	Mathematics	Linear Operator Equations: Approximation and Regularization
12	Dr. T.E. Venkata Balaji	Mathematics	An Introduction to Families, Deformations and Moduli
13	Dr. V. Ganesan Dr. A.F. Mills, UCLA, USA	Mechanical Engineering	Heat Transfer (Second Edition)

14	Dr. C. Sujatha	Mechanical Engineering	Vibration and Acoustic Measurements and Signal Analysis
15	Dr. V. Balakrishnan	Physics	Elements of Nonequilibrium Statistical Mechanics
16	Dr. Anil Prabhakar Dr. D.D. Stancil, CMU, USA	Electrical Engineering	Spin Waves -Theory and Applications
17	Dr. Mani Subramanian	Electrical Engineering	Network Management: Principles and Practices (Second Edition)
18	Dr. S. Devaki Reddy Dr. Shreesh Choudhary	Humanities and Social Sciences	Technical English
19	Dr. G. Venkatarathnam	Mechanical Engineering	Cryogenic Mixed Refrigerant Processes
20	Dr. K. Ramamurthy	Mechanical Engineering	Rocket Propulsion
21	Dr. Shreesh Chaudhary	Humanities and Social Sciences	English for the World: IELTS Writing and Speaking Modules
22	Dr. Srinivasan Chandrasekaran	Ocean Engineering	Seismic Design Aids for Nonlinear Analysis of Reinforced Concrete Structures
23	Dr. S.P. Venkateshan	Mechanical Engineering	Heat Transfer

6.1.7 Continuing Education Programme (CEP)

Several Short Term Courses were organized under Continuing Education Programme for the professionals from industry and R & D establishments on need-basis. The programmes were organized as tailor-made to suit the requirements of the Industries. From the date of inception, i.e., between 1980 and 2011, 1048 STCs have been conducted benefiting 24,023 participants. Approximately 60 to 65 such programmes are organized every year. During 2010-11, 69 Short Term Courses have been conducted and 2381 participants attended these programmes. The following Short Term Courses were conducted under Continuing Education Programme during the Year 2010 – 11:

Sl. No.	Department	Coordinator	Title	Duration	No. of participants
1.	Bio-technology	Dr.Sathyanarayana Prof.Mukesh Doble Prof.N Gummadi	Summer Workshop on Bioprocess Technology	12-07-10 - 21-07-10	30
2.	Bio-Technology	Dr.Rama Dr.S.Verma	Environmental Management System is Pharma and Chemical Sector	22-03-11 - 24-03-11	25
3.	Central Library	Dr.Harish Chandra Mr.M.Jadav Mr.C.R.Sekhar	Indest – AICTE consortium	18-02-11- 20-02-11	0
4.	Chemical Engineering	Prof.Shankar Narasimhan	Data Reconciliation and Gross Error Detection	26-10-10	15
5.	Chemistry	Prof. T. Pradeep	STAT Program on Nanomaterials for faculties Sponsored by the state of kerala	30-08-10 -03-09-10	32
6.	Chemistry	Prof.K. Mangala Sunder	Online And Video Supplimented Laboratory Courses.	6 Months From 01-11-10	0
7.	Chemistry	Prof.K. Mangala Sunder	STAT, KERALA 2011	10-01-11 -14-01-11	30
8.	Civil Engineering	Dr.R.G. Robinson Dr.T.Thyagaraj	Ground Investigation and Interference	23-06-10 -25-06-10	30
9.	Civil Engineering	Dr.S.M. Shiva Nagendra Prof.S.Mohan	Environmental Impact Assessment Guidelines & Procedures	19-07-10 -24-07-10	10
10.	Civil Engineering	Dr.R.G. Robinson Dr.T.Thyagaraj	Training Programme On Laboratory Soil Testing	19-07-10 -23-07-10	15
11.	Civil Engineering	Prof.S.R. Gandhi	Training Programme for Adani Port Engineers	28-08-10	30

12.	Civil Engineering	Prof.R.Sivanandan	Short Programme in Ghana at the Kaware NKRUMAH University of Science & Technology	27-09-10 -01-10-10	0
13.	Civil Engineering	Dr.Koshy Varghese	Training programme on "Management of construction for Enhanced operation	23-09-10 -25-09-10	25
14.	Civil Engineering	Dr.Koshy Varghese Dr.Lakshmana Rao	Fireday Training Program on Open Source "Gram Panchayat QGIS"	03-10-10 -07-10-10	19
15.	Civil Engineering	Dr.R.G. Robinson Dr.T.Thyagaraj	Soil Investigation and Design of Foundation for Building	20-10-10 -22-10-10	25
16.	Civil Engineering	Prof.A.Boominathan Prof.P.Alagusundaramoorthy	Written test for Recruitment for the post of AEE for TT Devasthanams	24-10-10 -26-10-10	15
17.	Civil Engineering	Prof.C.V.R Murty	Writing of Three Technical Books on Earthquake	Oct'10 - April'11	10
18.	Civil Engineering	Dr.G.Appa Rao	Fracture Mechanics of Concrete Research and Application	02-05-11- 07-05-11	36
19.	Civil Engineering	Prof.K.N.Satyanarayana Dr.Koshy Varghese Dr.Ashwin Mahalingam	Executive Program on Effective Project Management for Senior Executives	28-01-11- 30-01-11	25
20.	Civil Engineering	Dr.Balaji Narasimhan Dr.K.P.Sudheer	GIS & RS Technique for water Resource Assessment using open Source Tools.	21-01-11 -05-02-11	10
21.	Civil Engineering	Dr.R.G.Robinson Dr.Thyagaraj	Geotechnical Site Investigation	31-01-11 -05-02-11	20
22.	Civil Engineering	Prof.K.Rajagopal Prof.S.R.Gandhi Prof.A.Boominathan	Dynamics and Machine Foundations/ Ground Improvement Techniques	27-01-11 -29-01-11	20
23.	Civil Engineering	Prof.Ravindra Gettu Prof.K.N.Satyanarayana	Training Program On Construction Technology and Management for Shapooriji Pallonji Constructions Co.Ltd.	21-02-11 -26-02-11	34
24.	Computer Science and Engineering	Prof.Krishna Moorthy Sivalingam	Fundamental Concept of Data Structures, Algorithms and Software	15-11-10 - 15-05-11	20
25.	Computer Science and Engineering	Prof. A. Hema Moorthy	User Oriented ICT Design and Development	20-11-10 - 21-11-10	10
26.	Computer Science and Engineering	Prof.V.Kamakoti Dr.Shnakar Balachandran	Secure System Engineering	31-01-11 -01-02-11	40
27.	Dean (AC)	Prof.R.Dhamodaran Prof.S.Sundar Prof.Sankaranarayanan Prof.Kamakoti	Concept Enhancement Program for Hr.Secondary Teachers	08-12-10 - 29-01-11	122
28.	Electrical Engineering	Dr.Ashok Jhunjunwala	Digital Signal Processor and Applications	03-05-10 -15-05-10	60
29.	Electrical Engineering	Dr.Ashok Jhunjunwala	Digital Signal Processor and Applications	24-05-10 -05-06-10	60
30.	Electrical Engineering	Dr.Ashok Jhunjunwala	Digital Signal Processor and Applications	07-06-10 -19-06-10	60
31.	Electrical Engineering	Dr.Ashok Jhunjunwala	Digital Signal Processor and Applications	21-06-10 -03-07-10	60
32.	Electrical Engineering	Dr.Ashok Jhunjunwala	Digital Signal Processor and Applications	12-07-10 -24-07-10	60

33.	Electrical Engineering	Dr.Deepa Venkatesh Dr. Anil Prabhakar	Workshop on Optics	30-08-10 -04-09-10	12
34.	Electrical Engineering	Dr.Ashok Jhunjunwala	Digital Signal Processor and Applications	20-12-10 -04-01-11	46
35.	Electrical Engineering	Dr.Ashok Jhunjunwala	Digital Signal Processor and Applications	07-01-11 -21-01-11	65
36.	Electrical Engineering	Dr.Ashok Jhunjunwala	Digital Signal Processor	8 Days	20
37.	Electrical Engineering	Prof.Shanthi Pavan	Low Power Analog Mixed Signal Design	14-03-11- 18-03-11	20
38.	Engineering Design	Prof.Asokan T	Workshop on Industrial Hydraulics	06-05-10 -08-05-10	30
39.	Humanities and Social Sciences	Prof.S.C. Choudhary	Aeronautical English Language Training Testing	5 Weeks From 18-10-10-	432
40.	Management Studies	Prof.G.Srinivasan	Supply Chain Management	26-04-10 -28-04-10	30
41.	Management Studies	Prof.T.J.Kamalanabhan Prof.M.Thenmozhi	Supervisory Development Programme	26-04-10 -01-05-10	25
42.	Management Studies	Prof.L.S.Ganesh	First Source Leadership Programme	01-03-10 -05-03-10	30
43.	Management Studies	Prof.L.S.Ganesh	Knowledge Management	05-05-10 -07-05-10	30
44.	Management Studies	Prof.T.J.Kamalanabhan Prof.M.Thenmozhi	Executive Development program for exporters of leather products	20-09-10 -25-09-10	30
45.	Management Studies	Dr.L.Prakash Sai Dr.K.Chandrasekaran	Business Excellence Through Cool Computing	13-12-10 -15-12-10	60
46.	Management Studies	Prof.C.Rajendran Prof.T.J.Kamalanabhan Prof.M.Thenmozhi	Management Training for HMs of Chennai Schools	06-10-10 -08-10-10	100
47.	Management Studies	Prof.T.J.Kamalanabhan Prof.M.Thenmozhi	Supervisory Development Programme	28-02-11 -05-03-11	25
48.	Management Studies	Prof.T.J.Kamalanabhan Prof.M.Thenmozhi	Supervisory Development Programme	20-03-11 -26-03-11	25
49.	Management Studies	Prof.G.Srinivasan	Modern Manufacturing management Techniques	06-02-11 -07-02-11	30
50.	Mechanical Engineering	Prof.N.Sivaprasad	Mechanical Design	24-07-10 -31-03-11	30
51.	Mechanical Engineering	Dr.K.Srinivasa Reddy	International Workshop on Solar Power Generation Technologies	06-12-10 -08-12-10	20
52.	Mechanical Engineering	Dr.N. Ramesh Babu	Training Programme on Sheet Metal Product Manufacture	17-08-10 -19-08-10	6
53.	Mechanical Engineering	Dr.S.Vengadesan Prof.B.V.S.S.S. Prasad	Computational Fluid Dynamics	15-03-11 - 21-03-11	10
54.	Mechanical Engineering	Prof.N.SivaPrasad	Mechanical Design	26-02-11 -17-09-11	30
55.	Metallurgical & Materials Engineering	Prof.P.Venugopal	Lectures on Fine Blanking and on Extrusion	May'10 June'10	0
56.	Metallurgical & Materials Engineering	Prof.M.Kamaraj	QA/QC Refresher Programme for FL Smith Quality Control Engineers	23-07-10- 24-07-10	20
57.	Metallurgical & Materials Engineering	Dr.V.Subramanya Sarma Dr.B.S Murthy	DST & SERC School in Texture and Micro-Structure	25-10-10 -29-10-10	20
58.	Metallurgical & Materials Engineering	Prof.M.Kamaraj	QA/QC Refresher Program for FL Smith QC Engineer	25-03-11 -26-03-11	20
59.	Ocean Engineering	Dr.S.Nallayarasu	Subsea Engineering	23-07-10 -24-07-10	30

60.	Ocean Engineering	Prof.S.K. Bhattacharyya	Educational Assistance to naval architecture program	Aug'10 Nov'10	0
61.	Ocean Engineering	Prof.V.Ananthasubramanian Prof.P.Krishnakutty	Hydrodynamic Model Testing Training	Aug'10 Feb'11	86
62.	Ocean Engineering	Prof..S.K. Bhattacharyya Dr.S.Chandrasekaran	Academic Cooperation with Human Resource Development centre for Offshore & Plant Engineering	5 Years	15
63.	Ocean engineering	Dr.Srinivasan Chandrasekaran Dr.Nilanjana Saha	Short Term Course on Reliability of Offshore Structures	22-11-10 -26-11-10	30
64.	Ocean Engineering	Prof.S.K. Bhattacharyya	Experiments in Offshore Structures and Ships	10-01-11 -15-01-11	8
65.	Ocean Engineering	Prof.S.K. Bhattacharyya	Design of Offshore Structure and Ships.	11-02-11 -01-05-11	20
66.	Ocean Engineering	Prof.S.K. Bhattacharyya Dr.S.Chandrasekaran	Academic Co-operation with HRD Centre for Offshore & Plant Engg.	Jan-11 July-11	3
67.	Ocean Engineering	Prof.S.K. Bhattacharyya Dr.S.Chandrasekaran	Academic Services for University of Naples Fedarics	Jan-11 July-11	5
68.	Ocean Engineering	Prof.S.K. Bhattacharyya Prof.R.Natarajan	Small Craft Engineering	March-11 - 30-04-11	40
69.	Ocean Engineering Mechanical Engineering	Prof.K.Murali Prof.V.Ananthasubramanian Prof.Kumaraswamy	Training Course in Hydrodynamics and Hydro-Turbomachines	05-05-10 -07-05-10	30
			Total		2381

6.1.8 User Oriented Programme (UOP)

The User Oriented Programmes are designed to suit the requirements of the industrial organizations. Long duration, 2 years M.Tech Programmes are being organized to meet the specific needs of associated industries. Such programmes will ultimately pave-way for long-term consultancy assignments with the organizations.

The following M.Tech programmes are being offered under UOP:

- Construction Technology & Management in Civil Engineering Department
- Automotive Technology in Mechanical Engineering Department
- Ocean Technology and Management in Ocean Engineering Department

The following two more programmes are finalized under UOP:

- M.Tech Program on Offshore Structural Engineering to be exclusively conducted for Larsen & Toubro Limited (L&T).
- Metro Rail Technology and Management to be exclusively conducted for the Indian Railways.

6.1.9 Faculty Development Programme at IIT Madras

A three-day Faculty Development Programme (FDP) was organized by the Centre for Continuing Education during 08-10 Dec, 2010 for 32 young faculty of the Institute. Two educational technology experts from Texas A and M University, USA, namely, Dr. Jeff Froyd, and Dr. Chandrika Rajagopal of the Centre for Teaching Excellence as well as Dr. Prudence Merton, from Dartmouth University Hanover, conducted the programme. Prof Ajit Kumar Kolar and Prof Pramod S Mehta were the FDP coordinators. Prof. V.G.Idichandy, Dy.Director, inaugurated the FDP, on the 08 Dec 2010.

The participating faculties were trained in the state-of-the art teaching methodologies. Learning Outcome Processes, Minute-papers, Student Assessment Methods, Cooperative and Interactive Learning Methods, Joint Student Projects, Student Group Sitzings, and other teaching techniques which enhance the effectiveness of teaching – learning process were some of the topics of discussion. The FDP was marked by a constant interaction between the experts and the participants on the one hand and also among the participants themselves, which made the FDP lively,

exciting and productive. The printed material prepared by the experts and distributed to the participants were of a long-term value while being extremely useful during the programme itself.

The visiting experts and the CCE have taken independent assessment of the FDP from the participants which indicates that it was very beneficial to the faculty. Indeed, the participants (faculty members) assured the experts and the CCE that they will implement some of the new teaching techniques in the ensuing academic session itself. The faculty participants and the experts were very happy with the overall conduct of the programme.

The CCE plans to conduct similar programmes in the future, but more importantly, would like to develop an in-house core group of “trainers” from among the present participants towards establishing a Teaching-Learning Unit in the Institute. At the end of the FDP on 10th Dec., Prof.K.Ramamurthy, Dean (AC) distributed the certificates to the participants, and Prof. V.G. Idichandy, Deputy Director, delivered the valedictory address.

6.1.9 ISBN number allotment:

A 13 digits ISBN is allotted for the proceedings to be published by the faculty members of the Institute. This year we have allotted the following ISBN numbers to the faculty members:

S. No.	Department	Coordinator	Title of the Proceedings	ISBN number
1.	Mechanical Engineering	Dr.Shankar Krishnapillai Dr.Arshinder Kaur Prof.N.Sivaprasad Prof.L.S.Ganesh	Proceedings of International Conference on New Product Development: Challenges in Meltdown Times – NPDC09	978-93-80689-00-5
2.	Ocean Engineering	Dr.K.P.Sudheer Prof.V.Sundar Prof.K.Srinivasan Prof.K.Murali	Proceedings of the 9th International Conference on Hydro-Science and Engineering 2010	978-93-80689-01-2
3.	Civil Engineering	Prof.Ravindra Gettu Prof.K.Jayasankar Prof.K.P.Pradeep	Advances in Concrete: An Asian Perspective	978-93-80689-02-9
4.	Ocean Engineering	Dr.Rajiv Sharma Prof.R.Sundaravadi elu Prof.S.P.Subramania n	Advances in Drilling Technology	978-93-80689-03-6

6.1.10 Conference Registration

In order to streamline all matters connected with the conduct of conferences/ workshops/ seminars etc. CCE has been entrusted with the work of allotment of Registration Number. Accordingly the following Registration numbers are allotted:

S. No.	Department	Coordinator	Title of the Proceedings	Registration Number
1.	Bio-Technology	Dr.Michael Gromiha	IITM-Tokyo Tech Joint Workshop on Bioinformatics and Large Scale Data Analysis	CCE/IW/MG/BT/01/2011
2.	Ocean Engineering	Prof.S.K.Bhattacharyya Prof.P.Krishnan Kutty	International Conference on Developments in Marine CFD (ICMCFD 2011)	CCE/IC/SKB/OE/02/2011
3.	Electrical Engineering	Prof.Balaji Srinivasan Prof.Shanti Bhattacharyya	International Conference on Fibre Optics and Photonics.	CCE/IC/BS&SB/EE/03/2011
4.	Mechanical Engineering	Prof.M.Singaperumal Prof.BVSSS Prasad	11 th Asian International Conference on Fluid Machinery (AICFM) & 3 rd Emerging Challenges in Fluid Power Technology (EMCHAFT 2011)	CCE/IC/MSP&BVSSSP/ME/04/2011

5.	Chemistry	Prof.S.Sankararaman Prof.S.Baskaran	Conference on INDIGO-III (Indo-German Conference)	CCE/IC/SS&SB/CHY/05/201 1
6.	Mechanical Engineering	Prof.S.Narayanan Prof.A.Sekhar	National Symposium on Rotor Dynamics (NSRD-2011)	CCE/NS/SN&ASS/ME/06/20 11

6.1.11 National Programme on Technology Enhanced Learning (NPTEL) A joint initiative of the IITs and IISc, funded by MHRD:

NPTEL is India's largest technical dissemination programme in the higher education sector, through information and Communication Technology (ICT). Its main objective is to increase the reach of high quality engineering and sciences education across our country, which will transform India into a strong and vibrant knowledge economy.

NPTEL-Phase I is a pioneering joint initiative of 7 IITs and IISc Bangalore in developing 136 video based courses and 125 web based courses. IIT Madras is the coordinating institute for this project. Both the web and video course contents are freely available to everyone in our website: <http://npTEL.iitm.ac.in> and through the YouTube at <http://www.youtube.com/iit>

NPTEL – Phases II and III: Currently more than 100 courses (Web + Videos) developed under phase II are also available on the NPTEL website and YouTube. Preparations are underway for adding more than 600 new courses (more than 500 under graduate level and 100 post graduate level web and video courses). These courses cover various disciplines including Technology, Engineering, Management, Sciences, and Humanities and are expected to be completed by 2012. IIT Madras is the coordinating institute for this project.

Accessing NPTEL courses

All courses developed under NPTEL Phases I & II and the list of courses (along with the syllabi) for the various courses developed under NPTEL Phase II are available to everyone free of cost and without any formal registration at the NPTEL website at: www.npTEL.iitm.ac.in

For the benefit of students and faculty, free and easy downloads of web and video-based courses are available from the NPTEL website and also distributed to Individuals / institutions for a nominal fee. The video courses are currently telecast through the Eklavya channel made available by MHRD exclusively for this purpose. Institutions can use the Government subsidized VPN bandwidth available through NMEICT.

NPTEL Usage statistics

NPTEL is being extensively used by students, faculty members and working professionals. NPTEL channel in YouTube has crossed more than 68.3 million upload views. NPTEL site has recorded more than 14.6 million visits since inception in 2006.

Web Studio:

Web studio at IIT Madras is equipped with state-of-the-art studio facilities, hardware and software for the production of educational multimedia videos. The web studio assists faculty members in the creation of electronic course contents, supplements; lecture notes, quizzes etc., and enable them to be available to the student community. All NPTEL video and web courses created by faculty of IITM are recorded and edited here. In addition to the creation and maintenance of the NPTEL website, other departmental websites, conference websites, conference and meeting brochures are created at the web studio has extended its services to include the following:

- Meet the curriculum demands of IIT Hyderabad: IIT Madras faculty have used the facilities available in the web studio, provided under the National Knowledge Network, to teach courses for IIT Hyderabad and IIT Mandi students
- Support all projects sanctioned to IIT Madras under the National Mission on Education through ICT (Sakshat)
- Preparation of online and video supplemented laboratory experiments in Chemistry for IGNOU
- Innovation in teaching methodology with access to web based learning, for high school children, under the Kuruvila Jacob Initiative
- Text transcription of NPTEL video lectures to provide video indexing, searching and database creation for bootstrapping semi-automatic and automatic transcription algorithms, for MHRD, New Delhi
- Maintenance of course management system (Moodle) for IIT Madras

- State of the art video conferencing facility, under the Country – wide Classroom Network, enabling faculty, research scholars and students to use as virtual classrooms and for video conferencing
- Conduct educational programs and research initiatives for school children

Educational Technology Cell

CCE-T.V Studios

Two numbers Digital T.V studios of Broadcast quality, equipped with state-of-the-art equipment like Digital video cameras, vision mixers/special effects generator, audio mixers, presentation computer connected through VAG to PAL converters, Tele-Prompter etc., are available in a class room atmosphere lit by Cine –cool-lights.

