

Agriculture & Engineering for a Healthier Life

# INTERNATIONAL CONFERENCE OF AGRICULTURAL ENGINEERING

## CIGR-AgEng2012

Valencia Conference Centre  
July 8-12, 2012. Valencia, Spain.

# Final Programme



ORGANIZERS

SUPPORT



<http://cigr.ageng2012.org>



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Valencia Conference Centre  
July 8-12, 2012. Valencia. Spain

**CIGR-Ageng2012**

## **Final Programme**

|                                   |     |
|-----------------------------------|-----|
| WELCOME TO CIGR-AGENG 2012        | 4   |
| KEYNOTE SPEAKERS GENERAL SESSIONS | 6   |
| TECHNICAL SPEAKERS                | 7   |
| MEETINGS                          | 10  |
| WORKING GROUPS                    | 12  |
| CONFERENCE CENTRE PLAN            | 14  |
| CONGRESS AT A GLANCE              | 16  |
| SCIENTIFIC PROGRAMME              | 18  |
| GUEST PROGRAM                     | 118 |
| SOCIAL AND HOSTED RECEPTIONS      | 118 |
| POST CONFERENCE TOURS             | 118 |
| GENERAL INFORMATION               | 120 |
| SPONSORS                          | 123 |

# WELCOME TO CIGR-AGENG 2012



On behalf of the European Society of Agricultural Engineers (EurAgEng), the International Commission of Agricultural and Biosystems Engineering (CIGR), and the Spanish Society of Agroingenieria (SEAgIng), welcome to the International Conference of Agricultural Engineering CIGR-AgEng2012 here in Valencia, Spain on July 8-12, 2012.

EurAgEng and CIGR celebrate this joint International Conference on Agricultural Engineering in 2012. In addition, a Special Parallel Conference on mechanisation and post-harvest technology in developing countries organized by UNIDO and FAO forms a part of the Congress.

The Conference covers emerging research and new engineering solutions for food production and rural activities, as a means to enhance human well-being and promote social benefits. New concerns include methods of agricultural, livestock and forestry production, and the preservation of natural resources and landscape by applying modern engineering concepts. Healthier production systems need to encompass higher social and economic benefits.

The CIGR-AgEng2012 Conference is aimed at academia, industry, producers, manufacturers and service providers from all over the world for discussion about novel approaches to integrate agriculture and engineering for enhancing the quality and expectancy of life. PhD students, Delegates of CIGR and EurAgEng, Representatives of Developing Countries and Industry are especially encouraged to participate in CIGR-AgEng 2012 Conference.

I am looking forward to meeting you in July for CIGR-AgEng2012 in Valencia, Spain.

Florentino Juste  
Past-President EurAgEng  
President of CIGR-AgEng2012 Conference

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AgEng2012 takes place in Valencia, Spain, one of the most famous cities in Europe, and known as a leading trading place since the new world was discovered. Valencia is now a university city and capital of a region with various scientific institutions. Participants will meet in a modern conference venue, adjacent to a historic city with many tourist attractions and in a region with diverse agriculture.

Diverse agriculture is characteristic of Europe too. A wide variety of advanced technologies are needed to cope with the economic conditions of farmers and with the requirements of society in industrialized countries. These requirements aim to save precious resources and produce environmentally friendly and healthy food. As technology is part of farming, engineering must contribute to the development of advanced and efficient agricultural practices.

The conference offers a wide range of topics for presentations on agricultural and biosystems engineering subjects and there will be time for discussion, for initiating collaborations and for developing ideas for innovations. EurAgEng working groups, which will be organized as part of the conference, will give additional opportunities for deeper discussion on specific fields of interest and for initiation of joint activities between European research institutions and industries.

Peter Schulze Lammers  
EurAgEng President 2010-2012



The mission of CIGR is to serve the needs of humanity world-wide, by fostering mutual understanding, continuous improvement and rationalization of sustainable biological production systems. CIGR seeks to improve the quality of life for all while protecting the environment through the application and advancement of engineering and science.

Since its foundation in 1930, a primary goal of CIGR has been to foster international cooperation. The 2012 International Conference of Agricultural Engineering will play a fundamental role in support of this goal.

This conference provides a forum for engineers, scientists and associated professionals to exchange knowledge, information and experience related to new developments in agriculture and biosystems. More importantly, it provides a networking platform for professionals to establish long term working relationships that result in improvements in the quality of life of those we serve, and which support sustainability of biological production systems and related industries.

The CIGR Presidium would like to recognize EurAgEng, the organizing committee and the participants in this conference for their hard work and willingness to share knowledge and experience to the benefit of all.

Fedro S. Zazueta  
President, CIGR

# KEYNOTE SPEAKERS GENERAL SESSIONS

## MONDAY



### **Christopher WATHES**

Towards livestock production in the 21st Century: a perfect storm averted?

Date: Monday 9th July 9:00-10:00

Venue: Valencia Conference Centre (VCC)

Location: Auditorio1

Special Professor in the School of Life and Environmental Sciences, Nottingham, Head of Bioengineering Division and then Director of Science, Silsoe Research Institute (UK) and Professor of Animal Welfare, at The Royal Veterinary College, UK.

## TUESDAY



### **John F. REID**

Current and future applications of robotics and automation to agriculture

Date: Tuesday 10th July 8:00 - 9:00

Venue: Valencia Conference Centre (VCC)

Location: Auditorio 1

Dr. John F. Reid is Director, Product Technology and Innovation at the Moline Technology Innovation Centre (MTIC), John Deere. Dr. Reid received his BS ('80) and MS ('82) from Virginia Tech in Agricultural Engineering and his doctorate ('87) from Texas A&M in Agricultural Engineering.

## WEDNESDAY



### **Geoffrey C. MREMA**

The role of technology in the developing countries

Date: Wednesday 11th July 8:00 - 9:00

Venue: Valencia Conference Centre (VCC)

Location: Auditorio 1

Professor Geoffrey C. Mrema, from Tanzania, holds a B.Sc. degree in Mechanical Engineering (Hons) from the University of Nairobi; M.Sc. and PhD in Agricultural Engineering from the University of Newcastle-upon-Tyne, UK, and University College, Dublin, Ireland respectively. In February 2005, Dr. Mrema was appointed FAO's Sub-Regional Representative for Southern and Eastern Africa based in Harare, Zimbabwe. In 2006 he returned to the FAO headquarters as Director of the Rural Infrastructure and Agro-Industries Division (AGS), until his retirement in 2011. He is now based at the Department of Agricultural Engineering and Land Planning of SUA where in addition to lecturing and research, he undertakes consultancy missions for international and national agencies.

# TECHNICAL SPEAKERS

## MONDAY

### **SPECIAL PARALLEL CONFERENCE-02: First international symposium on computational fluid dynamics (CFD) applications in agriculture (ISHS working group on CFD, CIGR technical section II and ASABE committee SE-303) SESSION 111 FOOD ENGINEERING AND PROCESSING**



#### **In-Bok Lee**

Date:  
Monday 9th,  
10:20-11:55  
Venue:  
Valencia Conference Centre  
(VCC)  
Location: Room 2

Mr. In-Bok Lee is currently Chair of Rural Systems Engineering Department, College of Agriculture and Life Sciences of Seoul National

University (SNU). Other responsibilities At present, he is Vice President of Korea Society of Agricultural Engineers (KSAE), Chair of the CFD Working Group in International Society for Horticultural Science (ISHS), Editorial member of Biosystems Engineering, and also member of professional and international organizations like ASAE and CIGR.

His laboratory (Aero-Environmental & Energy Engineering Laboratory -A3EL) works on aerodynamics and energy engineering in the agricultural field, focusing on three major fields: 1) environmental control (especially ventilation) of agricultural buildings such as greenhouses and livestock houses, 2) atmospheric dispersions of aerosol, airborne disease, and gas (odor), and 3) renewable energy and energy saving technology.

To this date, he and his team have published 45 (SCI) International journals and 31 Domestic journals publications.

### **SPECIAL PARALLEL CONFERENCE-07: Silos and granular materials (SIGMA) SESSION 112 SILOS LOADING**



#### **Alan Roberts**

Date:  
Monday 9th July,  
10:20-11:55  
Venue:  
Valencia Conference Centre  
(VCC)  
Location: Room 3

In his 50-year career, Alan Roberts has published seminal technical papers and combined a glittering academic career with practical industry problem-solving. However, despite his retirement, Alan has maintained a brisk pace of work. His research interests continue, while he teaches short courses in Australia, Canada and the US.

### **SPECIAL PARALLEL CONFERENCE-03: IV INTERNATIONAL WORKSHOP ON COMPUTER IMAGE ANALYSIS IN AGRICULTURE SESSION 114 PLANT INSPECTION**



#### **Bosoon Park**

Date:  
Monday 9th,  
10:20-11:55  
Venue:  
Valencia Conference Centre  
(VCC)  
Location: Room 8+9

Dr. Bosoon Park is a Lead Scientist at Richard B. Russell Research Center, U.S. Department of Agriculture, Agricultural Research Service in Athens, Ga. He is the author and co-author over 221 articles including patents, book chapters, peer-reviewed jour-

nals, and proceedings on bio-instrumentation, bio-imaging as well as nanotechnology for food safety and quality. He is an Associate Editor of Transactions of the ASABE and Applied Engineering in Agriculture, and serves on Editorial Board on journal of Sensing and Instrumentation for Food Quality and Safety. He holds several honorary and scientific memberships including Sigma Xi, Alpha Epsilon, ASABE, SPIE, ACS, AAAS, IFAC, and CNIR. Currently, he holds Adjunct Faculty at the University of Georgia.

**SPECIAL PARALLEL CONFERENCE-06: Applications of smart sensors and wireless sensor networks (WSN) in PLF**  
**SESSION 151 Wireless Communication in Agriculture**



**Vahid Tarokh**

Date:  
Monday 9th,  
15:25-15:55  
Venue:  
Valencia Conference Centre  
(VCC)  
Location: Room 5

Vahid Tarokh received a Ph.D. degree in Electrical Engineering in 1995. He worked at AT&T Labs-Research and AT&T Wireless Services

until 2000 where he was (in chronological order) Senior Member of Technical Staff, Principal Member of Technical Staff and Head of Department of Wireless Communications and Signal Processing

## TUESDAY

**SPECIAL PARALLEL CONFERENCE-05: The Ninth International Livestock Environment Symposium (ILES IX)**

**SESSION 203 OVERVIEW OF MEASUREMENT AND VERIFICATION PROTOCOLS IN LIVESTOCK ENVIRONMENTS**



**Peter Engel**

Date:  
Tuesday 10th July,  
8:55-10:30  
Venue:  
Valencia Conference Centre  
(VCC)  
Location: Auditorio 2

Mr. Peter Engel has more than 17 years of professional experience within the environmental sector. In 2011 he was appointed as head of the international VERA secretariat. The secretariat is hosted in Denmark at the Danish Standard Foundation on behalf of the Danish Environmental Protection Agency. Mr. Engel has worked with environmental technology throughout his entire career both on a theoretical and a practical level.



**Nico W.M. Ogink**

Date:  
Tuesday 10th,  
8:55-10:30  
Venue:  
Valencia Conference Centre  
(VCC)  
Location: Auditorio 2

Nico Ogink is researcher at Livestock Research of Wageningen UR. His expertise and research themes are related to livestock and environment issues, with a focus on measuring emissions from livestock operations and understanding underlying processes in the main animal categories. He is engaged in developing and eva-



luating new mitigation methods for ammonia, odour and fine dust emissions. During the last 3 years he has been leader of an extensive research program to provide practical mitigation options for fine dust emissions from poultry farms.



### Hongwei Xin

Date:  
Tuesday 10th July,  
8:55-10:30  
Venue:  
Valencia Conference Centre  
(VCC)  
Location: Auditorio 2

Dr. Xin is a professor in the Departments of Agricultural and Biosystems Engineering (ABE) and Animal Science at Iowa State University, ABE Associate Chair for Research, and director of the Egg Industry Center located at ISU.

Dr. Geuzaine is currently responsible for the development of business, the set-up of new research projects and partnerships, the definition of development roadmaps and the management as well as coaching of team leaders. He is member of the management committee. He also chairs the Industrial Programme Committee at ERCOFTAC.

## SPECIAL PARALLEL CONFERENCE-02: FIRST INTERNATIONAL SYMPOSIUM ON COMPUTATIONAL FLUID DYNAMICS (CFD) APPLICATIONS IN AGRICULTURE

### SESSION 209 INDOOR AEROLICS I



### Dr. Philippe Geuzaine

Date:  
Tuesday 10th,  
8:55-10:30  
Venue:  
Valencia Conference Centre  
(VCC)  
Location: Room 2

“Establishing quality and thrust in CFD through ER-

COFTAC”.

Dr. Philippe Geuzaine is a Research and Technology Manager at Cenaero, a Belgian private research center. He received his B.S. and Ph.D. from the University of Liège, Belgium. Before joining Cenaero in 2003 as a CFD-Multiphysics Group Leader, Dr. Geuzaine has been a Postdoctoral Research Associate at the University of Colorado at Boulder, USA.

With a strong background in computational fluid dynamics,

# MEETINGS

## SATURDAY

### **CIGR - Presidium Meeting**

Date: Saturday 7th July 9:30 - 13:00  
Venue: Hotel Melia Meeting 2

### **CIGR - Executive Board Meeting**

Date: Saturday 7th July 15:00 - 18:00  
Venue: Hotel Melia Meeting 2

## SUNDAY

### **CIGR -Technical Board Meeting**

Date: Sunday 8th July 9:00 - 11:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 02

### **EurAgEng - Past President Meeting**

Date: Sunday 8th July 9:00 - 11:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 04

### **Special Meeting: Jaime Ortiz-Canavate**

Date: Sunday 8th July 11:30 - 13:00  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Room : Salon actos ETSIAMN

## CIGR SECTION MEETINGS

### **CIGR - Section 1: Land and Water**

Date: Sunday 8th July 14:00 - 16:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 02  
Coordinator: Guanhua Huang

### **CIGR - Section 2: Structures and Environment**

Date: Sunday 8th July 14:00 - 16:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 03  
Coordinator: Thomas Banhazi

### **CIGR - Section 3: Plant production**

Date: Sunday 8th July 14:00 - 16:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 05  
Coordinator: John K. Schueller

### **CIGR - Section 4: Energy in Agriculture**

Date: Sunday 8th July 14:00 - 16:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 06  
Coordinator: Janusz Piechocki

### **CIGR - Section 5: System Management**

Date: Sunday 8th July 14:00 - 16:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 07  
Coordinator: Claus Grøn Sørensen

### **CIGR - Section 6: Bioprocesses**

Date: Sunday 8th July 14:00 - 16:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 08  
Coordinator: Umezuruike Linus Opara

### **CIGR - Section 7: Information Technology**

Date: Sunday 8th July 14:00 - 16:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 09  
Coordinator: Seishi Ninomiya

### **EurAgEng Council Meeting**

Date: Sunday 8th July 14:00 - 16:30  
Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
Location: A. 1. 04

## **EurAgEng Biosystems Engineering Editorial Board Meeting**

Date: Sunday 8th July 16:30 - 18:30  
 Venue: Polytechnic University of Valencia (UPV) (Edificio 3P)  
 Location: A. 1. 10  
 Coordinator: Bill Day

## **CIGR Journal meeting**

Date: Sunday 8th July 16:30-18:30  
 Venue: Polytechnic University of València (UPV) (Edificio 3P)  
 Locación: A.1.11

## **MONDAY**

### **CIGR General Assembly**

Date: Monday 9th July 18:30 - 19:30  
 Venue: Valencia Conference Centre (VCC)  
 Location: Auditorio 2

### **ENGAGE: General Assembly**

Date: Monday 9th July 18:30 - 19:30  
 Venue: Valencia Conference Centre (VCC)  
 Location: Room 2  
 Coordinator: Reiner Brunsch

ENGAGE is the strategic arm of EurAgEng. Members come from Agricultural and Biosystems Engineering Institutions all over Europe. It aims to raise the profile of this field in Brussels and beyond and facilitate cooperation on research projects etc.