Two number 3-CCD portable video camcorder units for outdoor video coverage and Digital Non-Linear editing machines are available for Video production. All video courses created by faculty are recorded here.

Three numbers remote controlled video cameras with a remote control room. In IC&SR Auditorium for video recording and video streaming, is maintained by CCE.

6.1.12 Central Photographic Section

The Central Photographic Section caters to photographic needs of the Departments and Centres of the Institute. The jobs include photographic coverage of most of the important functions such as Convocation, conferences, etc. held in the Institute. Besides this, the section renders assistance to the UG, PG students, Research Scholars and Faculty of all the Departments / Centres for their activities including technical photography, conference poster preparation etc. The in-house processing and printing work is confined to Black and White photography. After recent modernization this section provides digital / high resolution photography for all the needs of the Institute.

The Central Photographic Section has undertaken 110 Departmental job orders and covered 85 functions as well during 2010-11. In addition, Central photographic section has contributed a large percentage of photographs to the Heritage Centre. Passport size photos for 2011 convocation, graduants taken and made ready for degree certificates.

6.2 CENTRE FOR INDUSTRIAL CONSULTANCY AND SPONSORED RESEARCH

6.2.1 Introduction:

The Centre for Industrial Consultancy & Sponsored Research was set up in 1973 to promote interaction with industries. It facilitates active participation of the faculty in various interactive programmes organized for the benefit of the industries and the Institute. The Centre also provides administrative support for carrying out consultancy and sponsored research projects, particularly for recruitment of project staff, maintenance of accounts and purchase of equipments as well as materials.

Some of the major activities that the Centre is involved are:

- Sponsored Research programmes
- Consultancy Projects: research based / retainer / institutional
- Collaborative projects with foreign countries
- Industrial Associateship Scheme
- ISRO-IITM Space Technology Cell joint projects
- IGCAR-IITM Cell joint projects
- NIOT-IITM Ocean Technology Cell
- Patenting and Technology Transfers
- Faculty & Student Entrepreneurship and Incubation

Dean : Prof. Job Kurian - upto 12th March 2012 (FN)
Prof. Krishnan Balasubramanian - from 12th March 2012 (AN)

Staff

Sri. R. Sundaram	Chief Techno Economic Officer
Dr. V. Suresh	Senior Techno Economic Officer
Smt. Prema Chakrapani	Deputy Registrar
Sri. V. Rajendran	Assistant Registrar

6.2.2 Sponsored Research:

144 projects of value totaling to **Rs.18185** Lakhs were taken up by the Institute during 2011 -2012 as given below.

S. No.	Agency	No. of Projects	Value (Rs. In Lakhs)
1	Aeronautics Research & Development Board	8	260
2	Board of Research in Nuclear Sciences	6	701
3	Board of Research in Fusion Sciences	1	68
4	Central Power Research Institute	1	46
5	Council of Scientific and Industrial Research	5	405
6	Defence Research and Development Organisation	3	55
7	Department of Biotechnology	15	705
8	Department of Information Technology	3	5216
9	Department of Science & Technology	47	8343
10	European Commission	2	449
11	India-Based Neutrino Observatory	1	31

S. No.	Agency	No. of Projects	Value (Rs. In Lakhs)
12	Indian council for Medical Research	4	26
13	Indian Council of Social Science & Research	1	6
14	Indian National Science Academy	1	10
15	Indian Space Research Organisation	6	181
16	Indira Gandhi Centre for Atomic Research	4	104
17	Indo-US Science & Technology Forum	1	42
18	Japan International Co-operation Agency	1	486
19	Ministry of Earth Sciences, New Delhi	1	10
20	Ministry of Human Resource and Development	1	3
21	Ministry of Rural Development	1	56
22	National Disaster Management Authority	2	50
23	National Institute of Ocean Technology	4	83
24	National University of Singapore	1	16
25	Naval Research Board	8	375
26	Nissan Research Support Program	5	42
27	Norut Narvik	1	5
28	Office of Naval Research Global	1	18
29	Office of the Principal Scientific Adviser	1	285
30	Shastri Indo-Canadian Institute	1	5
31	Society for Biomedical Technology	1	10
32	Space Application Centre	1	3
33	UK INDIA Education & Research Initiative	1	11
34	University Grants Commission	4	5
		144	18111
	Others and Additonal Grants		74
	Total	144	18185

This includes International Collaborative and Industry Sponsored Projects. About **159** faculty members are coordinators for projects sanctioned in 2011 – 2012. The value of the on-going Sponsored Projects during 2011 – 2012 is **Rs.40328 Lakhs**. About **291** faculty members were actively involved.

6.2.3 Consultancy Programmes:

549 Consultancy assignments of value totaling to **Rs.5077 Lakhs** were taken up during 2011 – 2012 as given below:

S. No.	Type of Consultancy	Number of Jobs	Value (Rs. In Lakhs)
1	Research Based Industrial Consultancy	79	2497
2	Institutional Consultancy	444	2039
3	Retainer Consultancy	18	67
4	Testing	8	90
	Additional Value		385
		549	5078

167 faculty members were actively involved in Consultancy Projects. The value of the on-going Consultancy Projects during 2011-2012 is Rs.6780 Lakhs.

6.2.4 New Faculty Scheme:

The Institute provides funds for new faculty to initiate research in their area of specialization at IIT Madras. This funding will also help them to get sponsored research grants to continue and establish their research activities at IIT Madras. This scheme is operated as a project under the Centre for IC&SR. Proposals for projects up to Rs.5.00 Lakhs will be recommended by the Dean, IC&SR to the Director for approval. In the case of proposals where there is an experimental activity requiring special equipments, Institute support to the project up to Rs.20.00 Lakhs is possible.

During the year, 32 proposals were approved for funding under the New Faculty Scheme for a total sum of Rs.326 Lakhs.

6.2.5 Industrial Associateship Scheme:

197 Industries were members of this Scheme (Large scale 25, Medium scale 116 and Small Scale 56) for the Year 2011.

6.2.6 Other Programmes:

ISRO-IITM Space Technology Cell joint projects:

This is an on-going activity sponsored by the ISRO where research projects of interest to ISRO are being taken up at IIT Madras. 21 on-going projects totaling to a value of Rs.453 Lakhs were continued and 6 new projects for a value of Rs.182 Lakhs were taken up during the year 2011-2012.

IGCAR-IITM Cell:

16 on-going projects were continued during 2010-2011, totaling to a value of Rs.274 Lakhs and 4 new projects for a value of Rs.104 Lakhs were taken up during the year 2011 – 2012.

NIOT-IITM Cell:

NIOT-IITM Cell has been setup in IIT Madras to initiate further NIOT Sponsored Research activities at IIT Madras during 2010 – 2011. 12 on-going projects were continued during 2011-2012, totaling to a value of Rs.342 Lakhs and 4 new projects for a value of Rs.83 Lakhs were sanctioned for the year 2011 – 2012.

Technologies for Social Development:

IIT Madras initiated activities for transfer of technologies which are of immediate relevance to society. For this purpose, the following three projects have been taken up.

- (1) Socially Relevant Projects.
- (2) Rural Technology Action Group (Funded by Planning Commission).
- (3) Centre for Social Innovation & Entrepreneurship (CSIE)

A write-up on the activities of the above projects is given in **Annexure – 1.**

6.2.7 Distinguished Visitors to the Centre:

The following visited IIT Madras for possible collaborative research work.

- Visit of Task Force on Defence Modernization and Self-Reliance to suggest measures for enhancing indigenization in defence, including by increasing Indian private sector participation; strengthening the legal and regulatory framework for the Indian defence industry; and absorption and upgradation of technologies in the Indian defence industry was held on 27th March 2012.
- M/s. Honeywell Technology Solutions
- The THALES Software India
- M/s Eaton India Engineering Centre, Pune
- FESTO AG & Co Kg, a leading global Industrial Automation company having Head Quarters in Germany.
- Mr. Terry Gettys, Head of R&D for the Michelin Group

- THALES Software India and a team of 24 experts from their head office in France
- Shell Projects and Technology
- IFB Industries Ltd.

MoUs / Agreements signed

19 new MoUs / Agreements have been signed by IIT Madras with the following organizations / Institutions during 2011-12:

- Saxon Infotech
- Texas Instruments India (Privated) Limited
- Nanoholdings LLC, USA
- Hari Shankar Singhanian Elastomer & Tyres Research Institute (HASETRI)
- Renault Nissan Technology & Business Centre
- Autodesk India Pvt. Ltd., Bangalore
- Japan International Co-operation Agency (JICA)
- Nielsen Company, New York
- Reliance - IITM Telecom Centre of Excellence (RITCoE), IITM Rural Technology and Business Incubator (RTBI), and Uniphore Software Systems
- Saint Gobain
- National University of Singapore
- Between several Universities and coordinated by Newcastle University
- MOBICIP LLC
- Department of Biotechnology & Centre for Cellular and Molecular Platforms
- Central Power Research Institute (CPRI), Bangalore
- Institute of Atmospheric Physics of RAS, Russia
- Danfoss Industries Private Ltd.
- Honeywell Technology Solution Pvt. Ltd.
- Advanced Micro Devices (AMD) Inc.

6.2.8 Patents:

Details of patent applications filed during the year 2011-2012 are given below:

Sl. No	Title of the Invention	Inventor	Dept.
1	An inductive loop vehicle detection system for heterogeneous and less-lane disciplined traffic conditions	Dr. Bobby George Mr. Sheik Mohammed Ali S Ms. Lelitha Vanajakshi Mr. Jayashankar V	ELE
2	Application of nanoscale zinc oxide in peanut crop	Dr. T Pradeep Mr. Sreepasad Theruvakkattil Sreenivasan Mr. Panikkanvalappil Ravindranathan Sajanlal	CHY
3	Removal of pesticides from water using graphenic materials	Dr. T Pradeep Mr. Shihabudheen M Maliyekkal Mr. Sreepasad Theruvakkattil Sreenivasan	CHY
4	An improved design for the manually operated tricycle for the physically challenged	Dr. Sandipan Bandyopadhyay Dr. M Ramanathan Mr. Aditya Soni	EDD

5	Portable cable way for agricultural applications	Dr. Shankar Krishnapillai Mr. T N Sivasubramanian	MEE
6	One container gravity fed storage water purifier	Dr. T Pradeep Mr. Amrita Choudhary Mr. Udhaya Sankar Mr. Anshup	CHY
7	Metal free catalysts for the ring-opening polymerization of cyclic esters and lactide	Dr. Debashis Chakraborty Mr. Payal Malik Mr. Ravikumar R Gowda Mr. Venkatachalam Ramkumar	CHY

Details of patent applications granted during the year 2011-2012 are given below:

Sl. No	Title of the Invention	Inventor	Dept.
1	A method of and an apparatus for continuous humidification of hydrogen delivered of fuel cells	Dr. Arun K Tangirala Dr. B Viswanathan Mr. Vasu Gollangi	CHE
2	An electrode based on ru-polyoxometalate for a supercapacitor	Dr B Viswanathan Dr. T K Varadarajan Mr. Pilli Satyananda Kishore	CHY
3	A process for the manufacture of flexible carbon nanotube based field emitter	Dr S Ramaprabhu Dr. K Sethupathi Ms R B Rakhi Ms. A Leela Mohana Reddy	PHY
4	Synthesis of multi walled carbon nanotubular coils over alloy hydride catalyst	Dr S Ramaprabhu Ms. A Leela Mohana Reddy	PHY
5	A process for the manufacture of PT/multiwalled nanotubular coils (MWNC) electrocatalysts	Dr.S Ramaprabhu Ms. A Leela Mohana Reddy	PHY
6	Method and system for enabling representation of UML class diagram in a lisp format and design pattern detection using such representation	Dr D Janakiram	CSE

Technology Transfer

S. No.	Inventor	Name of the Invention	Company Name	Value (Rs. In Lakhs)
1	Dr. Ashok Jhunjunwala	Voice Banking Technology	Uniphore Software Systems Pvt Ltd	13.57
2	Dr. Ashok Jhunjunwala	ATM Development	Vortex Engineering Private Limited	29.52

6.2.9 Publications:

- The quarterly publication titled IIT Madras News was continued.

6.2.10 Other information:

- IIT Madras secured the award instituted by the Indian Patent Office for highest number of patents in five years. Prof. Job Kurian, Dean (IC & SR) received the award on behalf of the Institute on 26th April 2011.
- The Centre for IC & SR organized an Industry-IITM Faculty Meet on 25th July 2011 at Hotel Le Royal Meridien.
- The Joint Policy Committee meeting of the ISRO-IITM Space Technology Cell was held on 29th August 2011.
- IC & SR Board meeting was held on 18th April 2011 and 28th September 2011.

- A meeting of the committee constituted by the undersigned to evaluate the proposals for innovative student projects was held on 20th and 21st September 2011. Out of the seventeen proposals presented six were considered for funding for a total value of Rs.6.08 Lakhs.
- The Joint Policy Committee Meeting of the IGCAR-IITM Cell was held on 6th May 2011 at IIT Madras and 7th September 2011 at Kalpakkam.
- A meeting of the faculty group related to the industry segment “Automobiles and ancillaries” was held on 4th January 2012 and “Bio Sciences and Processes” was held on 27th January 2012.

SOCIALLY RELEVANT PROJECTS (SRP) PROGRAM

The Socially Relevant Projects program, which started in the year 2003, with an initial grant of Rs. 10.0 lakhs from IIT Madras, is currently being supported by funds received from the IIT Madras alumni. “Ramachandran Jaikumar project for rural technologies: An initiative by 1967 batch alumni” had supported two projects with a funding of Rs. 17 Lakhs. Both the projects: one on the development of easy to use Water Quality Test Kit; and the other on the development of an efficient Biogas generator for use with micro-industry in rural areas, have been completed earlier. Alumni from that batch are evincing interest in taking these projects forward.

The Class of 1981 of the IIT Madras Alumni has allocated Rs. 30 lakhs, to support eight projects. Out of these eight projects, several projects were completed last year. One project on development of devices to support differently abled children was completed last year. The keyboard is the most common method of controlling computer for most of people and almost all computers equipped with a keyboard. In addition, it is generally most convenient and cheapest access method. How to adapt standard keyboard or provide an alternative keyboard to fit special needs for individuals with cerebral palsy is a challenging task for rehabilitation professions and was the focus of this project. Dr. M. Manivannan of the Department of Applied Mechanics worked along with the Spastic Society of Tamilnadu (SPASTN) on this project.

A new project on “Design and fabrication of a low cost bioptic electronic focus telescope for subjects with low vision”, by Prof. Shanti Bhattacharya (Dept. of Electrical Engineering, IIT Madras) and Prof. Nitin Chandrachoodan (Dept. of Electrical Engineering, IIT Madras), in collaboration with Ms. Sailaja, M.V.S. (Elite School of Optometry, Chennai) has been sanctioned last year. Objectives and scope of the work are: (i) to design motorized and auto- focus bioptic telescopes that would be low cost, light weight and suits the needs of people with low vision, and (ii) to fabricate the motorized telescope and evaluate its performance and utility in aiding people with low vision to carry out specific distance visual tasks. Specific target segment that will benefit by this project is people with low vision. This project is being funded by IIT Madras.

Another project on “Mobile Eye Surgical Units” has also been initiated last year. Project investigators are: Dr. Mohanasankara Sivaprakasam, Dr. V. Jagadeesh Kumar and Dr. V. Jayashankar, all from Dept. of Electrical Engineering, IIT Madras. Cataract is one of the leading causes of preventable blindness in India. Accessibility for cataract surgeries is difficult in many rural areas. IIT Madras and Sankara Nethralaya, a leading ophthalmology institution, have jointly developed “Mobile Eye Surgical Unit” that can perform cataract surgery on-site in remote areas. Grants received under the Coral Reunion Fund of Class of 1975 are used to fund this project. The project funds are being used for design and development of sensing and monitoring system for the various parameters and sub-systems in the surgical units during its operation.

Rural Technology Action Group (RuTAG), Tamilnadu at IIT Madras

1. Introduction:

In the early nineties, IIT Madras started undertaking projects for the development of technologies which are of immediate relevance to the society. RuTAG is one such project initiated by the Principal Scientific Advisor to the Government of India. Started in June 2004, RuTAG is aimed at identifying technology gaps through S&T NGOs and improving these for the benefit of rural India utilizing the expertise in IITs and other academic and R&D Institutions in the country. A number of technologies have been identified and upgraded by RuTAG Tamil Nadu, IIT Madras for rural application.

2. Technologies Upgraded till last year:

Sno	Project	NGO involved
1.	Natural Dyes	Gandhigram Trust (GGT)
2.	Developing Physical and Biochemical Parameters for Quality Standards in Siddha and Ayurvedic Preparations	Lakshmi Seva Sangam, GGT
3.	Modernization of coir spinning ratt	Small Industries Service Institute, Trichur
4.	Sanitary Napkins	Gandhigram Trust
5.	Mud Blocks for Low cost Housing	Pothu Vivasayeegal Sangam (PVS), Karur
6.	Bridge across small canal	PVS, Karur
7.	Rain Gun	Villgro Ltd. IITM Research park
8.	Physico-bio-chemical standardization of selected Ayurvedic Preparations	Lakshmi Seva Sangam, GGT
9.	Design of Low Bed Tractor trailer	Pothu Vivasayeegal Sangam, Karur
10.	Biogas from non-edible oil cakes	Vivekananda Kendra, Kanyakumari
11.	Market Study for baby diapers	Gandhigram Trust
12.	Semi-automatic mechanical Hammer for quarry workers	Mitraniketan, Kerala
13.	Solar Energy Operated Electric Tricycle for rural Physically Challenged	Spastic Society of Tamil Nadu
14.	Mud Blocks for Low cost Housing	Pothu Vivasayeegal Sangam, Karur
15.	Design and Manufacture of modernized coir ratt	SISI, Trichur
16.	Extraction and drying of natural dyes from Annatto, Beetroot and Tacoma flower	Gandhigram Trust
17.	Herbally treated baby diapers	Gandhigram Trust
18.	Retention of Nutrients in earthen pots while cooking	Centre for Social Development, Nagercoil
19.	Cono Weeder	Pondicherry Science forum
20.	Performance evaluation study of different types of hand-loom	Co-Optex, Tamilnadu
21.	Natural dyed textile from banana fiber	Industree Crafts Foundation
22.	Development of quality control standards for fastness properties of natural dyes	Gandhigram Trust
23.	Development of Artificial foot	Kasturba Hospital, Gandhigram Trust
24.	Effect of physical chemical and herbal agents on sanitary napkins	Gandhigram Trust
25.	Optimization and modernization of soap making process	Gandhigram Trust

3. Technologies Upgraded During The Current Year (2011 – 2012)

Sno	Project	NGO involved
1.	Improvement of the crack resistance of 'Athangudi Tiles'	M.RM.RM Cultural Foundation
2.	Multi speed Potter's wheel	Centre for Social Development, Nagercoil
3.	Design of energy efficient low power wind turbine systems for rural applications	Field research Laboratory, Leh
4.	Physico-bio-chemical fingerprinting and nutrient analyses of selected Ayurvedic	Gandhigram Trust
5.	Effect of physical, chemical and herbal agents on sanitary napkins	Gandhigram Trust
6.	Powered Tricycle for physically Handicapped	Sukrithi Social Foundation, Chennai
7.	Modification in the cutting machine of the binding unit, Automatic edge binding machine and Power operated sewing machines	Amar Seva Sangam, Ayikudi
8.	Implementation of Efficient 3.6kW Solar Power System	Amar Seva Sangam, Ayikudi
9.	Envelope Making Machine	Rehabilitation Centre for Blind Women(RCBW)
10.	Eco friendly disposal methods for sanitary napkins	GGT
11.	Studies on the performanace of a pump working as a turbine with an electronic controller developing constant voltage at constant frequency	Uttaranchal
12.	Design and development for solar absorption refrigeration system for rural applications	Gandhi gram Trust

4. Projects In Progress

Sno	Project	NGO involved
1.	Development of Rapier kit to suit the power loom industry	Power loom association
2.	Banana Fibre Extraction machine	Industree crafts foundation
3.	Solar fan for rural application	Kuthambakkam Village, Panchyat
4.	Design and Development of an improved version of Nepali Type loom	Cooptex
5.	Development of take-up and let-off motion in Handlooms for the visually impaired	Grameen Shramik Pratishthan
6.	Development of weft Insertion System in Handlooms for the visually impaired	Grameen Shramik Pratishthan
7.	Construction of residential houses with stabilized compacted soil bricks	PVS, Karur
8.	Studies on pyrolysis of Prosopis Juliflora	ODAM
9.	Modular tricycle for mobility disabled	Sukriti Foundation
10	Microwavability of redclay pottery	Centre for social development

5. Some of the significant work carried out:

- Low bed tractor trailer for safe transportation of sugarcane from field to tractor designed and fabricated
- Vertical axis Savonious type windmill developed for wind speeds upto 23 m/sec
- Modular tricycle designed and fabricated for the physically challenged
- Quality control and testing procedure developed for sanitary napkin manufacture by rural women SHGs
- Potters wheel designed and fabricated for the use of potters making special products
- Pump As Turbine tested and developed for constant output voltage and frequency suitable for use in hilly regions.
- Label of contents developed for select Ayurveda medicines

Center for Social Innovation & Entrepreneurship (CSIE)

Sponsored by '84 batch

1. Introduction

The Center for Social Innovation and Entrepreneurship (CSIE) at IIT-Madras was founded in August 2010 with a focus on teaching and research related to social enterprise in India. It aims to bring together the innovation and entrepreneurship aspects of IITM by creating knowledge and understanding that will be relevant to the problems that the poor in India face.