### **EurAgEng - Eastern European Meeting**

Date: Monday 9th July 19:30 - 20:30  
 Venue: Valencia Conference Center (VCC)  
 Location: Room 4  
 Coordinator EurAgEng: Peter Schulze Lammers  
 Coordinator Eastern Europe: László Fenyvesi  
 Delegates from Eastern Europe are invited to meet the EurAgEng Executive to find out more about the activities of EurAgEng, the benefits of joining EurAgEng and ways in which national societies participate in the organization.

## **TUESDAY**

### **EurAgEng - ASABE BREAKFAST**

Date: Tuesday 10th July 7:00 - 8:00  
 Venue: Hotel Solorolla  
 A brief opportunity for ASABE colleagues to meet members of the EurAgEng Executive and discuss common issues and future cooperation.

### **EurAgEng Open Meeting - Presidential handover**

Date: Tuesday 10th July 14:00 - 15:00  
 Venue: Valencia Conference Centre (VCC)  
 Location: Auditorio 2

All delegates are welcome to attend. There will be a short review of EurAgEng activities and Professor Peter Schulze Lammers will hand over the two year presidential term of office to Robert Kaufmann, AGROSCOPE, Tänikon, Switzerland

## **WEDNESDAY**

### **EurAgEng Working Group Chair's Meeting**

Date: Wednesday 11th July 14:00 – 16:00  
 Venue: Valencia Conference Centre (VCC)  
 Location: Room 1

Working Group chairmen are invited to discuss progress made within their groups and to propose ways in which to take their work forward and maintain communication between conferences.

### **AgEng 2014 - Conference Exchange**

Date: Wednesday 11th July 18:00 - 19:00  
 Venue: Valencia Conference Centre (VCC)  
 Location: Auditorio 2

Planning is already underway for EurAgEng2014 and this meeting will enable 2012 and 2014 conference organizers and participants to exchange experiences and ideas for future conferences.

# CIGR WORKING GROUPS

## MONDAY

### **CIGR - Animal Housing in Hot Climate Working Group**

Date: Monday 9th July 14:30 - 15:25  
Venue: Valencia Conference Center (VCC)  
Location: Room 1  
Coordinator: Mohamed Hatem

### **CIGR - Logistics Working Group**

Date: Monday 9th July 14:30 - 15:25  
Venue: Valencia Conference Center (VCC)  
Location: Room 3  
Coordinator: Remegio Berruto

## WEDNESDAY

### **CIGR - Image Analysis for Agricultural Products and Processes**

Date: Wednesday 11th July 12:15 - 13:00  
Venue: Valencia Conference Center (vcc)  
Location: Room 8+9  
Coordinator: Enrique Moltó

# EURAGENG WORKING GROUPS

## MONDAY

### AP: ANIMAL PRODUCTION TECHNOLOGY

#### **AP06: Innovative technologies for dairy farming**

Date: Monday 14:30 – 15:25  
Venue: Valencia Conference Center (VCC)  
Location: Auditorio 3A  
Coordinator: Jan Harms

### PM: POWER AND MACHINERY

PM23: Sustainable Energy  
Date: Monday 14:30-15:25  
Venue: Valencia Conference Centre (VCC)  
Location: Multipurpose 1A  
Coordinator: Franz Handler

### IT: INFORMATION TECHNOLOGY, AUTO- MATION AND PRECISION FARMING

#### **IT16: Information technology**

Date: Monday 14:30 - 15:25  
Venue: Valencia Conference Center (VCC)  
Location: Room 6+7  
Coordinator: Gilbert Grenier

#### **PA07: Precision agriculture**

Date: Monday 14:30-15:25  
Venue: Valencia Conference Center (VCC)  
Location: Multipurpose IB  
Coordinator: Stefane Böttinger

### PF: POST HARVEST, FOOD AND PROCESS

## ENGINEERING

### **PF: Post Harvest, Food and Process Engineering PH03: Post – harvest technology**

Date: Monday 14:30-15:25

Venue: Valencia Conference Center (VCC)

Location: Room 8+9

Coordinator: Pilar Barreiro

Venue: Valencia Conference Center (VCC)

Location: Room 4

Coordinator: Gösta Gustafsson

### **SE22: Greenhouse system design**

Date: Monday 9th July 18:30 - 19:30

Venue: Valencia Conference Center (VCC)

Location: Room 5

Coordinator: Demetres Briassoulis

## SE: STRUCTURES AND ENVIRONMENTAL TECHNOLOGIES

### **SE15: Farm building structures & environment**

Date: Monday 14:30-15:25

Venue: Valencia Conference Center (VCC)

Location: Room 4

Coordinator: Vacant

### **SE25: Wastes engineering**

Date: Monday 14:30-15:25

Venue: Valencia Conference Center (VCC)

Location: Room 2

Coordinator: Vacant

### **SE28: Rural buildings & landscape**

Date: Monday 14:30-15:25

Venue: Valencia Conference Center (VCC)

Location: Room 5

Coordinator: Patrizia Tassinari

## SW: SOIL AND WATER ENGINEERING

### **SW20: Soil and Water**

Date: Monday 14:30-15:25

Venue: Valencia Conference Center (VCC)

Location: Auditorio 2

Coordinator: Nunzio Romano

### **SPC-04: 5th Automation Technology for Off-Road equipment Conference**

#### **AE09: Intelligent Automation**

Date: Monday 14:30-15:25

Venue: Valencia Conference Center (VCC)

Location: Multipurpose 1C

Coordinator: Victor Alchanatis

## TUESDAY

### PM: POWER AND MACHINERY

#### **PM08: Sustainable Crop Protection**

Date: Tuesday 12:15 - 13:00

Venue: Valencia Conference Center (VCC)

Location: Auditorio 1

Coordinator: Paolo Balsari

## WEDNESDAY

### RD: RURAL DEVELOPMENT

#### **EurAgEng working Group Chair meeting**

Date: Wednesday 14:00 - 15:00

Venue: Valencia Conference Center (VCC)

Location: Room 1

Coordinator:

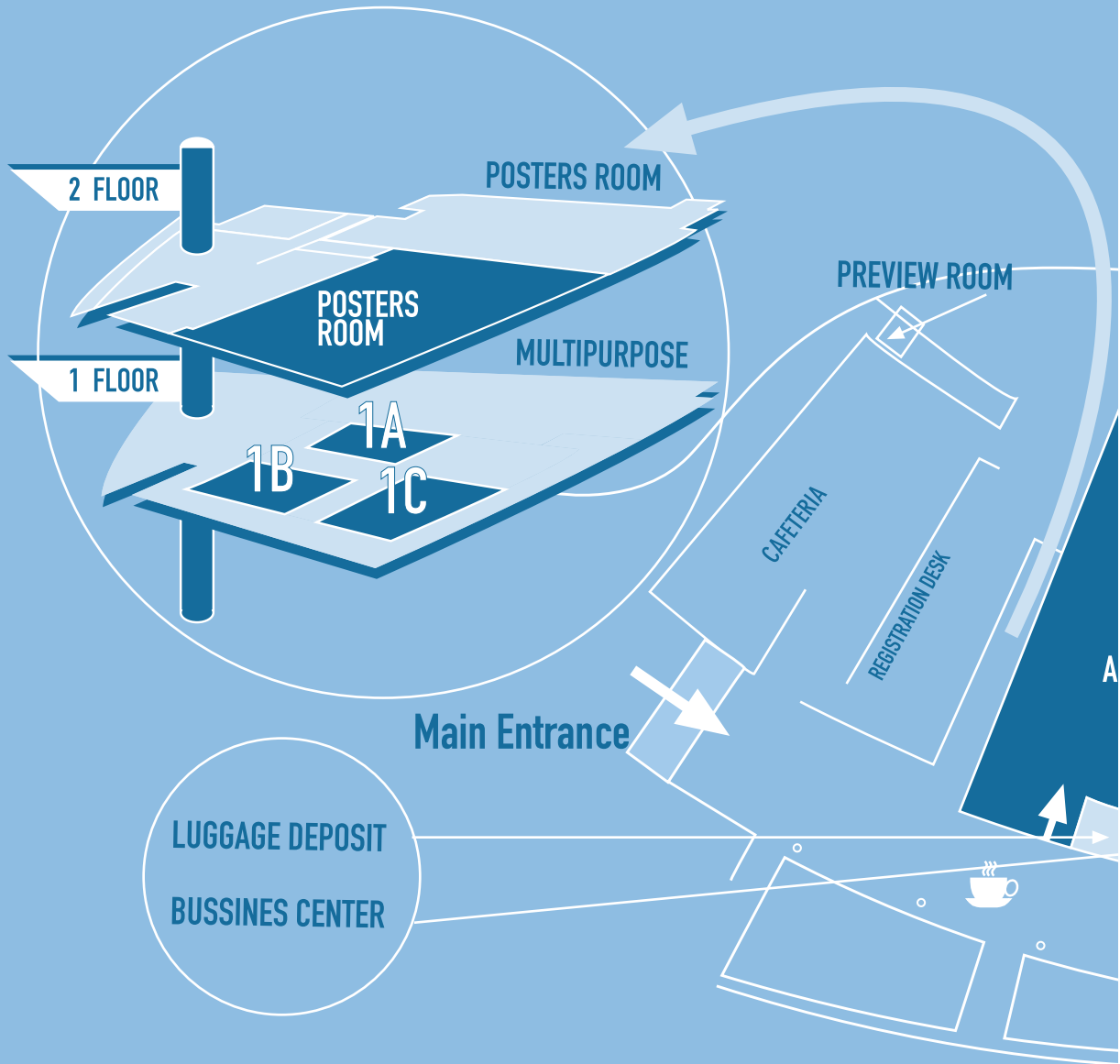
## SE: STRUCTURES AND ENVIRONMENTAL TECHNOLOGIES

### **SE14: Air quality in animal houses**

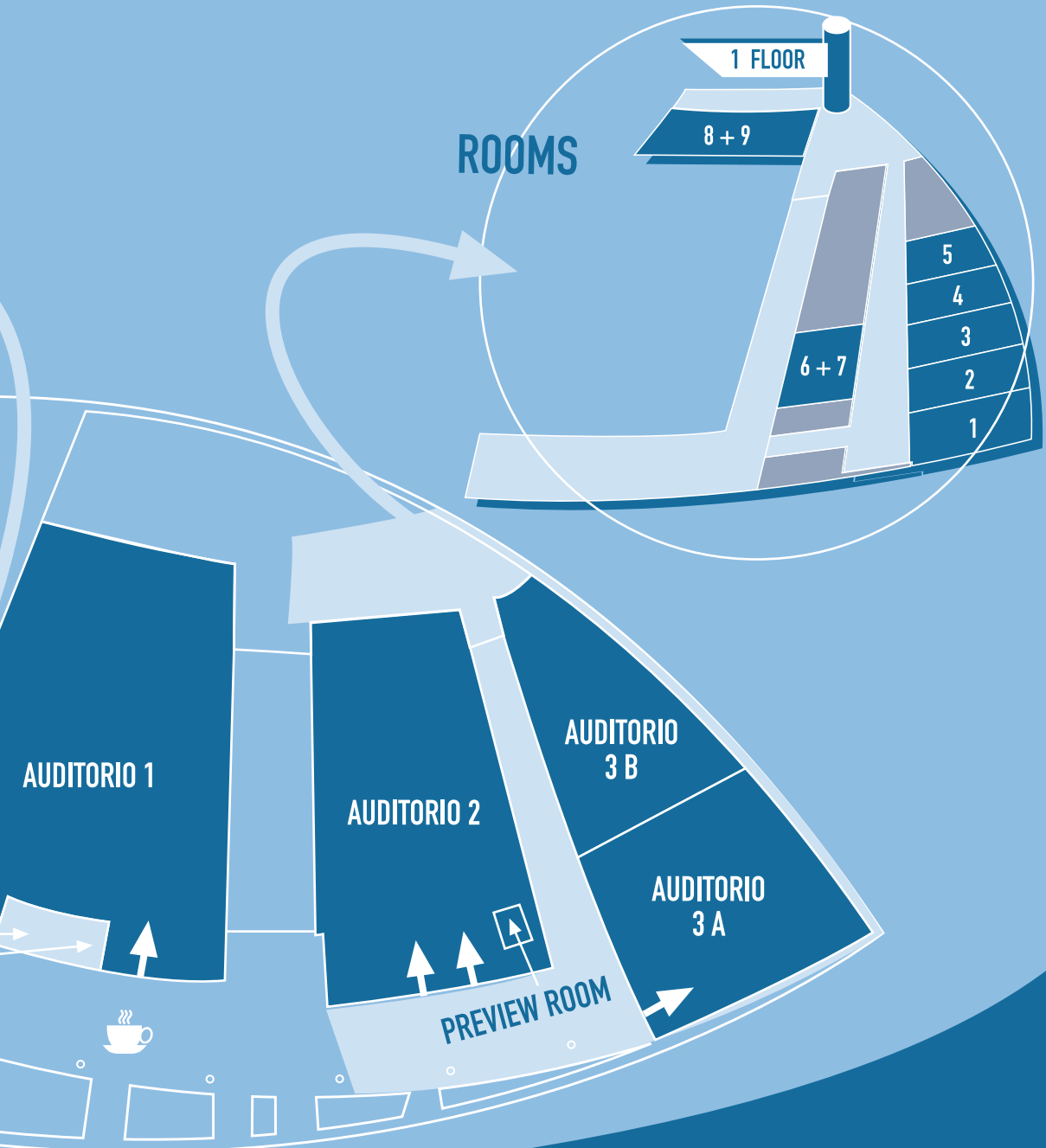
Date: Monday 9th July 18:30 - 19:30

**INTERNATIONAL  
CONFERENCE  
OF AGRICULTURAL  
ENGINEERING  
CIGR-AgEng2012**

**floor  
plan**



# Valencia Conference Centre July 8-12, 2012. Valencia, Spain.



# CONGRESS AT A GLANCE

| Time        | Hotel Melia Valencia                              | Polytechnic University of Valencia (UPV)  |
|-------------|---|---|
|             | SATURDAY<br>July 7                                | SUNDAY<br>July 8  |
| 7,30-8,00   |   |   |
| 8,00-8,30   |   |   |
| 8,30-9,00   |   |   |
| 9,00-9,30   |   |   |
| 9,30-10,00  | CIGR - Presidium Meeting<br>Melia Meeting 2       | CIGR - Technical Board Meeting A. 1. 02<br>EurAgEng - Past-President Meeting A. 1.04  |
| 10,00-10,30 |   |   |
| 10,30-11,00 |   |   |
| 11,00-11,30 |   |   |
| 11,30-12,00 |   |   |
| 12,00-12,30 |   |   |
| 12,30-13,00 |   | SPECIAL MEETING: Jaime Ortiz-Canavate<br>Salon Actos ETSIAMN  |
| 13,00-13,30 |   |   |
| 13,30-14,00 | CIGR - Presidium Meeting<br>LUNCH                 | LUNCH   |
| 14,00-14,30 |   | EurAgEng - Council Meeting A.1.04<br>CIGR - Section Meetings Room   |
| 14,30-15,00 |   | S.1 Land & Water A.1.02<br>S.2 Structures & Environment A.1.03<br>S.3 Plant Production A.1.05<br>S.4 Energy in Agriculture A.1.06<br>S.5 System Management A.1.07<br>S.6 Bioprocesses A.1.08<br>S.7 Information Technology A.1.09 |
| 15,00-15,30 | CIGR - Executive Board Meeting<br>Melia Meeting 2 | Engurra-Biosystems Engineering<br>Editorial Board<br>A.1.10<br><br>CIGR - Journal Meeting<br>A. 1.  |
| 15,30-16,00 |   |   |
| 16,00-16,30 |   |   |
| 16,30-17,00 |   |   |
| 17,00-17,30 |   |   |
| 17,30-18,00 |   |   |
| 18,00-18,30 |   |   |
| 18,30-19,00 |   |   |
| 19,00-19,30 |   |   |
| 19,30-20,00 |   |   |
| 20,00-20,30 |   |   |
| 20,30-21,00 |   | WELCOME RECEPTION + BUFFET<br>Edificio 3A   |