CSIE seeks to distinguish itself through:

- Its focus on delivering social enterprise knowledge primarily to engineering students, with the aim of developing their ability to develop and deliver technology solutions that creates social impact
- Its focus on academic research that will seek to address problems exclusively within the Indian context

2. Governance structure

Governance committee (GC) consists of representatives from sponsors ('84 batch), IIT Madras faculty and partnering agency (Villgro). Biweekly meetings are being held. Members of GC are:

Dr. R Nagarajan, Professor, Chemical Engineering,
Prof. Ashwin Mahalingam, Assistant Professor, Civil Engineering
Prof. B S Murty, Professor, Civil Engineering
Prof. Devendra Jalihal, Professor, Electrical Engineering
Prof. John Bosco Lourdusamy, Associate Professor, Humanities and Social Sciences
Prof. K N Satyanarayana, Professor, Civil Engineering
Prof. L Prakash Sai, Professor, Management Studies
Prof. LS Ganesh, Professor, Management Studies
Prof. Sandipan Bandyopadhyay, Assistant Professor, Engineering Design
Prof. Sudhir Chella Rajan, Professor, Humanities and Social Sciences
Prof. VR Muraleedharan, Professor, Humanities and Social Sciences
Paul Basil, Founder & CEO, Villgro
Anand Krishnaswamy, Consultant, The Lemelson Foundation
Joseph Thomas, Project Consultant, CSIE
Nishant Goyal, Principal Project Officer, CSIE

3. Staffing

A full-time Principal Project Officer is recruited. He is responsible for the overall running of the Center. A Project Consultant was appointed to manage IDRC related activities.

4. Awareness and Branding

CSIE website (<http://csie.iitm.ac.in>) was launched. The key feature of website is informational content for students, to keep them abreast with Social Entrepreneurship sector.

CSIE was 'knowledge partner' in organizing a one-of-a-kind signature event Unconvention by Villgro. CSIE was the campus partner of Techsparks 2011 Chennai edition - pan-India recognition for Product Tech startups.

An article on CSIE was published in PAN IIT magazine PiTech Oct 2011 issue. CSIE flyers were distributed at Pan-IIT 2011 global conference in New York.

CSIE designed and executed a survey amongst the students of the social innovation minor to understand their thinking on Social Entrepreneurship. The results are to be used to raise funds for assisting students interested in starting their own Social Enterprise.

5. Minor course: Innovation and Social Entrepreneurship

CSIE coordinates with the faculty for Minor course.

The course lays emphasis on two aspects:

- A theoretical understanding of the business of enterprise and innovation, in particular focusing on its relevance for India's marginalized communities
- Practical understanding of establishing and running an enterprise, including developing appropriate technology, product and business development

Course	Coverage	Output from Students
Intro to Social Enterprises in India	<ul style="list-style-type: none"> • Theory • Case studies • Guest lecture by practitioners • Rural field visit / visit to SE 	Case studies
Product Design and Business Models	<ul style="list-style-type: none"> • Creative Problem Solving (TRIZ techniques) • Engineering Design and Prototyping • Entrepreneurship • Finance • Business models and strategy 	Business plans
Laboratory based	Centre for Innovation Lab	Prototypes
Rural Field study	Rural visits	Business plans

The minor course students have participated in various national and international teams and won awards. Details are in achievements section.

6. Academic and sponsored research

Academic and sponsored research is to be undertaken by faculty, research scholars and Minor course students. Faculty on sabbatical and post-doctoral scholars would be invited on availability of funds.

7. Events

7.1. Academic Contribution award:

CSIE has instituted 'CSIE (IITM)-Villgro Academic Contribution award' at Unconvention 2011. Various academic institutions and research centers were invited to nominate themselves. Based on the criteria, finalists were

- Prof. Madhukar Shukla, XLRI
- Prof Harish Chaudhary, BHU
- Center for Entrepreneurial Leadership, BITS Pilani
- SHARE, IIT Roorkee
- Mahatma Gandhi Institute of Rural Industrialization (MGIRI), Wardha
- The Base of Pyramid Distribution Challenge (Rural Market Insights), CDF-IFMR

Prof Madhukar Shukla, XLRI was the winner of the award.

7.2. Research Session at Unconvention

Research Session brought together 36 researchers, academics, students and interested stakeholders of the innovation to market ecosystem to collectively think through and address some the challenges of research and learning by doing in the innovations to market journey and in promoting the social enterprise sector.

Session started with research presentations from 5 speakers. Session then used a 'conversational café' format to get people talking in small groups.

8. Coordination with internal organisations at IITM

CSIE organised a workshop with other socially relevant projects/organisations at IITM like Research Park, RTBI, SRP, RuTAG, CFI and C-TIDES. Presentations have been made to various departments at IITM to coordinate with faculty working on social projects. Coordination with student driven clubs like – CTIDES (the student led e-cell) and CFI (Centre for Innovation) is also being done.

9. External Networking

CSIE is reaching out to various national and international organisations for strategic partnerships. CSIE has also hosted various visitors in this regard.

9.1. Visit of Director and Staff, The Lemelson Foundation

Dr Carol Dahl, Executive Director, The Lemelson Foundation, USA and four senior staff members visited IITM on 19 Oct 2011. They met Prof Bhaskar, Director IITM and IITM faculty of Minor course. Students of Minor course made presentations at CFI lab.

9.2. Visit of Social Entrepreneurship Students of New York University, Stern School of Business

Prof Venkataram Srivatsan, an IITM alumnus, teaches a course 'Social Enterprise and Economic Development: The Indian Context' at NYU Stern School. He visited with students to understand the activities of CSIE and other social entrepreneurship activities at IITM.

9.3. Visit of IDRC, Canada staff

IDRC (International Research Development Centre), Canada has commissioned a research project at Villgro, jointly undertaken by CSIE and Villgro.

Program Leader and Senior Program Officer of 'Innovation for Inclusive Development' group at IDRC came to IITM to meet Director, IITM and Governance committee, staff of CSIE. Students of SIE minor presented their work at CFI lab.

Visitors viewed CSIE as an institutional innovation.

10. Sub-project for Villgro funded IDRC project activities

Villgro and CSIE are executing project "Learning from pro-poor, market-driven Innovation in India" with grants from the International Development Research Centre (IDRC), Canada.

CSIE has contacted and encourage academics and practitioners to undertake research in the form of short term (6 months) funded projects. The first round of research proposals and the institutes executing them are presented below:

Project Title	Host Institute
Assessing social enterprises: The need for new parameters	Centre for World Solidarity and KICS
Scaling-up Social Enterprises – Drivers and Challenges	Intellicap
Inclusive Business Models – Prospects and Challenges	IIM Bangalore
Understanding the adoption dynamics of new products among people living in rural India	IFMR
How Can Early Stage Social Businesses be taken to the Next Level	DASRA

Academic researchers are being contacted for the second round of proposals for the year 2012.

10.1. Funding of sub-project

Villgro is funding CSIE for the IDRC project related activities.

10.2. Staffing

CSIE appointed a Project Consultant to manage IDRC related activities.

11. Documentation

11.1. Social Entrepreneurship Snapshot and useful technologies

Informational content for students is being prepared to keep them abreast with Social Entrepreneurship sector. This includes the information on Social business plans competitions (national and international), Social Enterprises and support system in India, technology that are currently solving social problems etc. The information is posted on the CSIE website.

11.2. Documentation in CSIE

Study and benchmarking of various academic institutions, in India and abroad, contributing to Social Entrepreneurship space was carried out and documented.

12. Achievements

Some of the achievements of CSIE are:

- Research project funding from IDRC Canada, in partnership with Villgro
- Instituted National level Academic Contribution Award in SE at Villgro Unconvention
- The minor course students have participated in various national and international teams and won awards at Genesis 2011, Oxford Said Business School YBD competition 2011, finalist in AI Gore Sustainable Technology Venture Competition (AGSTVC) 2011, and BEST-India 2011 managed by The Association for Biotechnology Led Enterprises (ABLE) and Department of Biotechnology (DBT), Government of India

6.3 CENTRAL ELECTRONICS CENTRE

6.3.1 About the Centre

The Central Electronics Centre (CEC) was established in 1971 with the main objective of servicing and maintaining the wide variety of sophisticated electronic equipment in this institute. A key attribute of this Centre is the blend of an academic environment and an industry-like working atmosphere.

The Centre is housed in dust-free environment. CEC has a team of qualified, experienced and talented staff members, trained in India and Germany in various fields of electronic instrumentation, testing and calibration. The infrastructural facilities and equipment have been continually enhanced over the years by GOI funds and successive Indo-German collaborative Projects.

While establishing this Centre, in 1971, the critical need for training service engineers for maintaining the electronic equipment was foreseen and an 18 month training program, the first of its kind, in the country was started in the same year. In view of large demand for these trained personnel both within the Institute as well as outside, conducting such long term training programs has become one of the important activities of the Centre.

The Centre has diversified its activities and now offers the following services:

- Servicing and maintenance of electronic equipment/ instruments
- Training programs for manpower development
- Calibration of electronic test & measuring instruments
- Testing of electronic products
- Development of custom-built equipment
- Consultancy services to industries in the above mentioned areas.

So far, CEC has provided expertise and services in the above areas to more than 230 industries/ organizations inside and outside the country.

In the area of Renewable Energy, CEC has been playing a key role by conducting several training programs in the area of Solar Photo Voltaics (SPV). Forty SPV training programs have been conducted and more than 860 personnel have been trained. The project was sponsored by IREDA (Indian Renewable Energy Development Agency), New Delhi. SPV Laboratory (indoor and outdoor) facilities have been established to promote the developmental activities in this area. CEC is active in diverse projects involving SPV technology.

As a part of customized training programs, four special 12-week training programs have been organized for the Radio Officers of Merchant Navy to become Electro-Technical Officers. The project was sponsored by AMET (Academy of Maritime Education and Training), Chennai.

As the Centre had expanded its activities, most of the laboratories have been upgraded. In 2001, CEC received ISO 9001:2000 Quality Certification from RWTÜV, Germany, for having established the Quality Systems in its services. Also, the Centre received NABL Accreditation in 2004 for Testing and Calibration Laboratories in accordance with ISO/IEC 17025 Standards. In CEC both ISO and NABL accreditation are actively maintained through adherence to the specified processes and procedures.

6.3.2 Activities:

1. CEC Two-year Technician Training Program

Preparations are ongoing for the admission of XXVII Batch of Training Program (2 years duration). The total numbers of candidates to be admitted is twelve. The previous batch comprises of nine trainees.

2. Workshop Sessions for B.Tech Students

Electronics Workshop/ Laboratory Sessions for B.Tech I Year (part of WS1010) were conducted during both odd and even semesters of 2011-2012. Laboratory Sessions on 'Mechatronics Systems Design Laboratory Course' (ED5080) for B.Tech Dual Degree Students of the Department of Engineering Design was conducted during January – April 2012.

3. Some of the Important Consultancy Projects completed in 2011-12:

S.No	Co-ordinator	Title of Project	Organisation	No of Assign.	Project value in Rs.
1.	Prof.R.David Koilpillai	Testing of Note Sorting Machine (NSM)	M/s.Indian Bank, Chennai	1	55,150
2.		Testing of Fire Alarm Assembly	M/s.Ravel Electronics Pvt.Ltd.	2	82,725
3.		Testing of Wear Sensor and Contact Resistance Assembly	M/s. Madras Engineering Pvt.Ltd.	2	1,10,300
4.		Testing of High Voltage Charger	M/s. IIITD & M, Kancheepuram	1	1,655
5.		Testing of Inverter	M/s. Nisaki Technology Services, Bangalore – 560 027	1	4,412
6.		Calibration of DMM	M/s. Standard Micro Systems India Pvt.Ltd. Chennai 96	1	1,654
7.		Servicing of Oscilloscope, Interface Module, Data Logger, Power Supply, Temperature Calibrator	M/s.Elmack Engineering Services, Chennai 600 101	8	66,180
8.		Calibration of Fuel Gauge, AC/DC Current Source, DMM	M/s.Instrulab Aero & Allied Systems, Chennai	3	9,375
9.		Calibration of DMM and Decade Resistance Box	M/s. MTL Instruments Pvt.Ltd, Chennai	4	9,926
10.		Calibration of Dual Display Multimeter	M/s. SAMEER, Govt. of India, Chennai	1	2,758
11.		Calibration of DMM, Clampmeter	M/s. Siemens Site Office, ICF, Chennai 600 038	2	2,206
12.		Calibration of DMM	M/s.R R Electronics,, Chennai	3	4,412
13.		Servicing of BEB Board	M/s.Kody Medical Electronics (P) Ltd.,	1	5,515
14.		Servicing of Laser Light Exposing Board	M/s.Akash Digital Enterprises, Chennai	1	5,515
15.		Testing of Electronic Ballast	M/s.Tirumala Tirupati Devasthanams, Tirupati/Tirumala	1	33,090
16.	Prof. V.Jagadheesh Kumar	Servicing of Oscilloscope, Data Logger, Power Supply, Synthesized Signal Generator	M/s. Elmack Engineering Services, Chennai 600 101	5	65,628
17.		Calibration of Calibrator	M/s.Roots Industries India Limited, Coimbatore	1	11,030
18.		Calibration of AC/DC Clampmeters	M/s. Siemens Ltd, Chennai 600 038	4	6,618
19.		Calibration of DC Electronic Load	M/s.Keith Electronics Pvt.Ltd, New Delhi-66	1	11,030
20.		Calibration of DMM	M/s.R R Electronics, Chennai	1	1,655
21.		Calibration of Decade Resistance Box	M/s. MTL Instruments Pvt.Ltd, Chennai	1	1,985
22.		Testing of Time Domain Reflectometer	M/s.Instrulab Aero & Allied Systems, Chennai	1	22,060

Total CEC Consultancy Projects: 46

Total Values: Rs 4.15 Lakhs

4. Conference Presentations

- C.R.Jeevandoss attended the International Instrumentation and Measurement Technology Conference on 10-12th May, 2011 at Hangzhou, China and presented a paper on “Sunlight based I-V Characterization of Solar PV Cells”.
- K.Sulochana attended the International Conference on “Trends in Optics and Photonics” by organized by University of Calcutta, Calcutta on 6th – 9th Dec, 2011 and presented a paper on “Simultaneous measurement of multiple species using Super-Luminescent Diode for emission monitoring”.
- G.Amutha attended the International Conference on “Trends in Optics and Photonics” by organized by University of Calcutta, Calcutta on 6th – 9th Dec, 2011 and presented a paper on “Investigation of crystallization and ablation characteristics in annealing of amorphous silicon films with nano and picosecond pulsed Nd³⁺:YAG laser”

5. Training Programs attended by CEC Staff:

- V.Neelamani and K.K.Muthuswamy attended “Measurement of Uncertainty in Electrical Testing” conducted by CETE, Bangalore on Sep 09-10, 2011.
- P.Sadasivam and G.Saravanan attended “Laboratory Quality Management & Internal Audit as per ISO/IEC 17025” conducted by CETE, Bangalore on Sep 05-08, 2011.

6. Development Works completed:

- (i) Development of Integrated LED Lighting System for M/s. Intelligent Zone, Hyderabad
- (ii) Development of solenoid valve controller for the Dept. of Mechanical Engineering, IIT Madras
- (iii) Development of stepper motor controller for the Dept. of Engineering Design, IIT Madras
- (iv) Development of Camera Trigger Unit for the Dept. of Aerospace Engineering, IIT Madras
- (v) Development of Signal Conditioner for Photo Tube for the Dept. of Chemistry, IIT Madras
- (vi) Development of Signal Conditioner for Piezo-electric transducer for the Dept. of Applied Mechanics, IIT Madras

7. Ongoing Development Activities:

- (i) Evaluation of “Sollektor” (Indoor Lighting Systems by guiding of natural sunlight through polymer optical fibres) developed by George Simon Ohm University, Nürnberg, Germany.
- (ii) Solar Photo Voltaic powered Seawater Desalination (‘Suryajal’) Systems in standalone as well as hybrid versions jointly with EE and CH Depts.

8. Other Activities:

- Completed fabrication of resistor network (specific model) for the Dept. of Physics, IIT Madras
- Completed fabrication of photo-diode (reverse bias) circuit for the Dept. of Physics, IIT Madras
- Conducted one day workshop on Solar Photo Voltaics for Sustainable Network, IIT Madras
- Preventive Maintenance of all UPS units installed in the Institute has been taken up in coordination with the UPS Suppliers.
- Testing of UPS from new vendors for entering into Rate Contract

9. Staff Strength:

The Centre has 10 Technical and 2 Administrative staff.

6.4 COMPUTER CENTRE

Introduction:

Computer Centre was established in 1973 to provide Centralized Computing resources and support to the Academic initiatives of the Institute. Be it IBM system 370 in the 70s, Siemens system in the 80s, SGI and Sun systems in the earlier part of this millennium the computer centre has maintained professionally the facilities. In keeping with the trend, the High Performance Computing Environment (HPCE), the backbone network, data centre and the workflow environment are being upgraded continually to cater to the ever-increasing demand on the resources of Computer Centre at IIT Madras.

High Performance Computing Environment:

Aerospace engineering, Atmospheric and Ocean Modeling, Design of large structures, Flows and Combustion, Material Science and Engineering, Modeling social, Ecological and Physical Networks, Molecular Modeling, Spectroscopy and VLSI are some of the active research areas in IIT Madras, where such large scale computing will be used.

The Vega Super cluster has compute nodes based on HP Proliant DL160 G5 servers with Quad-core Intel Xeon processors. This Cluster consists of 256 nodes of which 128 nodes are in infiniband (IB) and the rest 128 nodes are in gigabit (GB) with one head node in each. Each compute node consists of Dual Processor, Quad-core, Intel E5472 processor, 16 GB RAM and 250 GB SATA Hard disk. The HP Proliant Rack server DL160 based Cluster options are built with:

- Seven HP 10642 G2 Racks hosting 2048 core Compute Server with HP's XC cluster software and PBS-Pro for batch processing.
- One separate rack for Infiniband Switch option
- One separate rack for NAS with a configured storage of 30TB and Tape Library containing 48 tapes for automatic backup.
- Three separate racks for HP SFS parallel file system with RAID-5, having a licensed storage of 80TB bundled.
- SFS is shared by both the clusters.

Libraries and Software:

Intel Cluster Open MPI for Intel Compilers for Linux, Intel MPI Lib. 3.1, Intel Math Kernel Lib. 10.0, GSL and GSLCBCLAS Lib., and IT++ 4.0.6.

Abaqus 6.10 EF1, Ansys CFX Ver 13.0, Fluent 13, Gambit 2.46, Mathematica 5.2, Matlab 2010, Gromacs, Namd, Star CD 5.0 and MATHCAD.

The HPCE group is under the guidance of Prof. P B Sunil Kumar.

Information about HPCE is available in the website <http://hpce.iitm.ac.in>

Computer Network:

The Campus Computer Network was established in 1994 connecting about 18 buildings in the academic zone using telephone cables. A high speed network was established connecting all the buildings in the academic zone on Fibre Backbone and ATM 622 Mbps communication technology. Currently the network has a 10Gbps backbone interconnecting the three zones, Academic, Hostel and Residential. Number of nodes in the campus is more than 6000. The network equipments in the academic zone are upgraded to provide 100/1000 Mbps connectivity to the nodes. All the buildings in the academic zone were provided with dual fibre connectivity.

The Internet bandwidth started with 64Kbps in 1996 and is 90Mbps to-day.

HTTP, Video Conference and FTP are provided under network service.

Dr. Nitiin Chandrachoodan is the Professor In-charge of the Network.

Workflow:

The following are the on-going computerization through the centre:

1. Administration
2. Finance & Accounts
3. Hospital
4. Engineering Unit
5. Hostels
6. Stores & Purchase
7. Academic

- Payroll of the employees has been successfully completed in October 2011.
- Portion of Academic work has been completed.

The work flow group is headed by Prof. Koshy Varghese and Prof. Anil Prabhakar.

PC Cell:

In view of the proliferation of the use of PC's, the Centre runs a PC cell to handle hardware problems of PCs and peripheral devices in the institute including those used in projects. The Academic zone personal computers and peripherals are repaired at PC Cell on call basis. PC's are repaired either at the customer's site or at the PC cell of the computer centre depending on the nature of complaint.