| Time  | Valencia Conference Centre (VCC) |   |   |                                   | THURSDAY<br>July 12   |       |  |
|-------|----------------------------------|---|---|-----------------------------------|---|-------|--|
|       | SUNDAY<br>July 8                 | MONDAY<br>July 9  | TUESDAY<br>July 10  | WEDNESDAY<br>July 11              |   |       |  |
| 7:30  |                                  | REGISTRATION  | REGISTRATION  | REGISTRATION                      | TECHNICAL TOURS<br>(Concurrent Tours)<br>Meeting point: Valencia<br>Conference Centre (VCC) |       |  |
| 8:00  |                                  | OPENING<br>CEREMONY<br>KEYNOTE<br>SPEAKER                 | KEYNOTE SPEAKER   | KEYNOTE SPEAKER                   |   |       |  |
| 8:30  |                                  |   | ORAL SESSION<br>(201 to 214)                              | ORAL SESSION<br>(301 to 314)      |   |       |  |
| 9:00  |                                  |   |   |                                   |   |       |  |
| 9:30  |                                  | COFFEE BREAK  | COFFEE BREAK  | COFFEE BREAK                      |   |       |  |
| 10:00 |                                  |   |   |                                   |   |       |  |
| 10:30 |                                  | ORAL SESSION<br>(101 to 114)                              |   | AET - COFFEE                      |   | LUNCH |  |
| 11:00 |                                  | ORAL SESSION<br>(115 to 128)                              | ORAL SESSION<br>(215 to 228)                              | ORAL SESSION<br>(315 to 328)      |   |       |  |
| 12:00 |                                  |   |   |                                   |   |       |  |
| 12:30 |                                  |   | LUNCH   | LUNCH                             |   |       |  |
| 13:00 |                                  |   | LUNCH   | LUNCH                             |   |       |  |
| 13:30 |                                  | LUNCH   |   |                                   |   |       |  |
| 14:00 | REGISTRATION at<br>VCC           |   | POSTER SESSION (229<br>to 239) + EurAgEng Open<br>Meeting | POSTER SESSION (329<br>to 338)    |   |       | EurAgEng<br>Working Group<br>Chair's Meeting<br>Sala 1 |
| 14:30 |                                  | POSTER SESSION<br>(129 to 138)                            |   |                                   |   |       |  |
| 15:00 |                                  |   | ORAL SESSION<br>(240 to 253)                              | ORAL SESSION<br>(339 to 352)      | AET - Workshop  |       |  |
| 15:30 |                                  |   |   |                                   |   |       |  |
| 16:00 |                                  | ORAL SESSION<br>(139 to 152)                              |   |                                   |   |       |  |
| 16:30 |                                  |   | COFFEE BREAK  |                                   | AET - COFFEE  |       |  |
| 17:00 |                                  | COFFEE BREAK  |   | CLOSING<br>CEREMONY               |   |       |  |
| 17:30 |                                  | ORAL SESSION<br>(153 to 165)                              | ORAL SESSION<br>(254 to 267)                              | Spanish<br>Wine                   |   |       |  |
| 18:00 |                                  |   |   |                                   | AgEng2014<br>Conference<br>Exchange   |       |  |
| 18:30 |                                  |   | The 52nd CIGR General<br>Assembly (Auditorio 2)           | CIGR & EurAgEng<br>AWARD CEREMONY |   |       |  |
| 19:00 |                                  |   |   |                                   |   |       |  |
| 19:30 |                                  | Coffee EurAgEng - East-<br>ern European Meeting<br>Sala 4 |   |                                   |   |       |  |
| 20:00 |                                  |   |   |                                   |   |       |  |
| 20:30 |                                  |   | CONFERENCE DINNER   |                                   |   |       |  |

# SCIENTIFIC PROGRAMME

## MONDAY JULY 9

9:00-10:00 Christopher WATHES. Keynote Speaker General Session AUDITORIO1

### 101 SESSION

10:20 -11:55  
**(PM): TRACTORS**  
Moderator: Jaime Ortiz-Cañavate  
Location: AUDITORIO I

- 10:20 Introduction
- 10:25 C-1008 ACTIVE BOGIES, CHASSIS LEVELLING AND TRANSMISSION EFFICIENCY FOR A VEHICLE OPERATING IN ROUGH TERRAIN  
**Marti Comellas**  
Marti Comellas, Jordi Pijuan Cases, Joan Roca, Xavi Potau
- 10:40 C-1340 OPTIMIZATION OF A THREE POINT HITCH IN AN AGRICULTURAL TRACTOR  
**Giovanni Molari**  
Giovanni Molari, Michele Mattetti, Adriano Guarnieri
- 10:55 C-1398 VEHICLE RIGID MOTION EFFECTS ON WHOLE BODY VIBRATION  
**Giovanni Molari**  
Giovanni Molari, Michele Mattetti, Matteo Badodi, Enrico Sedoni

- 11:10 C-1179 EXHAUST EMISSION CONTROL AND CO<sub>2</sub> REDUCTION ON COMBINES AND TRACTOR IMPLEMENT COMBINATIONS  
**Peter Eckert**  
Peter Eckert, Tobias Töpfer, Jörn Seeboode, Lars Henning
- 11:25 C-1603 NEW CLASSIFICATION OF TRACTORS ACCORDING TO THEIR ENERGY EFFICIENCY  
**Jaime Ortiz-Cañavate Puig**  
Miguel Angel Muñoz-garcía, Jaime Ortiz-Cañavate Puig, Jacinto Gil-Sierra, Jesus Casanova, Alvaro Valle
- 11:40 C-2129 DEVELOPMENT AND CHARACTERIZATION TESTS OF A SMALL HYDRAULIC-POWERED TRACTOR PROTOTYPE FOR USE IN EXTREME SLOPED VINEYARDS  
**Fabrizio Mazzetto**  
Fabrizio Mazzetto, Renato Vidoni, Carlo Bisaglia, Raimondo Gallo

### 102 SESSION

10:20 -11:55  
**(SW-SPC01): EVAPOTRANSPIRATION AND IRRIGATION-REQUERIMENTS**  
Moderator: Alfonso Dominguez  
Location: AUDITORIO 2

- 10:20 Introduction
- 10:25 C-0834 SURFACE RENEWAL ESTIMATES OF SENSIBLE HEAT FLUX: OPTIMIZATION FOR BANANA AND GRAPEVINE SCREENHOUSES  
**Josef Tanny**  
Yonathan Mekhmandarov, Moran Pirkner, Uri Dicken, Josef Tanny
- 10:40 C-0256 IMPACTS ON SOYBEAN SOIL WATER BALANCE AND YIELD DUE TO INCREASE IN TEMPERATURE AS SIMULATED BY CROPGRO  
**Rogério Faria de Teixeira**  
Rogério Teixeira de Faria, José Renato Zanini, Luiz Carlos Pavani
- 10:55 C-1648 IMPLEMENTING THE DUAL CROP COEFFICIENT APPROACH USING THE SIMDUALKC MODEL FOR THE SUMMER MAIZE IN THE NORTH CHINA: MODEL CALIBRATION AND VALIDATION  
**Luis S. Pereira**  
Zhang Baozhong, Liu Yu, Xu Di, Zhao Nana, Ricardo D. Rosa, Paula Paredes, Luis S. Pereira,
- 11:10 C-0665 FORETO: NEW SOFTWARE FOR REFERENCE EVAPOTRANSPIRATION FORECASTING  
**Rocio Ballesteros Gonzalez**  
Rocio Ballesteros Gonzalez, Jose Fernando Ortega Alvarez, Miguel Angel Moreno Hidalgo

# 103 SESSION

## 10:20 -11:55 (SPC-05): FEEDING AND RESTING BEHAVIOR

Moderator: Knut Bøe  
Location: AUDITORIO 3A

- 10:20 Introduction
- 10:25 C-0790 WATER INTAKE AND DRINKING BEHAVIOR OF PREGNANT SOWS  
**Melanie Junge**  
Melanie Junge; Daniel Herd; Dagmar Jezierny; Eva Gallmann; Thomas Jungbluth
- 10:40 C-0754 EFFECTS OF FEEDING REGIME ON FEEDING PATTERN AND BEHAVIOURS OF GROWING PIGS  
**Jun Bao**  
Jun Bao, Yun-long Kang, Xin-zhi Wang
- 10:55 C-0452 NATURAL BEHAVIOR OF THE ANIMAL WHEN EATING  
**Manuel García Reyes**  
Manuel García Reyes, Abraham Rojano
- 11:10 C-1602 PASSAGEWAY PREFERENCE TESTING FOR LAYING HENS  
Ana Paula De Assis Maia  
Ana Paula De Assis Maia; G. Tatiana Sales; Patricia Paulausky; Angela Renee Green; Daniella Jorge De Moura
- 11:25 C-0335 COMBINED STALL SYSTEMS FOR HEIFERS IN GROUPS ? A NEW CONCEPT  
**Knut Egil Boe**  
Knut Egil Boe, Gry Færevik
- 11:40 C-1341 EFFECTS OF FLEXIBLE OR FIXED STALL DIVIDERS ON LYING BEHAVIOUR AND PREFERENCES OF DAIRY COWS  
**Lars Erik Ruud**  
Lars Erik Ruud, Knut Egil

# 104 SESSION

## 10:20 -11:55 (SPC-05): VENTILATION RATE ASSESSMENT

Moderator: Rick Stowell  
Location: AUDITORIO 3B

- 10:20 Introduction
- 10:25 C-0476 EVALUATION OF THE CO2 MASS BALANCE METHOD TO CALCULATE VENTILATION RATES FROM MECHANICALLY VENTILATED LIVESTOCK BUILDINGS  
**Julio Mosquera Losada**  
Julio Mosquera Losada, Karin Groenestein, Nico W. M. Ogink, André J. A. Aarnink

- 10:40 C-0648 HE INFLUENCE OF BUILDING EQUIPMENT AND OPERATION ON THE AIR EXCHANGE RATES THROUGHOUT A NATURALLY VENTILATED DAIRY BARN  
**Alaa Kiwan**  
Alaa Kiwan, Werner Berg, Hans-joachim Müller, Manfred Gläser, Merike Fiedler, Kristina von Bobrutzki, Christian Ammon, Mohamed Samer, Reiner Brunsch,
- 10:55 C-0079 A COMPARISON STUDY AMONG H2O-BALANCE, HEAT BALANCE, CO2-BALANCE AND TRACER GAS TECHNIQUE FOR AIRFLOW RATES MEASUREMENT IN NATURALLY VENTILATED DAIRY BARN  
**Mohamed Samer**  
Mohamed Samer
- 11:10 C-1515 EMISSION MONITORING METHODOLOGY AT NEAMS DAIRY SITE, WITH AN ASSESSMENT OF THE UNCERTAINTY OF MEASURED  
**Larry Jacobson**  
Erin Cortis; Larry Jacobson; Brian Hetchler; Albert Heber
- 11:25 C-0503 MEASURING VENTILATION USING CO2 BALANCES: EVOLUTION OF CO2 PRODUCTION FROM LITTER IN TWO BROILER CYCLES  
**Salvador Calvet Sanz**  
Salvador Calvet Sanz, Fernando Estellés Barber, María Cambra-López, Antonio G. Torres
- 11:40 C-1394 IMPLICATIONS OF INCREASING VENTILATION RATES OF BROILER FARMS TO FULFILL EUROPEAN WELFARE REGULATIONS ON GAS CONCENTRATIONS  
**Fernando Estellés Barber**  
Fernando Estellés Barber, Aranzazu Villagra, Salvador Calvet Sanz

# 105 SESSION

## 10:20 -11:55 (EN): ENERGY EFFICIENCY IN AGRICULTURE I

Moderator: Claudia Lutsyuk  
Location: MULTIPURPOSE IA

- 10:20 Introduction
- 10:25 Presentation of AGREE
- 10:40 Keynote Speaker
- 10:55 C-2124 ENERGY ANALYSIS METHODOLOGY FOR AGRICULTURAL FIELD CROPS -PRINCIPLES AND NEEDS FOR STANDARDIZATION  
**Hannu Juhani Mikkola**  
Hannu Juhani Mikkola, Jukka Ahokas, Mari Rajaniemi, Tapani Jokiniemi

- 11:10 C-0969 CONTROL OF GREENHOUSE GAS EMISSIONS IN A SHORT ROTATION COPPICE BY REDUCED NITROGEN FERTILISATION  
**Jürgen KERN**  
Jürgen KERN, Antje Balasus
- 11:25 C-1950 A STUDY ON THE INFLUENCE WHEN BIOFUEL BE INTRODUCED TO TOKACHI PLAIN IN JAPAN ?THE VALUATION OF ENVIRONMENTAL CAPACITY AND AMOUNT OF ENERGY ON INPUT-OUTPUT ANALYSIS  
**Xin Wang**  
Xin Wang, Youichi Shibata, Marlowe Edgar Burce, Takashi Kataoka, Hiroshi Okamoto
- 11:40 C-2224 ENERGY EFFICIENCY INVESTIGATION IN ALFALFA, CORNSILAGE AND SOME OTHER FODDER PRODUCTION IN MOGHAN PLAIN IN IRAN  
**Mohammadali Maysami**  
Mohammadali Maysami, Werner Berg, Abdolhossein Chavoshpour

- 11:25 C-2137 NEW METHOD FOR BIOMASS BALES COUPLING AND ROLLING THEM ON BOGGY TERRAIN, ESPECIALLY IN NATIONAL PARKS AND NATURA 2000 PROTECTED AREAS  
**Adam P. Dubowski**  
Adam Dubowski Piotr, Krzysztof Zembrowski, Sylwester Weymann, Radoslaw Karbowski, Aleksander Rakowicz, Agnieszka Potrykowska, Lukasz Wojnilowicz,
- 11:40 C-1414 DEVELOPMENT OF A MOBILE STRAW PELLETIZING MACHINE  
**Koen Deprez**  
Koen Deprez, Paul Haems, Luc Vande Riviere, Philippe VanOverbeke, Jürgen Vangeyte

## 106 SESSION

10:20 -11:55  
**(EN): BIOMASS HARVESTING**  
**Moderator: Borja Velázquez-Martí**  
**Location: MULTIPURPOSE IB**

- 10:20 Introduction
- 10:25 C-0365 HARVESTERS FOR SHORT ROTATION COPPICES: CURRENT STATUS AND NEW SOLUTIONS  
**Detlef Ehlert**  
Detlef Ehlert, Ralf Pecenka
- 10:40 C-0460 ESTIMATION AND COMPARISON OF PRUNED BIOMASS DEPENDING ON LOCATION AND PRUNING PRACTICE APPLIED IN URBAN MORUS ALBA TREES  
**Borja Velázquez-Martí**  
Magdalena Sajdak, Borja Velázquez-Martí
- 10:55 C-1151 INVESTIGATION OF THE MAIZE STALK GATHERING FOR ENERGETIC USE  
**Laszlo Kocsis**  
Laszlo Kocsis, Zoltán Hudoba, Tibor Vojtela
- 11:10 C-1169 COLLECTING AND USE OF CEREAL CHAFF  
**Fritz Marti**  
Fritz Marti, Nicole Berger, Bernhard Streit

## 107 SESSION

10:20 -11:55  
**(IT): ANIMAL MONITORING I**  
**Moderator: Aad Jongebreur**  
**Location: MULTIPURPOSE IC**

- 10:20 Introduction
- 10:25 C-0392 AUTOMATIC DETECTION OF ANIMALS DURING MOWING OPERATIONS USING THERMAL IMAGING  
**Kim Arild Steen**  
Kim Arild Steen, Andrés Villa-Henriksen, Ole Roland Therkildsen, Henrik Karstoft, Ole Green
- 10:40 C-0641 CAN WE MONITOR PIGS' WATER INTAKE BY CAMERAS?  
**Mohammadamin Kashiha**  
Mohammadamin Kashiha, Claudia Bahr, Sara Amirpour Haredasht, Sanne Ott, Christel Moons, Daniel Berckmans
- 10:55 C-1140 AUTOMATIC LAMENESS DETECTION IN DAIRY COWS USING ARTIFICIAL NEURAL NETWORKS  
**Mertens Koen C.**  
Mertens Koen C., Jürgen Vangeyte, Stephanie Van Weyenberg, SamDe Campeneere, Annelies Van Nuffel
- 11:10 C-0438 VALIDATION OF A NEW HEALTH MONITORING SYSTEM (RUMIWATCH) FOR COMBINED AUTOMATIC MEASUREMENT OF RUMINATION, FEED INTAKE, WATER INTAKE AND LOCOMOTION IN DAIRY COWS  
**Nils Zehner**  
Nils Zehner, Joël J. Niederhauser, Franz Nydegger, Anne Grothmann, Markus Keller, Matthias Hoch, Angelika Haeussermann, Matthias Schick
- 11:25 C-0358 VIDEO-BASED DETECTION OF GOOSE BEHAVIOURS  
**Kim Arild Steen**  
Kim Arild Steen, Ole Roland Therkildsen, Henrik Karstoft, Ole Green