Data Centre:

This hosts HPCE Server and various Network Servers. Data Centre is equipped with UPS and Generator for 24x7 running of the Servers and Services.

The Chairman, Prof P.B. Sunil Kumar takes care of the Data Centre and PC Cell.

E-Services:

This is a new addition from this year to cater services like Email, Web, Active Directory Service (ADS), Lightweight Directory Access Protocol (LDAP) and Virtual Private Network (VPN).

Dr. Gandham Phanikumar is the Professor Incharge of this group.

Antivirus:

Server-based McAfee software is in a server at the Computer Centre that provides installation and automatic updating in individual machines. Support is provided to the users who face difficulties in activating or updating this from time to time.

ISO:

The Centre has ISO 9001 2008 certification. It is an ISO certified centre since 1999.

Accomplishments:

GATE and JAM admissions 2011-2012

S.K. Ramesh assisted in the successful conduct of the above Examinations.

JEE and HSEE admissions 2011-2012

Mr S. Anandkumar involved in the conduct of the JEE and HSEE Data Processing, Applications and Results query on Web/IVR.

Training and Professional Activities:

- V.Selvaraju, R.Jayaganesh and Neelakantan underwent training on CISCO Switches at Bangalore organized by Datacraft in September 2011.
- V.Ravichandran and P.Gayathri underwent training titled "Think Paralell" in Bangalore conducted by CDAC in January 2012.
- Dr. S. Jayaprakash was invited to serve as a Member of Executive Committee of Ramanujan Computing Centre, Anna University, Chennai.
- Dr. S. Jayaprakash is member in Steering Committee, e-Governance, National Institute for Technical Teachers Training and Research.
- Dr. S. Jayaprakash was invited to serve as a Member Technical Committee, Tamilnadu State Data Centre ELCOT.
- Dr. S. Jayaprakash is a member of Doctoral Committee for about 10 Ph.D students, Dept. of Computer Science & Engineering, Anna University, Chennai.
- Dr. S. Jayaprakash was invited to serve as a Technical Member, Tender Committee CCTNS Project, Tamilnadu Police.

Details of Staff

Sl.No.	Name	Designation	Field of Work
1.	Prof. P B Sunil Kumar	Chairman	
2.	Dr. S Jayaprakash	Senior Systems Engineer	Software Engineering, Computer Network & e-Governance
3.	S K Ramesh	Senior Systems Engineer	System Administration, MIS, Data Management, Data Processing & System Programming
4.	C S Sourirajan	Systems Officer Gr.I	System Administration, Programming Languages, Work Flow, e-Services & Data Centre activities.
5.	V Ravichandran	Deputy Systems Engineer	High Performance Computing , Application Programming, DBMS, Work Flow, Systems Programming & Administration
6.	C N Vijayaragavan	Deputy Systems Engineer	Computer Network, Data Centre Operations, Operating Systems, System Administration & PC Maintenance
7.	Banavath Baman	Asst. Systems Engineer	System Analysis & Design, Operating Systems
8.	C S Venkatesan	Asst. Systems Engineer	Software Engineering, Operating Systems, HRD Management & Computer Network
9.	S Anand Kumar	Asst. Systems Engineer	Computer Networks, e-Services, PC Hardware, Email & System Administration.
10.	V Selvaraju	Asst. Systems Engineer	Computer Network, PC Hardware & Software

11.	S Priya	Asst. Systems Engineer (Contract)	Work Flow & Software Development
12.	D Hariharan	Senior Superintendent	Antivirus Maintenance and Software Library Maintenance
13.	T V Subba Rao	Tech. Superintendent	PC Hardware Maintenance, System Administration & Operating Systems
14.	P Gayathiri	Junior Systems Engineer	High Performance Computing & Software Development
15.	M Sathish Kumar	Junior Systems Engineer	Computer Network & Operating Systems
16.	M Jeevanandam	Junior Technician	Computer Network
17.	M Irudayaraj	Junior Technician	Web Programming, Linux & e-Services
18.	R Jayaganesh	Junior Technician	Computer Network
19.	Mahesh Mithreevan	Junior Technician	Computer Network

Apart from the above permanent staff there are Project Associates/Technicians in the Computer Centre to support the various activities of the Centre.

7. CENTRAL FACILITIES

7.1 Central workshop facilities:

Central Workshop was established in the year 1959. Initially it consisted of shops associated with three major manufacturing processes, i.e. metal cutting, metal joining and metal forming. Later on, sections of other modern manufacturing processes and control systems were introduced in Workshop training.

Presently Central Workshop of our Institute is having the facilities in different shops and sections. The list shops and sections with their activities are given below.

S.No	Shop	Facilities
1	Carpentry	Wood working with Planing, crosscutting, turning, thickness reduction, polishing processes and power operated hand tools.
2	Fitting & Tool Room	Filing, drilling, tapping, jig boring, tool milling, engraving, marking, slotting, grinding, cutting and power tools
3	Machine Shop	Shaping, milling, turning, planing, radial drilling and tool and cutter grinding
4	Gear Shop	Spur, helical & bevel gear cutting and Gear inspection
5	Electrical Shop	Trainers for electrical circuit, DOL and star-delta starter trainers
6	Instrument Shop	Calibration of Pressure gauges up to 1000 bar. NC trainer lathes, milling machines
7	Welding Shop	Arc welding, gas welding, brazing, and Plasma Arc cutting.
8	Foundry Shop	Moulding work stations, Oil fired furnace and sand mixing plant
9	Smithy Shop	Hand forging, power hammer and heat treatment
Sections:		
10	Pneumatics and Hydraulics	1. Basic Pneumatic Trainers, 2. Electro pneumatic Trainer 3. PLC for Pneumatics trainer 4. Basic Hydraulic trainer
11	FRP	Manufacturing polymer composites by hand lay-up process
12	Plastics	Introduction to plastics, Demonstration and production in hand operated, semi automatic injection and compression moulding of plastics
13	Instrumentation & Communication Lab	Introduction to basic communication systems. Exercises on optical fiber communication. Introduction to various kinds of transducers. Microprocessor based control applications, Example of stepper motor control and traffic light controller and PLC.
14.	Quality control lab	Measurements, Metrology Terminologies, Measuring instruments properties, Calibration Standards, Traceability and Errors in Measurements

In addition to above, Central Workshop is maintaining institute vehicles (Light and Heavy).

During the year 2011-12, Central Workshop trained 817 undergraduate students (1st year B.Tech) of Course code WS1010 (4 Credit), WS1020 (2 Credit) and WS 1030 (2 Credit) course exclusively for the students of Engineering Design department during 1st semester). The details of the training modules are given below.

Department	No. of students	Training Modules
1. Electrical Engineering	119	Power Tools
2. Engineering Physics	31	Electrical

3. Mechanical Engineering	148	Electronics Welding Turning Pneumatics & Hydraulics Plastics & FRP Machining processes Foundry Smithy Instrumentation & Communication
4. Metallurgical & Materials Engineering	47	
5. Aerospace Engineering	55	
6. Chemical Engineering	91	
7. Naval Architecture & Ocean Engineering	54	
8. Civil Engineering	94	
9. Bio- Technology	60	
10. Computer Science	55	
11. Physics (Dual degree)	9	
11. Engineering Design	54	
Total	817	

Central Workshop executes fabrication of test set-ups and their accessories related to PhD, PG and UG Projects. **565** Work Orders were executed during the year 2011 – 2012.

Enhancement of facilities for students training in various modules and modernization of facilities for fabrication work were initiated. In this connection the purchase orders were issued to purchase of CNC Lathes- (4 nos.), CNC Milling machine- (3 nos.), Machining centre – (1 no), milling machines – (10 nos.), Centre lathe – (12 nos.), Pneumatics trainer – (6 nos.), Hydraulic trainers- (2 nos.) and die casting machine – 1 for students training.

7.2 Central Gas Supplies Unit:

The CGSU procure Industrial Gases and Special Gases from various manufacturers/suppliers and issues to various Dept/Labs and sections of the Institute for research and practical classes.

7.3 Central Glass Blowing Section:

The Central Glass Blowing Section is one of the important infrastructures facilities of the Institute since 1972. Being a central facility this section undertakes design and fabrication of sophisticated glass apparatus for research and development in various departments.

This section has a range of modern glass working equipments largely procured from Germany as a component of the collaborative program and these include; horizontal cum vertical lathe, universal lathe forming lathe and high vacuum system. The section is also well equipped with a good number of sophisticated burners, drilling and cutting machine, grinding and polishing equipments and such other tools necessary for fashioning out a variety of glass apparatus. The section has adequate facility for quartz working and has developed high level of expertise in this area.

Following are some of the sophisticated apparatus fabricated:

Cryostat, spherical and cylindrical Dewar flasks, lugging probe, laser housing tube with water jacket, reactor tube, vacuum tube collector for solar energy and quartz wares.

During April 2011 to March 2012 the section undertook 254 work orders from various departments.

8. CENTRAL LIBRARY

The Central Library is well equipped with all modern facilities and rich information resources in the forms of CD-ROMs, on-line databases, e-journals, e-books, e-standards, e-patents and various other printed information materials on Applied Science, Engineering, Technology, Humanities, Management, Social Science and other new emerging areas. The Central Library holds 4,55,289 collections, 932 current journals, catering to the information needs of 8119 members through providing various value added services with the help of modern information handling tools and techniques. The major activities added in the Central Library during April 2011 – March 2012 are given below:

8.1 Library Information Services Statistics:

Item	2010-2011	2011-2012
A. Collections		
Books	2,47,590	2,50,803
Theses	4,567	5,182
Pamphlets and Reports	4,123	4,123
Microfilms/Fische	1,842	1,842
Book-Bank	15,803	16,103
Current Periodicals by Subscription	952	845
Current Periodicals by Exchange/Gift	87	87
Back Volumes of Periodicals	1,07,818	1,09,713
Patents & Specifications	20,418	20,418
German Collection	44,280	44,280
CD-ROMs	1,436	1445
Audio/Video Cassettes	448	448
Total	4,49,364	4,55,289
B. Membership		
Staff	790	757
Faculty Members	513	541
Students	5,848	6490
Alumni Members	347	29
Corporate Members	202	10
Special Members	94	58
IAS Members	182	164
Project Co-ordinators	70	70
Total	8,046	8119
C. Services: Circulation		
1. Number of Books/Journals issued	93,993	77,095
2. Number of Books issued Book Bank (GS)	1783	3473

3. Number of Books issued Book Bank (WS)	1631	3287
4. Consultation Cards issued to users	01	01
5. Overdue & other Charges collected	Rs.4,07,635.50	7,27,588.50
6. Photocopy Charges collected	Rs.40,261.40	25,878.50

D. Project Loan to Depts/Centres

1. Books Issued	1,217	771
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E. Inter Library Loan Transactions

1. Borrowed from other Libraries	08	07
2. Loaned to other Libraries	09	05

F. Reprint Service

1. Reprints received from other Institutions	181p	1052p
2. Reprints supplied to other institutions	2334p	1350p
G. Smart Cards Generated/issued	2995	3239

H. Expenditure on

1. Purchase of Books	91.17 lakhs	88.41 lakhs
2. Subscription of Journals	817.57 lakhs	875.20 lakhs
I. New Journals/Databases Added	06	08

8.2 ISO 9001:2008 Activities

The Central Library actively participated in ISO-9001: 2008 activities and also maintained the quality based library system, services and procedures. Major activities related to ISO-9001: 2008 are listed below:

1. ISO Internal Audit was conducted on 16.05.2011
2. ISO Management Review Meeting held on 21.06.2011
3. ISO Re-Certification Audit held on 27.06.2011
4. ISO Internal Quality Audit held on 02.11.2011
5. ISO Management Review meeting held on 14.12.2011.
6. The smart cards were redesigned and issued to all staff and faculty.
7. The Central Library has taken initiative to conduct periodical review meetings of the library staff comprising Chairman LAC, Librarian, Deputy Librarian, Assistant Librarians and Section In-charges for effective functioning of the Central Library. For this purpose 02 Review meetings, 01 LAC Meeting and 01 Staff meeting were organized during April 2011 to March 2012

8.3 Major Initiatives:

The Central Library has taken various initiatives to improve the existing infrastructure, facilities, services and collections to provide strong and dynamic support to the academic, research, development, continuing education and industrial interaction programs and policy of the Institute. In this regard, some of the selected initiatives are listed below:

8.3.1 Equipments Added:

The following equipment has been added during April 2011 to march 2012

- One Automatic Tube Binding Machine from M/s. Aditya Front Line Marketing, Chennai on 20th Feb 2012.

8.3.2 Symposium on Change Management in Special and Academic Libraries under Digital Environment:

Symposium on Change Management in Academic and Special Libraries under Digital Environment jointly organized by Central Library, IIT Madras and Special Library Association, Asian Chapter on 24th January, 2012

Chief Guest: Prof. K Ramamurthy, Dean (Academic Course) and Chairman, LAC

Participants attended: 67

Invited Talks: 03

Technical Session: 02

8.3.3 On-line Access to E-Journals:

On-line access to the following 6 databases/packages has been added based on the recommendations of the faculty.

One petro database 2. Journal Citations Report (JCR) 3. Thomson Core Patents 4. Taylor & Francis package 5. Indian Economy Database 6. Science (online subscription) besides a large number of e-journals from various publishers including the major publishers like American Chemical Society, AIAA, American Mathematical Society, Blackwell, John Wiley, Oxford University Press, Royal Society of Chemistry, SAGE, SIAM, Taylor and Francis, Thomas Telford, JSTOR, Syndetic have been subscribed.

8.3.4 Extended Working Hours on Saturday & Sundays:

The Central Library has extended the working hours up to 12.00 midnight during Quiz/End Semester and Make-up Exams on Saturdays & Sundays for the benefit of students.

8.3.5 Systematic Re-shelving of Books:

To facilitate easy retrieval of books for the benefits of our students and faculty, two Groups consisting of 22 members have been formed who devotes one hour daily in the morning/afternoon in stack areas. The first phase of the re-shelving of books has been completed and the second phase is in progress. This initiative has generated considerable satisfaction among users.

8.3.6 Binding Facilities:

In order to accelerate the process of binding and to facilitate "Quick repair" of books and journal back volumes, the Central Library installed "Automatic Binding Machine" with the facility to bind the books in few seconds using strong glue. During the period April 2011 to March 2012, 4591 books/Journals have been bound and repaired. This has resulted in economical, faster binding/repair operations resulting in great satisfaction among users. Further to this, we have added Automatic Tube Binding Machine for binding exclusively for books which was installed on Feb 20, 2012.

8.4 Retirement of Staff:

Mr. K. Pounraj, Superintendent retired from service from 30.01.2012

8.5 Library automation:

1. The VIRTUA-VTLS server software upgraded from version 2009.4.1 to 2011.1.3
2. The *i-portal* upgraded to Chamo <http://iportal.cenlib.iitm.ac.in:8080/> new web OPAC
3. The VTLS server OS has been upgraded to RHEL 5.7 on 25th October 2011
4. The RFID Hybrid firmware was upgraded for following hardware to enable *I-code -1 and I-code -2* tags compliant for the RFID Technology.
 - 1) Self-check-out station
 - 2) Book drop box
 - 3) Two multipurpose stations

- 4) EAS security gate
5. The ELIMS server has been setup for RFID based circulation transactions.
6. The server has been setup for automatic backup of VTLS database in (CC) and daily manual backup is taking by Deputy Librarian.
7. The data of 2110 patrons' records (Students, Faculty, Staff, Alumni, IAS members) were added in the Virtua VTLS database
8. All the users employee ID data were updated to six digits in VIRTUA.
9. Hardware: Ten PCs were procured for RFID workstation and VTLS Web OPAC

8.6 Professional Development Lecture Series:

In view of upgrading and updating the level of information and knowledge of library staff, it has been decided to arrange series of lectures every month by experts on various topics. So far, we have arranged lectures as given below:

Sl.No	Name of the Speaker	Topic	Date
1.	Dr. V. Vishwa Mohan, Professor & Chairman, BOS, Dept. of LIS, Osmania University, Hyderabad	Evidence Based Librarianship	07.04.2011
2	Dr. Jagtar Singh, Professor & Head, Dept. of Lib. and Inf. Sci. Punjabi University, Patiala	Information Literacy in S&T Libraries	18.08.2011
3	Dr. M. Paul Pandian, Scientific Officer 'E' (Library), the Institute of Mathematical Sciences, Chennai	Digital Licensing	03.11.2011
4	Prof. I. Chandraiah, Department of Library & Information Science, SV University, Tirupati	Marketing of Library and Information Services	08.12.2011
5.	Dr. H.K. Kaul, Director, Delnet, New Delhi	Role of knowledge Centres in Academic Libraries	09.01.2012
6.	Dr. Francis Jayakanth, NCSI, Indian Institute of Science, Bangalore.	The Benefit Open Access to Scholarly Literature	14.02.2012

8.7 Faculty and their Activities:

Name	Qualifications	Major Area of Specialization
Harish Chandra Librarian	M.A., M.L.I.Sc., Ph.D.	Rural Information System, ISO application in Libraries, Digital Libraries. Website Design & Maintenance, Industries Information Service
Mahendra N. Jadhav Deputy Librarian	M.Sc., M.L.I.Sc., M.Phil.	Library Automation, Digital Libraries, Open Source Software, Library Portal etc.
C.R.Sekar Assistant Librarian	B.A., M.L.I.Sc.	SDI Service, CAS, Bibliographic Compilation.
P. Natarajan Assistant Librarian	M.A., M.L.I.Sc.	Resource Sharing, Document Delivery, Inter Library Loan.

8.8 Short term Courses / Workshops / Seminars / Symposia / Conferences / Training/ Meeting attended by faculty/Staff in recognized Academic Institutions:

Sl. No	Name of the staff	Title	Institution	Period
1.	Dr. Harish Chandra, Librarian	Member of the Library Advisory Committee	IIM Ranchi	April 2011
2.	Dr. Harish Chandra, Librarian	Expert Member to interview at SERC,	SERC, Chennai Area	13.06.2011
3.	Dr. Harish Chandra, Librarian	Member of the Selection Committee Meeting in the post of Librarian	Jawaharlal Nehru University, New Delhi	06.07.201
4.	Mahendra N. Jadhav	Attended 7 th All IIT Officers meeting	IIT Bombay	04.06. 2011
5.	Mahendra N. Jadhav	Member of Experts Committee meeting on implementation of RFID Technology	Ananda Rangapillai Library, Pondicherry University	08.09. 2011
6.	Mahendra N. Jadhav	Member of Experts Committee meeting on implementation of RFID Technology	Campus Library University of Madras Sekhizhar(Taramani)	28.09.2011
7.	Mahendra N. Jadhav	Participated in one day seminar on "Change Management in Special and Academic Libraries under Digital Environment"	Jointly organized by Central Library, IITM and Special Library Association Asian Chapter	24.01. 2012
8.	Mr. Mahendra N. Jadhav, Dy. Librarian	Case Writing Workshop. Use of management e-Resources	DoMs, IIT Madras	21.09.2011
9.	Mr. Mahendra N. Jadhav, Dy. Librarian	Selection Committee subject expert for the post of Lib. & Infor. Asst.	Chandragupta Institute of Management Patna	19.09.2011
10.	Mr. Mahendra N. Jadhav, Dy. Librarian	RFID Expert Comm. Meeting	University of Pondicherry	08.09.2011
11.	Mr. Mahendra N. Jadhav, Dy. Librarian	MALIBNET Meeting	Chennai	22.09.2011
12.	Mr. A.V. Selvavinayagam (Jr.Tech)	Attended the Workshop on "Recent Trends in Information Resource Management"	Science City, Dept. of Higher Education, Govt. of Tamilnadu, Chennai	05.08.2011
13.	Mr. S.N. Sathapathy (SLIA)	Attended the Workshop on "Recent Trends in Information Resource Management"	Science City, Dept. of Higher Education, Govt. of Tamilnadu, Chennai	05.08.2011
14.	Mr. P. Velmurugan (Jr.Tech)	attended the Workshop on "Recent Trends in Information Resource Management"	Science City, Dept. of Higher Education, Govt. of Tamilnadu, Chennai	05.08.2011
15.	05 Graduate Trainees" at	attended one day Seminar on "Library and Information in Digital Era	Hindustan University	21.11.2011

8.9 Special Lectures Delivered by Faculty in other Institutions:

SI	Name of Faculty	Topic of Lecture	Venue and Date
1	Dr. Harish Chandra	Change Management Challenges for Digital Environment	Symposium on "Change Management in Special & Academic Libraries under Digital Environment" jointly organized by Central Library, IITM & SLA, Asian Chapter on 24.01.2012
2	Mahendra N. Jadhav	Change Management: Tools & Techniques in Academic Libraries	-do-
3	Mahendra N. Jadhav	Delivered a talk on Hindi Computer Workshops	Central Hindi Training Sub Institute, Chennai on 04.08.2012

8.10 Honors and Awards:

Sl. No	Name of Faculty	Name of Award	Awarded by	Awarded for	Date of Award
1.	Dr. Harish Chandra, Librarian	Bonnie Hilditch International Librarian award 2011	Science- Technology and Engineering Division of the Special Libraries Association, Philadelphia, PA, USA	Professional Contribution in LIS	2011

8.11 Journal Editorial Board:

SI	Name of Faculty	Level	Journal
1.	Dr. Harish Chandra, Librarian	Member of Editorial Board	ISST Journal of Library & Information Sciences published by Intellectual Society for Socio-Techno Welfare