# 108 SESSION

10:20 - 11:55  
**(IT): ROBOTIC PLATFORM I**  
Moderator: Gilles Rabatel  
Location: ROOM 6+7

- 10:20 Introduction
- 10:25 C-2059 DEVELOPING A FIELD ROBOTIC TEST PLATFORM USING LEGO®MINDSTORM®NXT  
**Gareth Edwards**  
Gareth Edwards, Dionysis Bochtis, Claus G Sørensen
- 10:40 C-1395 OPTIMAL MOTION PLANNING OF A CARTESIAN MANIPULATOR FOR MAXIMUM MELON HARVESTING  
**Itzhak Shmulevich**  
Moshe Mann, Dror Rubinstein, Itzhak Shmulevich, Boaz Zion
- 10:55 C-0370 DESIGN AND DEVELOPMENT OF A ROBOTIC PLATFORM FOR THE EVALUATION OF SEARCH ALGORITHMS  
**Pilar Barreiro**  
Juan Duque Rodriguez, Pilar Barreiro Elorza, Javier Gutierrez Lopez, David Gomez-Ullate Oteiza, Valeriano Mendez Fuentes, Carlos Mejia Monasterio
- 11:10 C-2095 ROBOTIC SOLUTIONS FOR POT-PLANT NURSERIES  
**Paolo Gay**  
Lorenzo Comba, Paolo Gay, Davide Riccarda Aimonino
- 11:25 C-0232 A MULTI-ARMS ROBOTIC HARVESTER FOR 2-D CROPS  
**Boaz Zion**  
Boaz Zion; Daniel Levin

# 109 SESSION

10:20 - 11:55  
**(PF): NON DESTRUCTIVE TECHNIQUES**  
Moderator: Bert Verlinden  
Location: ROOM 1

- 10:20 Introduction
- 10:25 C-1812 NON-DESTRUCTIVE DETERMINATION OF AMYLOSE CONTENT OF RICE BY COMBINED USE OF A NEAR-INFRARED SPECTROMETER AND A VISIBLE LIGHT GRAIN SEGREGATOR  
**Sakiko Fujikawa**  
Sakiko Fujikawa, Shuso Kawamura, Rui Li, Takamasa Doi

- 10:40 C-2312 THE USE OF NEAR INFRARED SPECTROSCOPY TO DETERMINE THE QUALITY OF RICE AFTER STORAGE  
**Pornarree Siriphollakul**  
Pornarree Siriphollakul, Kazuhiro Nakano, Sirichaikunlayanarat, Jaitip Wanitchang, Thongchaisuwonsichon, Panida Boonyaritthongchai, Shintarohohashi,
- 10:55 C-2096 OPTICAL PROPERTIES OF PULP AND SKIN IN BRAZILIAN MANGOES IN THE 540-900 NM SPECTRAL RANGE: IMPLICATION FOR NON-DESTRUCTIVE MATURITY ASSESSMENT BY TIMERESOLVED REFLECTANCE SPECTROSCOPY  
**Lorenzo Spinelli**  
Lorenzo Spinelli, Anna Rizzolo, Maristella Vanoli, Maurizio Grassi, Paola Eccher Zerbini, Rodrigo Meirelles de Azevedo Pimentel, Alessandro Torricelli,
- 11:10 C-1182 RAMAN AND FT-NIR SPECTROSCOPY TECHNOLOGIES FOR THE PREDICTION OF TOTAL FAT CONTENT IN SOYBEAN  
**Hoonsoo Lee**  
Hoonsoo Lee, Byoung-Kwan Cho, Soo-In Sohn, Hee-Youn Chi, Soo-Chul Park
- 11:25 C-0059 NON-DESTRUCTIVE CLASSIFICATION OF TRANSLUCENT FRESH MANGOSTEEN BY NEAR INFRARED INTERACTANCE  
**Anupun Terdwongworakul**  
Anupun Terdwongworakul, Sontisuk Teerachaichayut, Sirinad Noypitak
- 11:40 C-0240 DETERMINING SOME PHYSICAL AND MECHANICAL PROPERTIES OF LORESTANBLACK FIG FRUIT  
**Seyedehsanaz Jarolmasjed**  
Seyedehsanaz Jarolmasjed, Fariborz Zare Nahandi, Meysam Karami, Ata Khamene Asl

# 110 SESSION

10:20 - 11:55  
**(PF): FOOD TECHNOLOGY**  
Moderator: Maria Luisa Amodio  
Location: ROOM 4

- 10:20 Introduction
- 10:25 C-1891 EFFECT OF FERMENTATION BY LACTOBACILLUS PLANTARUM AND LACTOBACILLUS ACIDOPHILUS ON FUNCTIONAL PROPERTIES OF POMEGRANATE JUICE  
**Zeinab Mousavi**  
Zeinab Mousavi, Seyed Mohammad Mousavi, Seyed Hadi Razavi, Zahra Emam-Djomeh, Mehri Hadinejad, Mojgan Mirzapour
- 10:40 C-1108 PURIFICATION OF MARINE FISH OILS USING PILOT SCALE ADSORPTION COLUMN  
**Subramaniam Sathivel**  
Subramaniam Sathivel, Huaixia Yin, Peter J. Bechtel

- 11:55 C-0522 PROPERTIES OF THE WATER CONTAINING NANOBUBBLES AS A NEW TECHNOLOGY OF THE ACCELERATION OF PHYSIOLOGICAL ACTIVITY  
**Shu Liu**  
Shu Liu, Masatoshi Enari, Yoshinori Kawagoe, Yoshino Makino, Seiichi Oshita
- 11:10 C-1685 CONTROLLING THE ATMOSPHERE IN THE MALAXATION MACHINE HEADSPACE IN ORDER TO IMPROVE THE QUALITY OF SICILIAN EXTRA VIRGIN OLIVE OILS  
**Pietro Catania**  
Pietro Catania, Felice Pipitone, Marco Salvia, Mariangela Vallone

## 111 SESSION

10:20 - 11:55  
**(SPC02): FOOD ENGINEERING AND PROCESSING**  
**Moderator: Tomas Norton**  
**Location: ROOM 2**

- 10:20 Introduction
- 10:25 TRENDS ON CFD APPLICATIONS IN AGRICULTURE  
Technical speaker: **In-Bok Lee**
- 10:55 C-0247 FLOW AND SCALAR EXCHANGE FOR HORTICULTURAL PRODUCTS WITH CFD: PERFORMANCE OF TURBULENCE AND BOUNDARY-LAYER MODELLING APPROACHES  
**Thijs Defraeye**  
Thijs Defraeye, Els Herremans, Pieter Verboven, Jan Carmeliet, Bart Nicolai
- 11:10 C-1066 COMPUTATIONAL FLUID DYNAMICS-BASED THREE DIMENSIONAL MODELING AND SIMULATION OF HEAT AND MASS TRANSFER PROCESS IN A GRAIN MASS OF MAIZE STORED IN A FLAT BIN  
**José Helvecio Martins**  
Keller Sullivan Oliveira Rocha, José Helvecio Martins, Marcio Arêdes Martins, Adílio Flauzino Lacerda Filho, Paulo Marcos de Barros Monteiro
- 11:25 C-1142 CFD MODELLING TO STUDY THE EFFECTS OF TABLE GRAPE PACKAGING AND STACKING ON COOLING AND MOISTURE LOSS  
**Mulugeta Admasu Delele**  
Mulugeta Admasu Delele, Mduzuzi E.K. Ngcobo, Umezuruike Linus Opara, Pankaj B. Pathare
- 11:40 C-1362 NUMERICAL SIMULATION OF AIRFLOW DISTRIBUTION IN A MIXED FLOW DRYER  
**Holger Scaar Uwe**  
Holger Scaar, Fabian Weigler, Jochen Mellmann