8.12 Paper Published in International Conference:

1. Harish Chandra: "Message from the President", SLA Asian Chapter News, Vol.8, No.1, 2012 p.1.
2. Harish Chandra & G. Kumar: Book Review on "Leadership and Professionalism for New Age Libraries. Edited by Dr.P.K. Jain et al. New Delhi, Bookwell, 2012, pp390 published in SLA Asian Chapter News, Vol 8 No 1, 2012 p.11.
3. Harish Chandra, Implementing Best Practices in the Central Library Website of Indian Institute of Technology Madras. Proceedings of 57th All India Library Conference of Indian Library Association on Knowledge Society: Innovations in Librarianship, Manglore, ILA, 23rd -25th February 2012, pp 627-632.
4. Harish Chandra, Refocusing on Capacity Building Strategic Shifts for Preparing LIS Professionals for Future Special Libraries. Leadership and Professionalism for New Age Libraries edited by Dr P.K. Jain et al, New Delhi, Book Well, 2012, pp. 311 – 316
5. Manju Naika and Mahendra N. Jadhav: Building Dynamic Library Portal using Wordpress Open Source Content Management System (CMS): A Study, Proceeding of International Conference on Digital Library & Electronic Information Management & Control, held at KIIT University, Bhubaneswar during Oct. 8-10, 2011

8.13 Fellowships of Academies and Professional Societies:

Sl. No	Name of Faculty	Name of Academy / Professional Society	Level
1.	Dr. Harish Chandra	President Elect SLA, Asian Chapter	Jan-Dec, 2011
2.	Dr. Harish Chandra	President, SLA, Asian Chapter	Jan- Dec, 2012
3.	Dr. Harish Chandra	Member: Standing Committee of International Federation of Library Associations and Institutions	2009-2013
4.	Dr. Harish Chandra	Governing Board, DELNET, New Delhi	Two Years, 2010
5.	Dr. Harish Chandra	ISKO (India Chapter) Bangalore	Ordinary
6.	Dr. Harish Chandra	Association of Government of India Libraries	Life
7.	Dr. Harish Chandra	Medical Librarians Association of India	Life
8.	Dr. Harish Chandra	Madras Library Association, Chennai	Life
9.	Dr. Harish Chandra	IATLIS, Patiala	Life
10.	Dr. Harish Chandra	Society of Information Science, New Delhi	Life
11.	Dr. Harish Chandra	Indian Society for Training & Development, Delhi	Life
12.	Dr. Harish Chandra	Tamilnadu Library Association, Chennai.	Life
13.	Dr. Harish Chandra	SALIS, Chennai	Life
14.	Dr. Harish Chandra	IASLIC, Kolkata	Life
15.	Dr. Harish Chandra	Association of Mathematics Teachers of India,	Life
16.	Dr. Harish Chandra	Special Libraries Association	Annual
17.	Dr. Harish Chandra	ILA- Indian Library Association	Life
18.	Mahendra N. Jadhav	Special Libraries Association	Annual
19.	Mahendra N. Jadhav	ILA- Indian Library Association	Ordinary
20.	Mahendra N. Jadhav	IASLIC	Ordinary
21.	Mahendra N. Jadhav	Society of Information Science	Life
22.	Mahendra N. Jadhav	BOSLA- Bombay Science Librarian's Association	Life
23.	C.R.Sekar	SALIS, Chennai	Life
24.	P. Natarajan	SALIS, Chennai	Life
25.	K. Sethu	SALIS, Chennai	Life
26.	N. Gnasekaran	Association of Government of India Libraries	Life
27.	Dr. Harish Chandra	Maulana Azad Library, Aligarh Muslim University, Aligarh (Member, Library Sub-Committee)	Ordinary

8.14 Distinguished Visitors/Groups to the Central Library:

Sl.No	Name of the Visitor & Designation	Date of visit	Purpose of visit
1	Sri. V. Vishwas Rao, Head, SENDOC National Institute for Micro, Small and Medium Enterprises, Ministry of MSME, Hyderabad visited alongwith 26 delegates from 13 countries	13-10-2011	To see the facilities and functioning of the Central Library
2	Dr. R. Ravichandran, Chief Librarian, NITTTR, Chennai along with 40 delegates from various countries	03-11-2011	To see the facilities and functioning of the Central Library
3	Dr. H.K. Kaul, Director Delnet (Developing Library Network) New Delhi	09.01.2012	To see the facilities and functioning of the Central Library

8.15 Future Plan:

1. To initiate the creation of database of conference proceedings received from the faculty of IITM
2. To capture more ISBNs for updating the syndetic database
3. To repair minimum 8000 books which will be identified from the stacks
4. To organize Professional Development Lectures and other professional events
5. To issue newly designed smart cards to dependants of faculty and staff residing in the Campus.
6. To initiate the abstracting of minimum 500 books not covered by the syndetic database

9. STUDENTS AMENITIES AND ACTIVITIES

9.1 Hostels:

All students admitted to IIT Madras required to reside in the hostels inside the campus. There are 15 men's hostels and 2 ladies hostel and G- type (ladies hostel) with total 5358 single rooms, 88 double rooms and 238 triple rooms. During the period under report, there were 5219 men and 1054 women students residing in the hostels.

A Warden and an Assistant Warden administer each hostel. Hostel Council consisting of student secretaries and Assistant Warden assists the Warden in day-to-day functioning of the hostel. The Hostel Management is centrally administered body and is in overall charge on the functioning of the hostels and the Central Supplies Unit. There are 115 hostel employees and are responsible to the Hostel Management through the respective Wardens of the hostels. The Chairman, Council of Wardens is the Chairman of the Hostel Management. He is assisted by the supporting staff. During the period under report, the following wardens were in position:

Chairman, Council of Wardens and

Dr. M Prakash Maiya

Hostel Management

Professor, Department of Mechanical Engineering

Name of the Hostel / Unit	Warden
Alakananda	Dr. K. Srinivasa Reddy Associate Professor, Department of Mechanical Engineering
Brahmaputra	Dr. Shaligram Tiwari Associate Professor, Department of Mechanical Engineering
Cauvery	Dr. Srinivasan Chandrasekaran, Associate Professor, Department of Ocean Engineering
Central Supplies Unit	Dr. M. Prakash Maiya Professor, Department of Mechanical Engineering
Ganga	Dr. A. Gopalakrishna Associate Professor, Department of Bio-Technology
Godavari	Dr. Nandan Kumar Sinha Associate Professor Department of Aerospace Engineering
Jamuna	Dr. Sathyanarayana N Gummadi Associate Professor Department of Bio-Technology
Krishna	Dr. S.M. Shiva Nagendra Associate Professor, Department of Civil Engineering
Mahanadhi	Dr.G. Phanikumar Associate Professor, Department of Met and Mat Engineering
Mandakini	Dr. Jyotirmaya Tripathy Associate Professor, Department of Humanities and Social Sciences
Narmada	Dr. B.S.V. Prasad Patnaik Associate Professor, Department of Applied Mechanics
Pamba	Dr. T.J. Kamalanabhan Professor, Department of Management Studies
Saraswathi	Dr. P. Murugavel Assistant Professor, Department of Physics
Sarayu	Dr. Indumathi Nambi Assistant Professor, Department of Civil Engineering
Sharavathi	Dr. N. Sujatha Assistant Professor, Department of Applied Mechanics

Sindhu	Dr. PN Santhosh Associate Professor, Department of Physics
Tamiraparani	Dr. V.S. Sampath Professor, Department of Metallurgical & Material Engineering
Tapti	Dr. N S Narayanaswamy Associate Professor, Department of Computer Science

9.2 Medical Facilities:

Medical facilities are provided to the students in the well equipped Institute Hospital. Advice is given to the students on a wide range of health problems. The details of medical facilities are available in Chapter 13 –Campus Amenities.

9.3 National Cadet Corps:

Institutional Training:

1. Enrolment

A total of 152 Senior Division/Senior Wing Air NCC cadets from IIT were enrolled against the authorised strength Of 200 during the year 2011-12 and the training schedule was successfully completed.

2. Kitting

All cadets were fitted with full set of NCC uniform to meet the expected standard of turn out.

3. Training

Training was conducted as per the NCC syllabus vide Director General NCC, Delhi No. 614/Trg/111(revised) dated 31 Dec 2007.

4. Annual Training Camp

Annual training camp was conducted from 01 Dec to 06 Dec 2011. During camp Skeet shooting and range firing practice was conducted for all cadets at miniature range, IIT Madras. Cultural and sports activities also conducted during camp.

Technical and common syllabuses were covered by specialist technical staff of this unit.

Weapon training, Drill with arms and without arms were undertaken by Permanent Instructional staff.

5. Social Service/ Community Development Activities

Social Service/ Community Development Activities like evils of smoking, AIDS Awareness and precaution against fire etc were organized during Annual Training Camp.

9.4 Gymkhana:

The Institute Gymkhana takes care of general welfare, Sports, Co-curricular and Cultural activities of students. Sports activities form an integral part for the overall development of personality, which prepares the students to overcome challenges in their various walks of life after their graduation. Hence the students are encouraged towards participation and organization of a number of sports activities.

The following tournaments were conducted during the year 2011-2012 by the Institute Gymkhana of IIT Madras.

- Freshie Tournament for I year B. Tech Students (for all games).
- The Inter-Collegiate Invitation Tournament “SPORTFEST – 2011”.
- N.S.O selection for I year B. Tech students (compulsory Attendance 85% percentage).
- All India Inter-Collegiate Basketball Tournament for Men (Gerhard Fischer Cup) and for Women (Mrs. Koikila Rajaiah Trophy). – 2011.

- IIT Sanmar Inter-Collegiate Invitation Cricket Tournament - 2011
- Inter-Hostel Tournament – “SCHROETER TROPHY” (Gymkhana Day).
- Inter IIT Tournament participation 2011 IIT 140 Students.
- Non-Media Tournament- “Dean (Students) Trophy”
- Inter IIT coaching camp 12 days (compulsory for Inter IIT contingent).
- Inter IIT Staff Meet selection and coaching for the staff’s.
- Institute Annual Open Road Race.
- Institute Annual Cycle Race.
- Institute Open Chess Tournament Race.
- Institute Open Bridge Tournament.
- Institute Premier League.
- Institute Open Best Physique competition.
-

SPORTFEST – 2011

The Inter Collegiate Tournament was conducted for city colleges both for men and women during 23rd to 27th September 2011 in few games. This tournament helps to finalize the Inter IIT team probables. Our students took part enthusiastically in all the games and won few events.

Inter-IIT Aquatic Meet 2011

The Inter-IIT Aquatic Meet was held from 2nd – 5th October 2011 at IIT Kharagpur. IIT Madras contingent won the 4th position in Water Polo.

Inter-IIT Sports Meet 2011

The 47th Inter-IIT Sports Meet was held between 12th to 19th December 2011 at IIT Kharagpur. The intense practice during mini camp in the month of November and mini camp in the month of December 1st week improved our preparations quite a bit. IIT Madras won first position in Mens section. IIT Madras won the Gold in Hockey, Table Tennis, Basketball and Weight Lifting Silver in Athletics and Squash Bronze in Volleyball. IITM women section came place with a total of 15.63 points. The Women’s Basketball team performed well. In Swimming IITM Girls won the Bronze medal. No doubt most of our teams performed at their best. IIT Madras - Men won the overall General Championship.

All-India Inter-Collegiate Invitation Basketball Tournament 2012

This tournament was conducted from 22nd February to 26th February 2012 and attracted teams from South India. The venue of the tournament is the new flood-lit basketball courts. A large number of spectators attended this tournament, witnessed many exciting matches wherein excellent performance was displayed by many teams. Hindustan University, Chennai retained the Gerhard Fischer Trophy for Men for the seventh year in succession and IIT Madras Girls team entered into the league stage and came fourth. MOP Vaishnav College won the coveted Kokila Rajaiah Trophy for women.

IITM-Sanmar Inter- Collegiate Cricket Tournament:

The prestigious IIT-Sanmar Inter-Collegiate Cricket Tournament for city Colleges sponsored by ‘Sanmar Group’ was conducted from 20th February to 05th April 2012. There was a record entry from **20** city colleges competing for top Honours. A high level of competition was witnessed throughout the tournament. Vivekananda College won the coveted Trophy and A.M. Jain entered in the finals and was placed runner-up.

Inter-Hostel Tournaments:

The Inter-Hostel Tournament was conducted in all the Games/events spread over the academic year and were contested for the Schroeter Trophy for General Championship, adhering to the Inter-IIT pattern of sports events. Also the Dean’s Trophy events were conducted on non-media and non-Inter IIT Sports events. Tapti Hostel won the Schroeter Trophy and the Dean’s Trophy won by Alaknanda Hostel.

The following non-media tournaments were conducted for the students: (i) 9-a-side Tennis ball Cricket, (ii) 9-a-side Tennis ball Cricket for Freshers, (iii) 6-a-side Football , (iv) 6-a-side Hockey, (v) 3-a-side Basketball and (vi) 3-a-side Volleyball and institute open events namely, Road Race, Cycle Race, Triathlon, Cycle Race for freshers were conducted. All these events encourage larger participation of the students / campus community. These events were

a grand success, attracting a large number of participants both from staff and students and student spectators, who witnessed and encouraged their hostel teams.

All the Gymkhana clubs like Fitness Club, with newly added facilities, Badminton club, Tennis club and Swimming Pool club functioned very well during the period. More than a few thousand students, staff, faculty and Campus children benefited from these excellent facilities and coaching offered by the Institute Gymkhana.

The Fitness club had a registered membership of 1228, the Tennis club membership of 262, the Badminton club a membership of 248. Excellent training and able guidance were provided for the students and the Campus residents at the fitness club and Yoga, bringing out the importance of maintaining good physique and health.

The advance planning of the calendar of sports events including the fixtures for both Schroeter and Dean's Trophy events helped the smooth satisfactory conduct of the various sports events in time. Also, the new flood-lit facilities attracted many students to the Basketball, the Volleyball and the Tennis courts. The new international "Synthetic Tennis Courts" added the sports and games facility at the campus.

The New Indoor Sports Complex was inaugurated. Last year to house few facilities like Table Tennis, Weight Lifting, fitness centre with new equipments and two Squash courts. New Squash Courts are coming up and it is an added facility in Sports and Games at the campus.

NATIONAL SPORTS ORGANISATION:

National Sports Organisation (NSO) is functioning as per the Government of India's decision for improving sports with special reference to upkeep the fitness of students. Our Institute has been taking necessary steps in encouraging students to participate in various games and sports events and in physical fitness activity as well.

In the academic year 2011-12 nearly 356 first year undergraduate students were registered under this scheme. Coaches/experts from various Sports Federation and sports Development Authority of Tamil Nadu were engaged for coaching our NSO students.

The noteworthy performance of sizable first year students at the various tournaments viz. Inter-IIT Sports Meet, Sportfest and All India Invitation Inter-Collegiate Basketball Tournament is partly due to the quality training given to the students and the hard efforts put forth by the students during the NSO programme.

INSTITUTE PREMIER LEAGUE:

Newly events started in few Games Viz Hockey, Football, and Basket Ball & Volley Ball.

Overall, it has been an eventful year for the Gymkhana activities, and regain the Glory of General Championship cup back continuously this year also.

47th Inter IIT Sports Meet 2011

The 47th Inter IIT Sports Meet was held at IIT Kharagpur during 12-19 December 2011. All the 15 IITs participated in the sports meet. Students from various IITs participated in various events (13 events for men and 6 events for women) enthusiastically. Despite their busy academic schedule, the students have undergone very good training and practice to get prepared for the events.

IIT Madras team won the General Championship during the 47th meet in the men category. They received gold medal in Basketball, Hockey, Table Tennis and Weightlifting. In the athletic events, the IIT Madras team stood first in the 4 x 400 m relay, and also our students received gold medal in hurdles events (both 110m and 400 m). IIT Madras women also team fared very well in the sports meet.

9.5 Advisor, Weaker Section:

This institute has nominated one Advisor to take care of the welfare of the foreign national and weaker sections students. He periodically meets these students and counsels them for various academic and non-academic requirements. During the period under report, a few students could not do well and they were counseled. Due to this counseling, they performed very well in their subsequent semesters.

In addition, the advisor arranged for extra classes in physics and mathematics between August and October for the weaker section and foreign national student of B.Tech Programme as they expressed difficulty in understanding

during normal teaching hours. Also drawing instruments have been issued to needy first year students belonging to the weaker section.

The mentor programme introduced in the previous year was continued. In this programme each first year student belonging to weaker section is attached with a mentor (from senior students) for discussion and guidance on the academic matters. The reports are periodically reviewed and discussed with the Advisor

9.6 Alumni Affairs:

The Office of Alumni Affairs (OAA) at IIT Madras has a dual mission-- enhancing Institute/ alumni relation, and fund-raising for various developmental and social projects. The following are associated objectives and activities:

9.6.1 Activities:

Serve as outward-facing window from the Institute to the Alumni:

- Act as primary interface from Institute to alumni-at-large by maintaining regular communication between IITM and alumni.
- Authorize alumni access to campus facilities
- Administer Distinguished Alumnus Award program
- Administer Travel Grant program, etc.

Drive Institute-related fund-raising activities among alumni:

- Devise fund-raising strategy
- Coordinate fund-raising activities
- Ensure timely deployment of funds
- Report to Institute and back to donor regarding status of funded projects

Register graduating students into the alumni database:

- Enrol students into the database, Maintain and grow the database
- Provide permanent alumni e-mail ID

Serve the student community:

- Administer scholarships and awards
- Solicit alumni funds towards student travel, facilities, projects, etc.
- Facilitate student mentoring by alumni

Serve the faculty community:

- Promote interactions between visiting faculty and local alumni
- Promote campus and department visits by alumni
- Promote research & consultancy relationships between faculty & alumni

Serve the alumni community:







- Support networking activities and events, such as reunions
- Support alumni communications, such as monthly newsletter
- Support alumni registration in database
- Work closely with IIT Madras Alumni Associations (IITMAA, IITMAANA, etc.) on alumni-related matters
- Support PANIIT activities (e.g., club) and events (e.g. Annual meets)



OAA staff photo



9.6.2 Distinguished Alumni Awards:

The quality of education and training that our alumni had received as students of our Institute enabled them to graduate into professionally satisfying and successful careers, and nearly all have distinguished themselves professionally. Many of them occupy top positions in India and abroad in Industries, Government Organizations and Educational Institutions. Till 2011, 35979 students have been awarded degrees. Since 1997, we are honouring selected alumni for their distinguished contribution to society, through Distinguished Alumnus Awards every year. The names of the awardees for the year 2012 were announced during the Republic Day Function. They are:

S.No	Name	Year	Current Position	Photos
1.	Dr. Raj Mutharasan,	1969/BT/CH]	Professor, Chemical & Biological Engg., Drexel University, USA	
2.	Dr. Jayant R. Haritsa,	1985/BT/EE	Senior Professor, Department of Computer Science and Automation, IISc Bangalore	
3.	Dr. P.R. Kumar,	[1973/BT/EE]	Professor and College of Engineering Chair in Computer Engineering Texas A & M University, USA	
4.	Dr. Prabhakar Raghavan,	[1981/BT/EE]	Chief Strategy Officer and Head, Yahoo! Labs, USA	
5.	Dr. Sumantran	[1981/BT/AE]	Dr. V. Sumantran, Vice Chairman, Hinduja Automotive Ltd, Chennai	
6.	Dr. Ashok S. Krishna aka S. Krishnaswamy,	[1974/BT/CH]	Vice President of Technology for Global Downstream, Chevron Corp., USA	

7.	Ms. Uma Ghurka,	[1975/BT/EE]	Technical Director, Thermopads Pvt. Ltd. & Managing Director, Thermo Cables Ltd., Hyderabad	
8.	Dr. Balaji Sampath	1994/BT/EE]	Founder and CEO, AID INDIA, Chennai	

Many events were held on campus to strengthen and celebrate alumni relations.

The first-ever "PG Confluence Day" was held on April 20, 2011, at the behest of IITM post-graduate students. It was conceived as an initiative to achieve a quantum leap in relation-building between IITM PG students and alumni, as well as to instill a sense of belonging among PG students. It was scheduled the day before "Institute Day" to leverage the presence on campus of Distinguished Alumni Awardees of 2011, half of whom were PG alumni! The program was held in CLT.

2011 Events

PG Confluence Day and 52nd Institute Day





Pioneer Re-union – 23.7.2011

Ruby re-union – 23.7.2011



Alumni Day

Our combined IITMAA AGM - Alumni Day event on Sat, July 23, 2011 was an unmitigated hit. More than 320 alumni, faculty and families joined the proceedings.

The AGM was, as some commented later, a "professional and well-run meeting". The '64, '65, '66 & '71 batch programs that followed were memorable, with > 30 alumni getting on stage to address the audience, including the Director. The announcement of the "Prof. S.S. Sampath Chair" was an emotional occasion, with his brother and son in attendance.

Prof. Ananth's last address as Director, IITM in "Alumni Day" was inimitable, as always. He struck his usual richly-humorous vein in recapping his career at IITM, and pointing the way forward.

The evening was capped by various announcements of financial contributions to IITM:

- Kris Gopalakrishnan donated Rs. 3 crores to the Thin Films Lab in the Dept of Physics, and Rs. 1 crore to the "MS Ananth Endowment Fund". His felicitation of Prof. Ananth, and the ensuing standing ovation were truly thrilling.
- The Mehta Foundation, who had earlier funded the "Bhupat & Jyoti Mehta School of Biosciences", announced \$ 2 million funding towards "School of Biosciences II", an adjacent building. A video-taped message from Rahul Mehta for Prof. Ananth was played.
- "Desh" Deshpande has announced upto Rs. 50 lakhs matching funding for batch of '73 fund-raising efforts. Based on this, the batch has set a goal of Rs. 1 crore by December. Ramesh Narasimhan spoke about this on behalf of his batch.
- The '75 batch had their Coral Reunion in December 2010, and were inspired to raise funds for the alma mater. J Krishnan, on behalf of the batch, announced that Rs. 25 lakhs had been raised, and would be directed towards "Socially Relevant Projects", a key initiative of Prof. Ananth.
- Class of '81 alumni have pledged Rs. 1 crore for their Pearl Reunion in Dec 2011, out which Rs. 25 lakhs have already been raised. The funds will go towards "sustainable campus" initiatives.
- The '83 batch has raised Rs. 50 lakhs. "Flute" Bhaskaran spoke on behalf of the batch, and mentioned that 2 projects were in the running for selection-- the MS Ananth Endowment Fund, and the Travel Grant Endowment.
- The '85 batch has pledged Rs. 5 crores, and already raised Rs. 2.7 crores. On behalf of the batch, Mahesh announced that Rs. 3.5 crores will be targeted towards a corpus that other alumni & batches could contribute to-- a welcome departure from previous practice.

With these pledges and donations, the "Golden Jubilee Alumni Fund" is approaching the quarter-way point of the target of Rs. 100 crores, with Rs. 10 crores being raised in 2011 alone, thanks to the generosity of alumni and well-wishers. With your support, we have every chance of maintaining the momentum in our relation-building and fund-raising efforts over the long-term-- a befitting legacy of the remarkable tenure of Prof. Ananth as Director.



Reunion Day 2011 : Dec. 28th

"Reunion Day 2011" on December 28, 2011 was attended by more than 300 alumni and family. It featured the Silver Reunion of the '86 batch, the Pearl Reunion of the '81 batch, and the Coral Reunion of the '76 batch. A highlight of the Event was the release of the first-ever IIT Madras coffee-table book "**Campaschimes**", a collaborative effort between our alumni, Prof. Ajit Kumar Kolar (ME) and Kumaran Sathasivam. The book is loaded with excerpts from "Campas Times", and rare and lovely photographs.

Campus tours were arranged throughout the day, and families were entertained with activities ranging from mehendi to magic. The Institute interaction program started in CLT around 11:30 and lasted two hours. Prof. David Koilpillai, Dean-Planning & Alumni Relations, welcomed the gathering. Prof. Nagarajan (Advisor, OAA) and V Gopinathan (President, MAA) briefly presented various initiatives of their respective Offices. The reunion batches were given their time on stage, enabling hilarious recollections of days gone by. The Director, Prof. Bhaskar Ramamurthi, made a presentation on "IIT Madras: Vision and Plan for 2012-16". The audience was deeply engrossed in his talk, and listened with rapt attention. Distinguished Alumnus and Secretary, IITM Alumni Charitable Trust, D Chandrasekhar, proposed the vote of thanks.



Coffee Table Book released on alumni re-union day by Prof. Kolar, Chairman CCE

81 Batch PEARL Re-union

The 1981 batch celebrated their Pearl Reunion . About 20 alumni attended this event with good representation from India and abroad. While the formal portion of the event was short and sweet by design, the attendees had an opportunity to spend several days together at informal dinners, walks around campus during the two sunny days. Cyclone Thane then unleashed its heavy winds and persistent rains..but despite that a few of us visited the CFI (sponsored in part by the 1981 batch) and were duly impressed by the range of innovative projects in flight by a truly committed and talented set of students. Dr. Seetharam and family, Mr. V. Shankar and family were gracious enough to join the three out of towners for dinner.

PAN IIT Meet in the US

The PANIIT Alumni Meet was held in New York City during Oct. 1 – 5, 2011. The meet was attended by about 1000 alumni, with nearly 100 coming from IIT Madras.

IITMAANA Travel Grant Program

IITMAANA Travel Grant is very popular among the Institute students as it helps them financially to participate in International Conferences and present research papers. Around 400 students have received funds.

Last year the Travel Grant program was expanded to facilitate international travel by UG and PG students alike to competitions, summits, workshops and even internships in addition to the historical focus on paper presentations at conferences. IITM Alumni in the US are sponsoring this grant through IITMAANA to encourage IITM students showcase their talents at the international level. A Travel Grant Endowment was initiated last year to turn this into a sustainable program with the potential to aid a larger fraction of IITM students.

IITMAANA Travel grant distributed till 2011:

Indian Institute of Technology, Madras

IITMAANA Travel Grant Statistics from 2001 to Aug. 2011

Year	B.Tech	M.Tech	M.S	Ph.D	Dual	others	Amount B.Tech	Amount M.Tech	Amount (MS)	Amount (Ph.D)	Amount (Dual)	Others	Total
2001-02	2	1	3	9	5	0	47000	50000	104282	324053	61518	0	586853
2003	5	0	6	14	0	0	188994	0	181524	310965	0	0	681483
2004	4	0	1	15	2	0	100000	0	20000	289960	70000	0	479960
Feb'05-Oct'06	1	0	7	44	0	1	20000	0	40000	721500	0	78764	860264
Feb'05-Oct'07	1	0	7	27	0	0	30000	0	78000	397000	0	0	505000
Jun-08	0	0	4	17	0	0	0	0	40000	189000	0	0	229000
Dec. 2008	0	0	1	16	0	0	0	0	15000	250000	0	0	265000
Jul-09	0	0	4	34	0	0	0	0	65000	3,72,000	0	0	437000
Sep. 2009	4	0	5	10	1	1	53000	0	87000	1,30,000	15000	15000	300000
Feb. 2010	2	0	0	16	0	0	45000	0	0	1,85,500	0	0	230500
June 2010	3	0	1	24	0	1	60,000	0	12,000	446000	0	25000	543000
Nov. 2010	1	0	2	13	0	3	30000	0	48000	213000	0	120000	411000
Apr. 2011	8	1	2	17	2	0	154000	20000	20000	224000	40000	0	458000
Aug. 2011	2	0	6	14	6	6	50000	0	68000	206000	165000	150000	639000
TOTAL	25	1	47	252	14	12	777994	70000	778806	4258978	351518	388764	6626060

	B.Tech	M.Tech	M.S	Ph.D	Dual	Others	Amount B.Tech	Amount M.Tech	Amount M.S	Amount Ph.D	Amount Dual	Amount Others	Total
Apr. 2011	8	1	2	17	2	0	154000	20000	20000	224000	40000	0	450000
Aug. 2011	2	0	6	14	6	6	50000	0	68000	206000	165000	150000	639000

9.6.3 Awards sponsored by Alumni:

Sl.no	Name of the Prize	Award particulars & Criteria	Donor Name	Citation
1	Institute Merit Prize	A silver medal and cash award of Rs.5000/- to the student with the best academic record in first two semesters of B.Tech/Dual Degree programme – 2nd prize	K. Bhaskaran 1983/BT/CH	Award instituted by Mr. K. Bhaskaran 1983/BT/CH in the name memory of his father Sri K. Krishnamurthi prize
2	Institute Merit Prize AE	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Parasuram Balasubramanian 1971/BT/AE & 1973/MT/IM	Award instituted by Dr. Parasuram Balasubramanian 1971/BTAE & 1973/MT/IM in the name of Prof. T. K. Varadan
3	Institute Merit Prize BT	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Ramesh Damani 1985/BT/CH	Award instituted by Ramesh Damani 1985/BT/CH in honour of Dr Anita Mehta-Damani
4	Institute Merit Prize CH	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Ramesh Damani 1985/BT/CH	Award instituted by Ramesh Damani 1985/BT/CH in honour of Dr Anita Mehta-Damani
5	Institute Merit Prize CS	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	R. Gopalakrishnan 1992/BT/CS	Award instituted by Mr. R. Gopalakrishnan 1992/BT/CS in the name of V. Ramachandran
6	Institute Merit Prize CE	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Shankar V 1981/BT/ME	Award instituted by V. Shankar 1981/BT/ME in the name of Computer Age Management Services Prize
7	Institute Merit Prize EE	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	R.Muralidharan 1968/BT/EE	AWARD instituted by R. MURALIDHARAN BTEE 1968 IN MEMORY OF HIS FATHER LATE V. RAJAGOPALAN
8	Institute Merit Prize ED	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Srinath H S 1977/BT/EE	Award instituted in the name of Latha & Sampath Srinath
9	Institute Merit Prize EP	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Srinath H S 1977/BT/EE	Award instituted in the name of Latha & Sampath Srinath
10	Institute Merit Prize NA	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Srinath H S 1977/BT/EE	Award instituted in the name of Latha & Sampath Srinath
11	Institute Merit Prize ME	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Vijay R Raghavan 1980/PHD/ME	Award instituted by Vijay R. Raghavan 1980/PHD/ME in the name of Mrs. Jayshree Ananth
12	Institute Merit Prize MM	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 3 rd and 4 th semesters in each branch of B.Tech/Dual Degree programme	Satish Pai 1985/BT/ME	Award instituted in the name of Satish Pai 1985/BT/ME

Sl.no	Name of the Prize	Award particulars & Criteria	Donor Name	Citation
13	Institute Merit Prize AE	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 5 th and 6 th semesters in each branch of B.Tech/Dual Degree programme	Parasuram Balasubramanian 1971/BT/AE & 1973/MT/IM	Award instituted by Dr. Parasuram Balasubramanian 1971/BT/AE & 1973/MT/IM in the name of Prof. E.G.Tulapurkara
14	Institute Merit Prize BT	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 5 th and 6 th semesters in each branch of B.Tech/Dual Degree programme	Ramesh Damani 1985/BT/CH	Award instituted by Ramesh Damani 1985/BT/CH in honour of Dr Anita Mehta-Damani
15	Institute Merit Prize CS	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 5 th and 6 th semesters in each branch of B.Tech/Dual Degree programme	Shankar V 1981/BT/ME	Award instituted by V. Shankar 1981/BT/ME in the name of Computer Age Management Services Prize
16	Institute Merit Prize ME	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 5 th and 6 th semesters in each branch of B.Tech/Dual Degree programme	Dr. V P Kochikar 1993/PHD/PHHS	Award instituted in the name of Vivekanand Kochikar 1993/PHD/PHHS
17	Institute Merit Prize CS	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 7 th and 8 th semesters in each branch of Dual Degree programme	Shankar V 1981/BT/ME	Award instituted by V. Shankar 1981/BT/ME in the name of Computer Age Management Services Prize
18	Institute Merit Prize MM	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 7 th and 8 th semesters in each branch of Dual Degree programme	Sundaresan V 1971/BT/MT	Award instituted in the name of V. Sundaresan 1971/BT/MT
19	Institute Merit Prize ME	A silver medal and cash award of Rs.5000/- to the student with best academic record in 7 th and 8 th semesters in ME branch of Dual Degree programme - Product Design-ME22	Rajesh Achanta 1987/BT/ME	Award instituted in the name of Rajesh Achanta award 1987/BT/ME
20	Institute Merit Prize NA	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 7 th and 8 th semesters in each branch of Dual Degree programme	Thiruppathy Srinivasan 1989/BT/OE	Award unstituted by Thiruppathy Srinivasan 1989/BT/OE in the name of "Poovai TR Srinivasan & S Alamelu Award"
21	Institute Merit Prize ME	A silver medal and cash award of Rs.5000/- to the student with best academic record in 7 th and 8 th semesters in ME branch of Dual Degree programme - Intelligent Manfg.-ME23	Sagar Pushpala 1981/BT/CH	Award instituted in the name of Sagar Pushpala 1981/BT/CH
22	Institute Merit Prize ME	A silver medal and cash award of Rs.5000/- to the student with best academic record in 7 th and 8 th semesters in ME branch of Dual Degree programme - Energy Tech-ME21	Raghu Ramamoorthy 1982/BT/ME	Award instituted in the name of Raghu Ramamoorthy 1982/BT/ME
23	Institute Merit Prize EE	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 7 th and 8 th semesters in EE branch of Dual Degree programme - Microelectronics & VLSI Design(EE21)/Power Systems & Power Electronics (EE23)	Ramesh Chopra 1969/BT/EE	Award instituted by Ramesh Chopra 1969/BT/EE in the name of ELECTRONICS FOR YOU
24	Institute Merit Prize EE	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 7 th and 8 th semesters in EE branch of Dual Degree programme- Power Systems & Power Electronics (EE23)	Rajeshwari Ramanan 1976/BT/EE	Award instituted in memory of Ramanan Ramamurthy 1976/BT/EE

Sl.no	Name of the Prize	Award particulars & Criteria	Donor Name	Citation
25	Institute Merit Prize CE	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 7th and 8th semesters in each branch of Dual Degree programme	Ravi Venkataraman 1971/BT/CE	Award instituted in the name of Venkataraman Ravi 1971/BT/CE
26	Institute Merit Prize BT	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 7th and 8th semesters in each branch of Dual Degree programme	Ramesh Damani 1985/BT/CH	Award institute by Ramesh Damani 1985/BT/CH in honour of Dr Anita Mehta-Damani
27	Institute Merit Prize CH	A silver medal and cash award of Rs.5000/- to the student with the best academic record in 7th and 8th semesters in each branch of Dual Degree programme	Ramesh Damani 1985/BT/CH	Award institute by Ramesh Damani 1985/BT/CH in honour of Mr. Madan Gopal Damani
28	Institute Merit Prize OE	A silver medal and cash award of Rs.5000/- to the student with best academic record in 1 st and 2 nd semesters in each branch of M.Tech programme	V. Sundar 1982/PHD/CE	Award instituted by Prof. V. Sundar 1982/PHD/CE in the memory of his father Prof. Vallam Venkataswami prize
29	Institute Merit Prize EE	Institute Merit Prize EE A silver medal and cash award of Rs.5000/- to the student with the best academic record holder in 1st and 2nd semesters in EE 3 (Microelectronics and VLSI Design) M.Tech programme	Amitava Das Gupta & Nandita Das Gupta 1984/MT/EE	Award instituted by Prof. Amitava Das Gupta & Nandita Das Gupta 1984/MT/EE in the name of Prof. M.K. Achuthan
30	Institute Merit Prize CE	A silver medal and cash award of Rs.5000/- to the student with best academic record in 1st and 2nd semesters in each branch of M.Tech programme	N. Raghavan 1970/BT/CE	Award instituted by N. Raghavan 1970/BT/CE in the name of his mother Smt. Jayalakshmi Narasimhan Memorial Prize
31	Institute Merit Prize ME	A silver medal and cash award of Rs.5000/- to the student with best academic record in 1st and 2nd semesters in each branch of M.Tech programme	Rajeshwari Ramanan 1976/BT/EE	Award instituted in memory of Ramanan Ramamurthy 1976/BT/EE
32	Institute Merit Prize PH(ST)	A silver medal and cash award of Rs.5000/- to the student with best academic record in 1st and 2nd semesters in each branch of M.Tech programme	Nagarajan R 1981/BT/CH	Award instituted by R. Nagarajan 1981/BT/CH in the name of Lakshmi Ravikumar Memorial Prize
33	Institute Merit Prize CH	A silver medal and cash award of Rs.5000/- to the student with best academic record in 1st and 2nd semesters in each branch of M.Tech programme	M/S. Chevron Products Company	Award instituted by Mr. Ashok Krishna 1974/BT/CH in the name of Chevron Products Company
34	Institute Merit Prize PE	A silver medal and cash award of Rs.5000/- to the student with best academic record in 1st and 2nd semesters in each branch of M.Tech programme	International Conference in Drilling Technology	Award instituted by International Conference in Drilling Technology in the name of Prof. M. S. Ananth
35	Institute Merit Prize MS	A silver medal and cash award of Rs.5000/- to the student with best academic record (highest CGPA) in 1 st and 2 nd semesters of M.B.A.	Parasuram Balasubramanian 1971/BT/AE & 1973/MT/IM	Award instituted by Dr. Parasuram Balasubramanian 1971/BT/AE & 1973/MT/IM in the name of late Prof. T. N. Govindarajan

Sl.no	Name of the Prize	Award particulars & Criteria	Donor Name	Citation
36	Institute Merit Prize CY	A silver medal and cash award of Rs.5000/- to the student with best academic record (highest CGPA) in 1st and 2nd semesters of M.Sc. Chemistry	Amarnath Natarajan 1996/MSC/CY	Award instituted by Amarnath Natarajan 1996/MSC/CY in the name of his mother Kalaimani Natarajan
37	Merit Award	Merit Award for the Engineering student with highest CGPA in Innovation and Entrepreneur minor	Dr. V. Kumar 1981/MT/IM	Award instituted by Dr. V. Kumar 1981/MT/IM in the name of "Mrs. Pattammal Viswanathan"
38	Merit Award	Merit Award for the best Research thesis in Marketing in the M.S/Ph.D Program	Dr. V. Kumar 1981/MT/IM	Award instituted by Dr. V. Kumar 1981/MT/IM in the name of "N.KANNAN"
39	Merit Award	Merit award for the best student with the highest CGPA in Marketing Specialization in the MBA Program	Dr. V. Kumar 1981/MT/IM	Award instituted in the name of "Dr. V. KUMAR"
40	Merit Award	Merit award for the Engineering Student with highest CGPA in Management minor	Dr. V. Kumar 1981/MT/IM	Award instituted by Dr. V. Kumar 1981/MT/IM in the name of "S. VISWANATHAN"
41	Award	Instituting the award for the best thesis (MS/PHD) in the area of OB/HRM from DoMS	Dr. R. Solomon Suresh 1993/PHD/HS	Award instituted by Dr. R. Solomon Suresh 1993/PHD/HS in the memory of his adorable father R.N.Rajendran

CARES & CSIE: 1984 Batch Alumni-Funded Initiatives

"IITM CARES' aim is to focus on activities involving collaboration between Institute alumni and the various communities at the Institute (faculty, students etc.) in areas other than alumni funding.

During the past one year, IITM CARES has arranged for sharing of expertise by distinguished alumni with faculty and students in various fields- petroleum engineering, automobile design, entrepreneurship etc. IITM CARES has also initiated a number of collaborative projects with the help of alumni and faculty with organizations like Precision Medall, ITC, Automation Industries Association of India etc. In the coming year, apart from these activities, IITM CARES hopes to help in greater interaction between faculty and industries with the help of alumni for the mutual benefit of both, try and enhance collaborative efforts between IITM and other reputed Universities world over and such like."

CSIE: The Center for Social Innovation and Entrepreneurship (CSIE) at IIT-Madras was founded in August 2010 with a focus on teaching and research related to social enterprise in India. It aims to bring together the innovation and entrepreneurship aspects of IITM by creating knowledge and understanding that will be relevant to the problems that the poor in India face.

Why Social Entrepreneurship at IIT Madras?

IIT Madras has been involved in the field of social entrepreneurship since 2002, when it partnered with the Lemelson Foundation's RAMP program for social entrepreneur, as well as Villgro Innovations Foundation, a Chennai-based social business incubator.

In 2010, recognizing the need to build a full-fledged centre focusing on social entrepreneurship within the Institution, CSIE was established, with support from the Lemelson Foundation, the IITM Alumni Batch of 1984, and Villgro Innovations Foundation.

CSIE seeks to distinguish itself through:

- Its focus on delivering social enterprise knowledge primarily to engineering students, with the aim of developing their ability to develop and deliver technology solutions that creates social impact
- Its focus on academic research that will seek to address problems exclusively within the Indian context

Nobel Laureate Lecture Series

L & T ECC, through the efforts of our Distinguished Alumnus, Mr. KV Rangaswamy, has recently instituted a "Nobel Laureate Lecture Series" at IIT Madras.

The funding will enable us to host 2 Nobel Laureates in 2012 (in March & Sep) to give lectures, and to interact with our students, research scholars and faculty (as well as with L & T ECC). We would like the Laureate to stay on campus for 4-5 days for this purpose. We are prepared to offer round-trip business-class airfare for the Laureate and his/ her spouse.

Chapter meetings:

Chennai Chapter : Nov. 19, 2011

Chapter of IITMAA organized an alumni get together to welcome Prof. Bhaskar Ramamurthi (1980-BTEE) the new Director of IITM at 6.30 p.m. on 19th November 2011 at Hotel Savera, Chennai. All IIT alumni were invited along with their spouses for the event. Nearly 150 alumni attended the event which culminated with Dinner.

V.Gopinathan (1969-BTCH), President, IITMAA and Girish Paliath (1978-BTME), President of the Chennai Chapter of IITMAA welcomed the participants. Prof.R.Nagarajan (1981-BTCH), Advisor, Office of Alumni Affairs briefly introduced the new Director Prof. Bhaskar Ramamurthi following which Prof. Bhaskar addressed the gathering. He stressed on the role alumni could play in strengthening the Institute through their support towards the following:

- Facilitating industry contacts and relationships
- Identifying international faculty & students interested in collaborating with/ studying at IITM
- Promoting student entrepreneurship initiatives
- Mentoring students
- Networking strongly among themselves & with the Institute.
- The event then wound up with a formal vote of thanks by K.Bhaskaran (1983-BTCH),



2. Bangalore Chapter Meeting – Jan 28, 2012

IITMAA Bangalore Chapter meeting for the year 2012 was held at Hotel Royal Orchid – Bangalore on 28th Jan 2012 to welcome our new Director Prof. Bhaskar Ramamurthi. 80+ alumni have attended the meeting. The Director, Prof. R. Nagarajan (Advisor, OAA) & the IITMAA Secretary Mr. Madhusudan made a detailed presentation.



3. Director Prof Ramamurthi's first address to IITMAA Mumbai Chapter on Feb 05, 2012

The program was well attended by more than 70+ local alumni. Mr. Muthuraman (1997 DAA) & Mr. Vijayakumar Magapu (2008 DAA) also attended the program. Director gave a detailed presentation on his Vision & Plans for IITM, which was then followed by a Q&A session.



4. Director's visit to Hyderabad on Feb 25, 2012

The program was well attended by more than 40+ local alumni. Director gave a detailed presentation on his Vision & Plans for IITM, which was then followed by a Q&A session.

9.7 Guidance and Counselling Unit – Renamed as Mentoring for Individual Transformation (MITr):

A Campus information booklet – “IIT Life – A Glance” was prepared for all the fresh students and were made available to all of them.

This year the Guidance and the counseling Unit (GCU), renamed Mitr, saw a lot of changes. The newly formed faculty team has been structured in terms of a Chief Advisor (Mitr), and five Faculty Mentors, one each for the B.Tech/DD, M.Tech+ MBA+M.Sc, MA + integrated MSc, MS+P.hD programmes, and one for lady students.

Mitr is structured on a task-force based model, with the team divided into academic grievances, anti-addiction, public health, social activities, creative and media task forces. Each task force is headed by a coordinator and volunteer counselors. A 24*7 counseling system was implemented this academic year with a 24-hour helpline. A professional Counseling organization provides the counselors who visit the campus every day during working hours and man the call centre at all times.

10. STUDENTS PLACEMENT

The number of students placed during 2010-2011 is summarized below:

Branch	B.Tech	Dual Degree	M.Tech	M.B.A	M.A	M.Sc	M.S	Ph.D	Total
Aerospace	14	14	8	-	-	-	6	1	43
Applied Mechanics	-	-	7	-	-	-	3	3	13
Bio Technology	10	12	5	-	-	-	1	5	33
Civil	21	28	30	-	-	-	4	-	83
Chemical	37	9	11	-	-	-	1	-	58
Chemistry	-	-	-	-	-	-	-	6	6
Com. Science	21	12	51	-	-	-	11	1	96
Electrical	36	45	37	-	-	-	14	3	135
Engineering Design	-	17	-	-	-	-	6	-	23
Engineering Physics	15	-	-	-	-	-	-	-	15
Humanities & Soc Sciences	-	-	-	-	9	-	-	-	9
Management Studies	-	-	-	62	-	-	1	-	63
Mathematics/IMSC	-	-	4	-	-	6	-	-	10
Mechanical	54	39	62	-	-	-	12	2	169
Metallurgical	13	10	9	-	-	-	2	1	35
Ocean	21	6	20	-	-	-	3	1	50
Physics	-	-	2	-	-	2	-	2	6
Total	242	192	246	62	9	8	64	24	847

During the year 847 students / scholars were placed in various organisations.

11. FINANCIAL ASSISTANCE TO STUDENTS

Financial assistance in the form of scholarships and fellowships are given to meritorious students who are pursuing engineering, technology and science education at this Institute. The details of Scholarships and Fellowships sanctioned to the students of different programmes during 2011-12 are as follows:

11.1 Assistance to B.Tech /Dual Degree students:

Merit-cum-means scholarship: 25% of students admitted to B.Tech/Dual Degree programmes and whose parental income is less than Rs. 4.5 lakhs were sanctioned MCM Scholarship (i.e exempted from payment of tuition fee of Rs. 25000/- semester plus pocket allowance of Rs. 1000/- per month). During the period under report 730 students benefited. The year-wise details of number of students were benefited are given in Table 11.1(b).

SC/ST students admitted to B.Tech/Dual Degree programmes and whose parental income is less than 4.5 lakhs were sanctioned the concession of free messing plus pocket allowance of Rs.250/-p.m. and exemption from payment of tuition fees and hostel seat rent as per Government of India post-matric scholarship rules. As on 31.3.2012, 374 students were benefited.

Institute free studentship scholarship for B.Tech/Dual Degree programmes were sanctioned to the students, which comprises of exemption from payment of tuition fees.

The batch-wise details of number of students benefited also are given below:

Table 11.1 (a)

Sl.No	Name of the Scholarships	No. of students
1.	Govt of India Ministry of Tribal Affairs ST Scholarships	13
2.	Ministry of Social Empowerment	30

Table 11.1 (b) - No of MCM and SC/ST scholarships

Batch	MCM Scholarship	SC/ST Scholarship	Student Freeship
2011	202	92	47
2010	208	128	83
2009	171	91	52
2008	149	63	60
Total	730	374	242

In addition to the above, the Institute sanctioned notional prize of Rs. 1000/- to 25 first B.Tech top ranking (in the JEE 2010) students whose parental income is more than Rupees two lakhs.

11.2 Other Scholarships:

Scholarships were sanctioned by NCERT, GOI and State Governments to meritorious students pursuing B.Tech programme in this Institute. The batch – wise details of number of students benefited by these scholarships are given below:

No of NCERT Scholarship obtained by B.Tech /DDstudents

Batch	Total no. of students
2011	23
2010	-
2009	17
2008	7
Total	47

No. of State Government Scholarship obtained by B.Tech/DD students

State	Batch / Total no. of students				Total
	2011	2010	2009	2008	
Andhra Pradesh	2	1	1	1	5
Karnataka	1	1	1	-	3
Kerala	1	-	-	-	1
Total	4	2	2	1	9

11.3 M.Tech:

Students who joined M.Tech programme through GATE were awarded Half-time Teaching Assistantship (HTTA) at Rs.8000/- per month. During the period under report 362 fresh assistantships and 306 renewed assistantships were given. The discipline-wise details are given below:

No. of HTTA awarded

Sl. No.	Discipline	Fresh – 2011 batch		Renewal - 2010 batch
		I Sem.	Non-HTTA got HTTA	
1	Aerospace Engineering	14	3	14
2	Applied Mechanics	11	-	12
3	Biotechnology – Clinical Engg.	12	-	0
4	Chemical Engineering	29	4	7
5	Civil Engineering	44	6	46
6	Computer Science & Engg.	56	-	52
8	Electrical Engineering	54	1	48
9	Indl. Maths & Sc.Computing	9	2	7
10	Mechanical Engineering	61	9	72
11	Metallurgical & Mat. Engg.	20	1	17
12	Ocean Engineering	18	-	29
13	Solid State Technology	8	-	2
Total		336	26	306

11.3.1 M.Tech Dual Degree

Students who joined M.Tech programme under Dual Degree of 2007 batch were awarded Half-time Teaching Assistantship (HTTA) at Rs.8000/- per month based on their obtaining valid GATE score or on seaming CGPA of 8.0 or above (CGPA of 7.5 & above for SC / ST). During the period under review 218 students were awarded fresh assistantships of Rs.8000/- per month from June 2011 and 218 renewed assistantships in Jan. 2012 out of which 186 students were renewed HTTA at the rate of Rs. 8000/- p.m and 32 students at the rate of Rs. 4500/-p.m. since they obtained CGPA of less than 6.5 in July-Nov. 2011 semester. The department-wise details are given below:

Sl. No.	Discipline	2007 batch	
		Fresh (9 th Sem.)	Renewal (10 th Sem.)
1	Aerospace Engineering	18	18
2	Biotechnology	15	15
3	Chemical Engineering	10	10
4	Infrastructural Civil Engg.	28	28
5	Computer Science & Engg.	20	20
6	Electrical Engineering	48	48
7	Engineering Design	19	19
8	Mechanical Engineering	44	44
9	Met. & Mat. Engineering	8	8
10	Naval Arch. & Ocean Engg.	8	8
Total		218	218

11.4 M.Sc.:

Students admitted to M.Sc programme were sanctioned Rs 1000/- p.m. merit scholarship as per rule. Exemption from payment of tuition fee was also given to certain students. During the period under report 137 students benefited. The department-wise details are given below:

No. of Merit Scholarship and freeship awarded

Sl. No.	Course	Merit scholarship		Freeship (tuition fee waiver)		50% Freeship (50% tuition fee waiver)	
		1 st Year	2 nd Year	1 st Year	2 nd Year	1 st Year	2 nd Year
1.	Chemistry	14	12	5	5	10	10
2.	Mathematics	13	13	5	5	12	4
3.	Physics	10	9	4	4	0	2
Total		37	34	14	14	22	16

11.5 M.A.:

Institute Merit Scholarship: 25% of students admitted to M.A programme and whose parental income is less than Rs. 4.5 lakhs were sanctioned Merit Scholarship (i.e exempted from payment of tuition fee of Rs. 3000/- semester plus pocket allowance of Rs. 1000/- per month).

SC/ST students admitted to M.A programme and whose parental income is less than 4.5 lakhs were sanctioned the concession of free messing plus pocket allowance of Rs.250/-p.m. and exemption from payment of tuition fees and hostel seat rent as per Government of India post-matric scholarship rules.

Institute free studentship scholarships for M.A. programme were sanctioned to the students, which comprises of exemption from payment of tuition fees.

The batch-wise details of number of students benefited also are given below:

Batch	Merit Scholarship	SC/ST Scholarship
2011	7	2
2010	7	3
2009	1	2
2008	-	1
2007	1	0
Total	16	8

11.6 M.S:

The scholars admitted to MS programme through GATE are given Half-time Teaching Research Assistantship (HTRA) of Rs 8000/- p.m. for three years. During the period under report 498 scholars received these assistantships of which 186 were fresh scholars. The department-wise details of the assistantships awarded and renewed are given below:

No. of HTRA awarded

SI. No.	Discipline	Fresh	Renewal	Total
1	Aerospace Engineering	14	23	37
2	Applied Mechanics	12	24	36
3	Biotechnology	8	13	21
4	Chemical Engineering	15	24	39
5	Civil Engineering	8	17	25
6	Computer Sc. & Engg.	17	29	46
7	Engineering Design	6	13	19
8	Electrical Engineering	48	97	145
9	Management Studies	14	26	40
10	Mechanical Engineering	20	20	40
11	Metallurgical & Mat. Engg.	6	6	12
12	Ocean Engineering	18	20	38
Total		186	312	498

11.7 Ph.D:

The Scholars admitted to Ph.D. full time programme in Engineering are sanctioned Half-time Teaching / Research Assistantship (HTRA) of Rs.18000/- p.m. for first 2 years and Rs.20000/- p.m. for next 3 years. Scholars admitted to the Ph.D fulltime programme in the Science subjects through GATE or other equivalent exams are sanctioned Rs.16000/- p.m. for first 2 years, Rs.18000/- p.m. for next 3 years. During the period under report 836 students obtained assistantships of which 239 were fresh scholars. The department-wise details of the assistantships awarded and renewed are given below:

No. of HTRA awarded

SI. No.	Discipline	Fresh	Renewal	Total
1	Aerospace Engineering	7	32	39
2	Applied Mechanics	10	29	39
3	Biotechnology	22	48	70
4	Chemical Engineering	20	38	58

5	Chemistry	17	40	57
6	Civil Engineering	29	67	96
7	Computer Science & Engg.	7	16	23
8	Engineering Design	11	12	46
9	Electrical Engineering	20	65	85
10	Humanities & Soc. Sciences	4	17	21
11	Management Studies	7	20	27
12	Mathematics	10	12	22
13	Mechanical Engineering	26	84	110
14	Metallurgical & Mat. Engg.	13	29	42
15	Ocean Engineering	18	11	29
16	Physics	18	54	72
Total		239	574	836

11.8 (a) Financial Assistance to Research Scholars/Students for presentation of papers abroad:

This Institute is encouraging the Research Scholars to present papers in international conferences for which they are given financial assistance. The financial assistance provided to M.S. & Ph.D. scholars are given under:

Adhoc amount including Registration fee: Rs.1,00,000/-

11.8 (b) National/International conferences in India:

Research scholars and students of course programmes are given the following financial assistance for presentation of papers in National/International Conferences in India:

Registration fee:

National conference : Rs. 2,000/-
International conference : Rs. 3,000/-
Travel : Third Class AC train fare
Daily allowance : Rs.200/- per diem subject to a maximum of 10 days

12. WEAKER SECTION & FOREIGN NATIONAL STUDENTS

12.1 B.Tech programme:

As per the GOI orders 27%, 15% and 7.5% of seats are reserved for OBC, SC and ST students respectively in the B.Tech. programme. These students are admitted through the Joint Entrance Examination with a relaxation. These students have to get only 60% of the marks obtained by the last student of the general category to get qualified for admission. During counselling prior to admission, the Adviser explained to each student the requirements of different branches. This helped the students to choose a suitable branch based upon their capability and interest. When a student finds the chosen branch is tough, he is allowed to switch over to lower JEE cut-off branch at the end of his first semester.

The following are the details of number of SC/ST students admitted to B.Tech programme through JEE and Preparatory Course in July 2012:

Total Sanctioned Intake	Sanctioned Intake		No. joined through				
			Program me	JEE		Preparatory Course	
	SC	ST			SC	ST	ST
B.Tech - 474	71	36	B.Tech	68	34	-	3 (GE)
Dual Degree - 364	55	27	Dual Degree	53	24	-	2 (GE)

SC/ST students admitted against reservation are given the following benefits:

- Travelling allowance (II Class train fare/ordinary bus fare) from the place of residence to Chennai to join the B.Tech programme.
- Tuition fee waiver.
- Free lodging and messing (basic menu only) and pocket allowance of Rs.250/- p.m. provided their parents' income is Rs.4,50,000/- net per annum or less.
- A Book Bank as part of Central Library is maintained for the benefit of the SC/ST students. The students are issued 12 tickets for taking books from the Book Bank. Books are issued for a semester.
- Drawing instrument (Mini-drafter) free of cost.
- Help in getting placement. Wherever possible, industries are requested to conduct separate interviews for SC/ST students and the requirements for these students are lower than those for the general category.

12.2 Preparatory Course for admission to B.Tech programme:

A preparatory course of one academic year was initiated by the Ministry of Human Resource Development, Government of India, during the year 1983-84 exclusively for SC/ST students. Selection for this course is made from the Joint Entrance Examination list of SC/ST students who did not qualify for admission. Upon successfully completing the preparatory course at the IIT, they would be eligible to join the B.Tech programme and they will not require to write the JEE again. Following are the details of admission in July 2011:

Offer issued for PC		No. joined	
ST	PD	ST	PD
6 (STPD-5; ST-1)	7 (OBC-6; GE-1)	3	7 (OBC -6; GE-1)

5 Preparatory course 2010-11 batch candidates were offered admission to B.Tech/Dual Degree Programme in July 2011 as they have successfully completed the preparatory course.

12.3 M.Tech programme:

Seats are reserved for SC and ST candidates as per the Government of India orders. They are admitted through GATE by a separate merit list. Following are the details of admission in July 2011:

Offer issued		No. joined	
SC	ST	SC	ST
58	29	47	25

12.4 M.Sc programme:

Admission was made to the M.Sc. programme through entrance examinations only. 21 SC students were admitted in M.Sc. These students were given tuition fee waiver.

M.Tech and M.Sc students admitted against reservation are given the following benefits:

- Book Bank facility with 12 library tickets. Books are issued for a semester.
- Both Public Sector and Private Sector industries were requested to recruit SC and ST students. Other special steps were also taken to enhance the recruitment of this category of students.
- Scholarship is given to these students as per Govt. of India norms.

12.5 Admission of Foreign National Students and Indian National Residing Abroad:

In July 2011, 2 Ethiopian student joined M.Tech programme.

At the end of March 2012, 5 foreign nationals were on the rolls of the Institute. The programme and country-wise details are given below:

Country	I Year	II Year	III Year	IV Year	V Year	Total
1. Foreign National Students						
M.Tech						
Ethiopia	2	4	-	-	-	6

Foreign students are also permitted to use the Book Bank. Book Bank Library tickets are issued to each student. Books are issued for a semester.

In addition to the above, IIT Madras Alumni Association provides financial assistance to students under IITMAANA Travel grant program to assist IITM students to visit USA and present their papers at nationally recognized technical conferences. The grant will cover airline ticket charges and visa fees but exclude payment of conference registration fees.

13. CAMPUS AMENITIES

IIT Madras is a residential Institution. It is housing about 184 Students and 804 Faculty/Staff members in the Campus. It provides various amenities in the Campus for students and staff.

13.1 Engineering Unit:

The Engineering Unit, IIT Madras is entrusted with the responsibility of construction, maintenance of residential and non-residential buildings and various services of this Institute. This Unit also award contracts in transparent manner and in the best interest of the Institute and by ensuring maintenance of all round integrity as well as best possible standards, adequate supervision. The Engineering Unit ensure timely, prompt and efficient services to the residents in the campus.

The Engineering Unit completed the following major works during the period April 2011 to March 2012.

Major Works completed (Civil)

Sl. No.	Name of Work	Rupees in Lakhs
1	Addition and Alteration Works in Academic Zone	365.00
2	Renovation and Minor works at Kitchen, Bath and Toilet and repairing to floors in Residential and Non-residential buildings in Residential zone	176.00
3	Construction of 96 Nos. C2 type quarters for faculty	1745.00
4	Construction of additional floor (i.e. Third Floor) over Alakananda, Narmada and Saraswathi Hostels (3 x 64 = 192 rooms)	348.00
5	Design, Supply and Erection of Pre-Engineered and Prefabricated Structural Arrangements for the construction of additional rooms for Girls hostel in Saravathi hostel	328.00
6	Construction of Additional Floor (4 th Floor) at Sharavathi Girls hostel	
7	Construction of 60 Nos. of G Type quarters (G+6) for married research scholars	948.00
8	Construction of Additional floor over Tapti and Brahamaputra Hostels	345.00
9	Extension of 3 rd floor in Engg. Design Building	106.00
10	Providing and laying sewer line from new G type and C2 type quarters to sewage treatment plant	38.00
11	Addition and alteration works at OAT – Phase I	25.00
12	Construction of additional class rooms in Ocean Engineering Department	26.10
13	Creation of new infrastructure facilities (G+1) for Central School by replacing the damaged primary school wing	1014.00
14	Construction of 512 Nos. students room by replacing the existing mess, dining hall and construction of additional toilet block, common room and staircase at various hostels	1932.00
15	Construction of compound wall with RCC precast panels and raising of boundary walls at various places along the boundary of IIT Madras	205
16	Creation of new infrastructure facilities for Vana vani School by replacing the damaged primary school wing	781.00
Total		8382.10

Major Works completed (Electrical)

Sl. No.	Name of Work	Rupees in Lakhs
1	Annual Contract for day to day maint. Work for street lights, substations and cables in IIT Madras campus for the year 2011-12	40.83
2	AMC for day to day electrical maintenance, minor and alteration works for the Hostel Zone buildings in IIT Madras campus for the year from April 2011 to March 2012.	34.81
3	AMC for day to day electrical maint., minor and alteration works for Residential Zone buildings in IIT Madras campus.	32.95

4	AMC for day to day routine maintenance of EPABX Telephone lines in IIT Madras campus for the year 2011 -12	17.83
5	Annual Compre. maintenance of Air Conditioners in various depts. (Zone – 3) in IIT Madras for the year 2011–12	6.77
6	Provision of AC facility to virtual class rooms for NPTEL at MSB360 in IIT Madras.	6.49
7	Operation on contract of central AC plant at IIT, Madras	4.00
8	Replacement of 3.0TR ductable split units in DCF for civil Engg. In BSB 108 in IITM.	4.43
9	Providing Flood lights for the Foot Ball and Hockey grounds in IIT Madras	39.73
10	Provision of power mains and cabling for 3x10.0 HP pumps for corporation pumps, 2x50.0 HP pumps at main pump house & 3x12.0 HP sewage pumps in sewage pumping station in IIT Madras	1.28
11	AMC for Kone Elevator located at Dept. of Mgt Studies for the period from 01-04-2011 to 31-03-2012	65.00
12	AMC for OTIS Elevators located at ESB & Admn for the period from 01-04-2011 to 31-03-12	2.77
13	Non – Comprehensive Annual Maintenance Contract for the fire fighting and fire alarm system at various locations in IIT Madras for the year 2011-12	1.50
14	AMC for 25 KVA, 110 KVA, 125 KVA, 180 KVA, (2Nos), 200 KVA, 500 KVA, DG sets and diesel engines in IITM.	0.90
15	Providing and installing 10 TR DX air cooled plant for clean room 100 for Micro electronics lab in ESB in IITM	5.12
16	Providing Energy Meters for street lights, outdoor stadium & Common areas in IIT Madras	2.57
17	Provision of fan coil Unit in the rooms of Chairman & Office of TCL at level 5 and rooms of librarian, committee room at level 1 at Central Library in IIT Madras	3.85
18	Rectification of OFC cable fault near new C2 block	0.41
19	Replacement of scroll compressor for 5.0trductable split unit of ESB32/c and replacement of Outdoor Unit for KCL 306	0.43
20	Providing Temporary illumination at various locations inside our premises for 48 th Convocation in IIT Madras	2.46
21	Structured networking at G.Quarters (Girls Hostel Extension)	0.99
22	CAT6 Cable wiring at new G Quarters (Girls Hostel Extension)	0.91
23	Supplying and fixing of 8 port D-link Data Switches at G type Quarters (Girls Hostel Extension)	0.69
24	Providing Scaffolding works for ladies toilets shaft in biotechnology building in connection with the erection of fabricating ducts for toilets exhaust system.	0.23
25	Replacement of 3.0tr Ductable split units in DCF for Civil Engineering in BSB 108 in IIT Madras	4.43
Total		281.38

Work in Progress (Electrical)

Sl. No.	Name of Work	Rupees in Lakhs
1.	AMC for day to day routine maintenance of electrical installation in Academic Zone buildings for the year 2011-12.	88.32
2.	AMC of Air Conditioners in various epts. (Zone–1) in IIT Madras for the year 2011 – 12.	9.53
3.	Annual Comp.Maint. of Air conditioners in various departments (Zone-2) in IIT Madras for the year 2011-12	10.45
4.	Comp. Annual Maint. Contract for video conferencing system for 3 machines for the period from 01-04-11 to 31-03-2012	1.33
5	AMC and maintenance supervision for the fire & security works at Data centre in computer centre building.	7.21
6.	AMC for 39 Johnson make Elevators erected at various building in IITM	21.22
7.	Annual Maintenance Contract for Central Air-Conditioners plant in SAC building	4.37

8.	Rectification of OFC cable fault near new C2 block	0.18
9	Automation of water tanks in central library and management studies building.	0.35
10	Providing 50 mm dia water drain pipe AHUs in Chennai library in IIT madras	0.24
11	Annual maintenance contract for KONE Elevator located at Department of Management Studies for the period from 01-04-2011 to 31-03-2012.	0.65
12	AMC of 4 Nos of 10 Passenger lifts in C2-6, C2-7 Block	2.51
Total		146.36

Work in Progress (Civil)

Sl. No.	Name of Work	Rupees in Lakhs
1	Renovation and Minor works at Kitchen, Bath and Toilet and repairing to floors in residential and nonresidential buildings in Residential zone for the period 2010-11	176.00
2	Construction of an Academic Complex (G+6) by replacing the dilapidated workshop and stores buildings	12940.00
3	Extension of AC facility to Central Library from existing central AC plant	70.00
4	Construction of a new Boys hostel	5248.00
5	Construction of New Canteen Block (G + 1 Floor)	1400.00
6	Construction of New Wing of Chemistry Dept. (G +2)	913.00
7	Community Hall	528.00
Total		21,275.00

In addition to above, Engg. Unit has engaged an Architectural consultant for preparing Master Plan for the campus and updating the existing services.

Future Plan:

Following works are planned to be taken during the next academic year:

Sl.No.	Name of the Work	Rupees in Lakhs
1	Construction of Centre for Sustainability (G+ 6 floors)	2750.00
2	Augmentation of Himalaya Mess (G+ 2 floors)	1130.00
3	Augmentation of Krishna Hostel Mess (G + 2 Floors)	495.00
total		4375.00

13.2 Housing Facilities:

1076 Faculty/staff quarters and 184 students' quarters are available in the Campus for accommodation. In addition to this 176 servant quarters are also in the campus.

13.3. Horticulture:

A separate horticulture unit is functioning under Engineering Unit. A Corridor has been formed near proposed sports complex area for movement of blackbuck from hostel zone.

13.4 Telephone Facilities:

A new Telephone Exchange was commissioned by BSNL, Chennai Telephones Division in the Campus. All direct lines of this institute, which were linked from Raj Bhavan Telephone Exchange, were linked to this Exchange.

13.5 Central Supplies Unit:

It functions under the administration of a Warden. The Unit procures milk from Tamil Nadu Co-operative Milk Producers' Federation (TCMPF) and distributes to the student hostels.

Under the provision supply scheme, the Unit procures the items of major consumption from the wholesale suppliers through Provision Selection Committee and Provision Purchase Committee and distributes them to hostels, thus economizing the mess expenditure in the Hostel.

Further to the above, the Unit is procuring the branded cosmetics and eatables from the wholesale dealers and distributing the same to the students through Students Amenities Centres under nominal price which is comparatively very less than the maximum retail price (MRP).

13.6 Guest House:

There are two Guest House in the Campus viz. the Main Guest House and Taramani Guest House which have 7suites and 84 rooms respectively.

13.7 Hospital:

Institute Hospital-IIT M is one of the best health care units embedded to any education institute with talented and dedicated work force dealing with Cardiac, Neuro, RTA and other emergencies round the clock.

Our outstanding performance in this financial year has been possible because of the valuable contribution of Visiting Consultants and below mentioned Medical Officers:

Dr. Mahalakshmi M. Ravi, Chief Medical Officer-i/c.

Senior Medical Officers	Medical Officers	Junior Medical Officers (on Contract)
Dr. B. Rebecca Punithavalli	Dr. N. Porchelvi	Dr. G. Shobana Devi
Dr. Sabitha Selvam	Dr. V. Thenral	Dr. P.R. Shanmuga Priya
	Dr. D. Saraswathi	Dr. P. Arathy
	Dr. R. Gowri Shanker	
	Dr. P. Kavitha	

Needless to mention to have been able to achieve this feat by the ever dedicated assistance of paramedics and supporting staff.

Activities

1. For students admission into IIT-Madras:

Medical Board for **59** Physically challenged - Orthopaedic, Ophthalmic, ENT disabilities and dyslexic candidates was held on 08/06/2011 & 09/06/2011 Chaired by Dr. Mahalakshmi M. Ravi and comprising of

1. Dr. Muralidharan, Oto-Rhino Laryngologist- Civil Surgeon, RGGG Hospital
2. Dr. Govardhan, Orthopaedic Surgeon-Civil Surgeon, RGGG Hospital
3. Dr. Subashini, Ophthalmologist, Institute of Ophthal, Egmore
4. Dr. Jaya Prakash, Psychiatrist, Institute of Mental Health, Kilpauk
5. Dr. Varma Doshi, Psychiatrist, Institute of Mental Health, Kilpauk
6. Dr. N. Porchelvi, Medical Officer, Institute Hospital, IIT Madras
7. Dr. R. Gowri Shanker, Medical Officer, Institute Hospital, IIT Madras

The Physically challenged candidates and parents were very much satisfied with the arrangements.

2. Medical and gynaecological screening was done on 16/06/2011 for 67 Owzone workers and on 20/06/2011 for 25 Tech-Kids employees.

3. For students admission to IIITDM:

Medical Board for **5** Physically Challenged - Orthopaedic, Ophthalmic, ENT and dyslexic candidates were examined and opinion of the board given immediately.

The Physically challenged candidates and parents were very much satisfied with the arrangements.

4. Medical Board conducted for Recruited faculty – 20 Members.

5. The Medical Board / Medical ground for Quarters allotment- 21.

The following Continuing Medical Education Programmes were conducted for Academic improvement of our Doctors:

Topic	Name of Medical Faculty	Held on
Stroke Management	Dr. Satish Kumar	08/04/2011
Post Exposure Prophylaxis.	Mr. Nandha Gopu	15/04/2011
Hand Wash Techniques	Mr. Suresh	21/04/2011
Dyspepsia	Dr. S. Ganesan	21/04/2011
Rational use of Antibiotics (In General Practice)	Dr. Vijayalakshmi	29/04/2011
Diabetic Nephropathy/Neuropathy	Dr. Panneerselvam	17/06/2011
Common GI Problems in GP, LFT-Evaluation and NAFLD and NASH	Dr. G. Manoharan	24/06/2011
Irritable Bowel Syndrome	Dr.K. Premkumar	30/06/2011
Low Back Ache – For a GP	Dr. Parthasarathy	05/07/2011
Current Management of Urolithiasis	Dr. R. Vijayakumar	17/07/2011
Comprehensive Lipid Management	Dr. Sriram Mahadevan	20/07/2011
Benign Prostatic Hyperplasia (BPH)	Dr. M.R. Pari	21/09/2011
Case Studies in Diabetes and Endocrinology	Dr. Sriram Mahadevan	22/09/2011
Allergic Rhinitis	Dr. N. Rajaram	23/09/2011
Gliptins	Dr. Sridhar	21/10/2011
Latest Updates in the Guidelines in Dyslipdemia	Dr. V. Jinados	27/10/2011
Case Studies in Diabetes and Endocrinology	Dr. Sriram Mahadevan	29/10/2011
Diabetic Retinopathy	Dr. Prathiba Surendar	17/11/2011
Strategies to Prevent and Manage Diabetes	Dr. Usha Sriram	18/11/2011
Diabetic Retinopathy and Common Ophthalmic Problems	Dr. Prathiba Surendar	23/11/2011
Efficacy with Efficacy Barrier-DPP4	Dr. Suresh Prabhu	25/11/2011
Thyroid and Malignancy	Dr. Sriram Mahadevan	21/01/2012
VERTIGO	Dr. Vasudevan	02/03/2012
Similarities and Dissimilarities among Progestins Management of Unscheduled Bleeding who eligibility Criteria on Contraception	Dr. Narassa Narayani	27/03/2012
Diabetic Foot	Dr. T.V. Raja	28/03/2012

Health Education Programmes:

Myocardial Infraction is on the rise among young individuals. Hence the following Health Education Programmes were arranged.

Topic	Name of Medical Faculty / Organisation	Held on
Heart Attack in the Young-Life Style Modification	Dr. Sunil Chandy, Cardiologist, CMC, Vellore	11/10/2011
Diabetic Retinopathy	Dr. Prathiba Surendar, Dr. Agarwal Eye Hospital, Velachery	17/11/2011
Strategies to Prevent and Manage Diabetes	Dr. Usha Sriram, ACEER, Adyar	18/11/2011
Know your Liver	Dr. Dinesh Jyothimani, MIOT Hospital, Chennai	21/12/2011
Cancer Cervix – Prevention	Dr. Sowmya Ragavan, Apollo Hospital	17/02/2012

Unusual Presentations and rare cases:

Case 1	21 years old student : Early and Prompt Detection of Myocardial infarct (Heart Attack)- Life Saved
Case 2	23 years old student: Anti Phospholipid Antibody Syndrome with incidence 1 in 55,000 was detected, treated appropriately and complications prevented.

Case 3	Acute Charcots Disease in a Diabetic, treated immediately and complication prevented.
Case 4	A case of 22 weeks Fibroid with Menorrhagia with Cerebral Venous Thrombosis – Life Saved.
Case 5	A case of Myocardial Infarct with unusual presentation- Life Saved.
Case 6	A student was diagnosed to be a case of “Sickle Cell Anaemia”.
Case 7	A case of Ectopic Pregnancy in a student was detected in time and managed appropriately – Life Saved.
Case 8	A case of Undescended testis and Right Orchiopexy surgery was performed in a student.
Case 9	A case of Prosthesis Infection-Knee was diagnosed and managed appropriately.
Case 10	A case of Impending Periorbital Cellulitis was diagnosed and treated appropriately.
Case 11	A case of Ureteric calculi with stenosis- JJ Stenting done in a student.
Case 12	Left Hemiparesis due to Right Middle Cerebral Artery Territory Infarct in a student.
Case 13	MTP with sterilization with Medical Complication of Dengue Fever and UTI (ESBL).
Case 14	A case of Open Pulmonary Tuberculosis with UTI (ESBL).
Case 15	A student and a case Open Pulmonary Tuberculosis with Plural Effusion.
Case 16	A case of Atrial Fibrillation Cardiac Emergency was treated appropriately.
Case 17	A case of Supra Ventricular Tachycardia – Cardiac Emergency was treated appropriately.
Case 18	Infectious Mononucleosis rare cause of PUO diagnosed and treated appropriately on a student.
Case 19	Scrub Typhus another rare cause of PUO diagnosed and treated appropriately on a student.
Case 20	Multiple Myeloma was diagnosed and treated appropriately in a student.
Case 21	Prostatic Cancer diagnosed to an employee and referred to Oneologist in a Hostel employee.
Case 22	Epstein Barr Virus Infection in a dependant.

Pre-Malignant Lesions:

Case 1	A case was diagnosed as a case of Lowgrade Squamous Intraepithelial Lesions.
Case 2	A case was diagnosed as a case of High Grade Squamous Intraepithelial Lesions.

Free Camps:

- World Heart Day - Free screening camp: Echocardiogram / Dr. Sengottuvelu, Cardiologist, Apollo Hospital gave his valuable opinion to all patients - Immediate Cardia Intervention advised for 2 patients.
- Free Hearing Check-up camp for Senior Citizens by Dr. K. Balamurugan, Visiting Consultant (ENT), Institute Hospital on 22/01/2012.
- Medical and Gynaecological Screening was done on 16/06/2011 to 18/06/2011 for 67 OWZONE workers and 25 Tech-Kids employees on 20/06/2011.
- Free Anaemia Screening camp was done on 17/02/2011 by Dr. Sowmya, Apollo Hospital
- Free Gastro Camp conducted by Dr. A. Mohan Rao, Institute Consultant on 25/08/2011.
- Free Ultrasound Screening camps conducted on six days in 4 months.
- In connection to Womens Day, General and Gynaec check was for Women. Pap Smear sent for HPE. USG study done.
- Free Eye Screening, Free Diabetes screening and Free BMD Study was done for all women.
- Free Lipid Profile screening camp was conducted on 24/08/2011.

Surgeries:

Operation Theatre was upgraded with latest equipments that was necessary.

- Major and Minor Surgeries : 644
- Orthopaedic Intra Articular Procedures : 94

Gyneac:

- Pap Smear : 125

Emergency Surgeries:

- Emergency Laparoscopic Appendicectomy : 1
- Emergency Appendicectomy : 4
- Emergency Caesarean Section : 3

Details of Infectious Diseases treated as in-patients (Ward):

1. Viral Fever : 85
2. Chicken Pox : 17
3. AGE : 30
4. Dengue Fever : 105
5. Enteric Fever : 29
6. Pneumonia : 7
7. Hepatitis : 3
8. Bronchitis : 1
9. Mumps : 1
10. TB : 2
11. Malaria : 7

Total claim for In-Patients admissions in the Institute Hospital through Insurance Company **Rs.32,79,333/-** .

Procurements:

Sl.No.	Name of Equipments	Purpose
1	Uro-Flow Meter	Urology
2	Cardio Toco Gram (Twin Foetus Monitor)	Labour Ward
3	Vaccine Refrigerator	Labour Ward
4	Surgical Aspirator	Ward
5	Retinoscope	Eye OP
6	Bipolar Cautry	Operation Theatre
7	Lensometer	Eye OP
8	Ot Care Fumigator	Operation Theatre
9	Pulmo Nebulizer	Ward/Casualty
10	Electronic Weighing Machine With Platform Type	OPD
11	Digital B.P. Monitor	OPD
12	Dell Server & Scanner	For computerization of Hospital
13	Ent Light Source	ENT Clinic
14	Linen Trolley	Operation Theatre
15	Ss Crash Cart	Casualty / Ward
16	Laprosopic Instruments	Operation Theatre
17	Patient Attendant Couch	Ward
18	Dental Chair (Donated by Dr.S.C. Selvamuthukumar, Professor & Head, Thaimoogambigai Dental Care, Chennai-17)	Dental Clinic

ANNUAL CENSUS OF HOSPITAL FOR THE YEAR 2011-12											
Month	O.P DAY 8am - 6pm	Emergency Cases 6pm - 8am	In patient in Casualty admission	In Patient (In ward)	Surgery	Dental	X-ray	ECG	USG	Lab	Physio
APR 11	5818	507	172	35	03	60	204	60	44	534	141
MAY 11	5123	392	183	27	09	116	198	61	21	503	118
JUN 11	5231	392	161	24	16	48	226	96	05	568	140
JUL 11	6132	512	268	32	20	66	212	81	-	643	131
AUG 11	9033	861	377	87	34	166	355	91	27	1069	178
SEP 11	8309	761	348	78	14	170	376	123	41	1068	164
OCT 11	7841	644	327	48	21	159	252	80	36	745	139
NOV 11	8006	690	364	76	25	161	235	97	46	850	156
DEC 11	6254	465	251	45	23	54	206	82	17	591	102
JAN 12	8672	757	378	63	15	54	264	83	-	760	144
FEB 12	7893	686	300	44	18	59	230	75	-	637	126
MAR 12	7906	662	215	49	45	106	278	80	-	697	159
TOTAL	86218	7329	3344	608	243	1219	3036	1009	237	8665	1698
Grand Total = 97499 Patients for the year 2011-2012											

13.8 Bank:

State Bank of India IIT branch is functioning on the campus, which has provided 2 ATMs. Canara Bank branch is also functioning on the campus. ICICI Bank has provided an ATM in the Hostel Sector.

13.9 Post Office and Telecom centre:

There is a post office on the campus opposite to the State Bank of India to cater to the needs of the staff, students and residents of the campus. A 24 hours telecom centre is functioning to cater to the needs of the staff, students and residents of the campus.

13.10 Schools:

Vanavani Matriculation Higher Secondary School (VVMHSS) administered by IIT Madras Educational Trust is functioning on the campus besides a Kendriya Vidyalaya (K.V.) VVMHSS school is offering courses from LKG to XII Standards and the KV is offering courses from I standard to XII standard.

13.11 Open Air Theatre:

An Open-Air Theatre is available for screening films by the Film Club during week-ends and for use for other functions of the Institute and the Schools.

13.12 Student Activities Centre:

This building is used for indoor games of the students as well as for the conduct of important functions such as Convocation, orientation programme for freshers etc.

13.13 Cafeteria:

Two Canteens, viz. IIT Staff Canteen and Tifans Restaurant are available on the campus to cater to the needs of the staff and students.

13.14 Crèche:

A Crèche is functioning in the campus for the benefit of staff/ working women. There were about 50 children in the Crèche during the period under report.

13.15 Transport Services:

The Institute has 8 LYNX buses which provide transport facility to the staff, students and residents of the campus. Transport facilities are also available for the official work.

13.16 Campus News:

Campus News is published every Friday highlighting the important events of the Institute.

14. FINANCE AND ACCOUNTS

The financial year of the Institute corresponds with that of Government of India i.e., 1st April to 31st March of the following year. The Accounts of the Institute are annually audited by the Principal Accountant General (Tamil Nadu & Pondicherry), Chennai on behalf of the Comptroller & Auditor General of India.

The 78th Finance Committee of the Institute in its meeting held on 13th December 2011 recommended Non-Plan Revised Estimates of Rs.21370 lakh (Gross) for the year 2011-12 and Budget Estimates of Rs. 23300 lakh (Gross) for 2012-13. The Committee also recommended Revised Estimate of Rs.21888.31 lakh under Plan for 2011-12 besides recommending budget estimate of Rest.20131.09 lakh under plan schemes for 2012.13.

The following are the Summary of Revised Estimates 2010-11 and Budget Estimates for 2011-12 as approved by the Board of Governors of the Institute in their 211th Meeting held on 13.12.2011.

(Rs. in Lakhs)			
Head	BE – 2011-12	RE – 2011-12	BE – 2012-13
I. Non-Plan			
Income	3290.00	3620.00	3550.00
Grant from MHRD(Proj)	17710.00	17750.00	19570.00
Total	21000.00	21370.00	23300.00
Expenditure	21000.00	21370.00	23300.00
II. Plan			
Opening Balance	0.00	2997.23	0.00
Grant received/anticipated	19325.00	18891.08	20131.09
Total	19325.00	21888.31	20131.09
Expenditure	19325.00	21888.31	20131.09

Audit:

The Annual Accounts of the Institute for the year 2010-11 was audited by Principal Accountant General (Tamil Nadu & Pondicherry) during July 2011. The certified copy of Accounts and Audit Report were sent to MHRD, New Delhi for placing before Parliament on 16th December 2011 after obtaining approval of Board of Governors of this Institute on 13th December 2011 in its 211th Meeting held on 13.12.2011. Summary of Plan/Non-Plan funds utilization for 2010-11 is as below.

Plan:

(Rupees in Crore)	
Opening Balance	17.85
Normal Plan Grant Sanctioned during 2010-11	116.23
Total available	134.08
Capital Expenses during 2008-09	
Buildings & Construction	63.11
Furniture & Fixtures	2.67
Equipments	15.51
Books, Journals & Periodicals	9.09
Revenue Expenditure	13.74
Total	104.12
Balance	29.96

Non-Plan**(Rupees in Crore)**

Grant Sanctioned during 2010-11	149.40
Tuition Fees	9.84
Hostel Fees	0.96
Entrance Examination Fees	10.27
Administrative Income	3.96
Interest Income	1.28
Other fees	2.53
Other Income	1.27
Total available	179.51
Expenditure during 2010-11	
Pay & Allowances	79.90
Service Pension & Family Pension- Retirement Benefits	44.06
Library Services	0.13
Health Services	1.94
Student Scholarship	1.07
Administrative Expenses	3.40
Departmental/Laboratory/Workshop expenses	7.63
Transport Subsidy	0.59
Student Support Activities	0.64
Computer Facilities	1.66
House Keeping & Estate Maintenance	11.28
Water/Electricity Charges	14.79
Entrance Examination Expenses	10.59
Total utilized *	177.68
Surplus	1.83

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