## 112 SESSION

10:20 - 11:55  
**(SPC07): SILO LOADING**  
**Moderator: Francisco Ayuga**  
**Location: ROOM 3**

- 10:20 Introduction
- 10:25 C-0016 Review of Silo Loadings Associated with the Storage of Bulk Granular Materials  
Technical Speaker: **Alan W. Roberts**
- 10:55 C-0488 A NOTE ON LOAD COMBINATIONS FOR SILOS  
**Jørgen Nielsen**  
Jørgen Nielsen, Jørgen Nielsen, J. Michael Rotter, John Dalsgaard Sørensen
- 11:10 C-0450 AN ARCH-BASED MODEL FOR PREDICTING DYNAMIC PRESSURES DURING SILO DISCHARGE  
**Qiang Zhang**  
Xuduo Cheng, Qiang Zhang
- 11:25 C-1406 EXPERIMENTAL STUDY OF THE PRESSURES EXERTED BY THE WHEAT STORED IN SLENDER CYLINDRICAL SILOS. COMPARISON WITH EUROCODE 1 PART 4.  
**Pedro Aguado Rodríguez**  
Angel Couto, Pedro Aguado Rodríguez, Angel Ruiz, Alberto Tascón

## 113 SESSION

10:20 - 11:55  
**(ED): EDUCATION AND CURRICULA**  
**Moderator: Carlos Alvarez**  
**Location: ROOM 5**

- 10:20 Introduction
- 10:25 C-0055 EVALUATING THE EFFICIENCY OF APPLIED AGRICULTURAL SCIENCE EDUCATION IN PRODUCTIVITY OF PRODUCERS AND SUPPLIERS OF MEDICINAL PLANTS IN IRAN  
**Seyed Abbas Mirjalili**  
elahe poorazizi, Seyed Abbas Mirjalili
- 10:40 C-0142 TEACHING INNOVATION THROUGH INTERNATIONAL STAFF MOBILITY AT THE TECHNICAL UNIVERSITY OF VALENCIA  
**Nemesio Fernández Martínez**  
Nemesio Fernández Martínez, Vicente Castell Zeising, Rosa Puchades Pla, Debra Westall, Penny Macdonald, Claudio Benavent Montoliu
- 10:55 C-0976 NEW REQUIREMENTS FOR AGRICULTURAL ENGINEERING TRAINING IN GALICIA (SPAIN)  
**Carlos J. Álvarez**  
Marta Cardín, Manuel F. Marey, Tomas S Cuesta, Carlos J. Álvarez

- 11:10 C-2346 AN OPEN-ACCESS CAN-BASED SYSTEM FOR TEACHING ELECTRO-HYDRAULICS AND OTHER MOBILE CONTROL  
**Dennis Buckmaster**  
 Dennis Buckmaster, John Michel, Shawn Ehlers, Daniel Skelton, Noah Freeman, D Skelton, Kyle Brune, Josh Heber

## 114 SESSION

10:20 -11:55  
**(SPC03): PLANT INSPECTION**  
**Moderator: Scott Noble**  
**Location: ROOM 8+9**

- 10:20 Introduction
- 10:25 Technical speaker **Dr. Bosoon Park**
- 10:40 C-0609 AN AUTOMATIC VISION-BASED PLANT GROWTH MEASUREMENT SYSTEM FOR LEAFY VEGETABLES  
**Ta-Te Lin**  
 Ta-Te Lin, Tsung-Cheng Lai, Ting-Yu Liu, Yu-Hui Yeh, Chang-Chih Liu, Wei-Chang Chung
- 10:55 C-1358 DETECTION OF OVERLAPPING PLANTS USING ACTIVE SHAPE MODELS.  
**Julio Cesar Pastrana Perez**  
 Julio César Pastrana Pérez, Thomas Rath
- 11:10 C-1931 WEED MAPPING USING DIGITAL IMAGES  
**Joao Pedro Sansao**  
 Joao Pedro Sansao, Mário Cupertino Da Silva Júnior, Leonardo Amaral Mozelli, Francisco De Assis De Carvalho Pinto, Daniel Marçalde Queiroz
- 11:25 C-2186 DETECTION OF PERENNIAL WEED PATCHES IN RIPENING CEREALS WITH AN IMAGE ANALYSIS APPROACH  
**Christoph Zecha**  
 Tobias Dittmann, Martin Weis, Christoph Zecha
- 11:40 C-2315 A METHOD FOR PLANT LEAF AREA MEASUREMENT BY USING STEREO VISION  
**Vincent Leemans Vincent Leemans**  
 Benjamin Dumont, Marie-France Destain, Françoise Vancutsem, Bernard Bodson

## 115 SESSION

11:55-13:30  
**(PM): TILLAGE FORCES 1**  
**Moderator: Jesus Gil-Ribes**  
**Location: AUDITORIO I**

- 11:55 Introduction
- 12:00 C-0740 A NEW APPROACH FOR MEASURING THE WEAR RESISTANCE OF CUTTER BLADES  
**Andrej Batos**  
 Andrej Batos, Andreas Jahr, Hunn Sim

- 12:15 C-1256 ANALYSIS OF AN ALTERNATIVE CUTTING PRINCIPLE IN A DISC MOWER TO REDUCE THE POWER REQUIREMENTS  
**Sebastian Kemper**  
 Sebastian Kemper, Thorsten Lang
- 12:30 C-0099 OPTIMIZING THE PERFORMANCE OF TRACTORS IN DISC HARROW SYSTEMS  
**João manuel Serrano**  
 João Manuel Serrano, José Peça, Shakib Shahidian, José Marquesda Silva
- 12:45 C-2290 MODELING AND PREDICTION OF SOIL CUTTING BEHAVIOR BY A PLOW  
**Takashi Okayasu**  
 Takashi Okayasu, Ken Morishita, Haruki Terao, Muneshimitsuoka, Eiji Inoue, Koichiro Fukami

## 116 SESSION

11:55 -13:30  
**(SW-SPC01): CROP RESPONSE TO THE IRRIGATION REGION**  
**Moderator: Luis Santos Pereira**  
**Location: AUDITORIO 2**

- 11:55 Introduction
- 12:00 C-1971 REGULATED DEFICIT IRRIGATION. A USEFUL TOOL FOR IMPROVING ON-FARM IRRIGATION EFFICIENCY  
**Diego Intrigliolo**  
 Diego S. Intrigliolo, Luis Bonet, Carlos Ballester, Juan Ramón Castel
- 12:15 C-0601 PREDICTING EFFECTS OF WATER-SAVING PRACTICES ON CROP YIELD AND WUE FOR SPRING WHEAT AND SUMMER MAIZE IN ARID IRRIGATION DISTRICTS OF UPPER YELLOW RIVER BASIN  
**Guanhua Huang**  
 Jianhua zheng, Xu Xu
- 12:30 C-0953 EFFECT OF DIFFERENT IRRIGATION STRATEGIES ON POTATO (SOLANUM TUBEROSUM L.) CROP YIELD  
**Juan Ignacio Corcoles Tendero**  
 Juan Ignacio Corcoles Tendero, Debora Costa, Francisco Montoya, Alfonso Dominguez, Jose Maria Tarjuelo Martin -Benito, Jose Fernando Ortega Alvarez
- 12:45 C-1373 OPTIMIZED REGULATED DEFICIT IRRIGATION STRATEGIES FOR MAIZE (ZEA MAYS L.) IN A SEMIARID ENVIRONMENT  
**Alfonso Dominguez Padilla**  
 Alfonso Dominguez, Jose Arturo De Juan, Jose Mariatarjuelo, Roberto Simon Martinez, Angel Martinez
- 13:00 C-2108 ECONOMIC IMPACTS ASSESSEMENT OF DEFICIT IRRIGATION AND COMMODITY PRICES IN SOUTHERN BRAZIL  
**Gonçalo Rodrigues Caleia Gonçalo C.**  
 Rodrigues, Juliano D. Martins, Mirta T. Petry, Reimar Carlesso, Paula Paredes, Ricardo D. Rosa, Luis S. Pereira

# 117 SESSION

## 11:55 -13:30 (SPC-05): LIGHT, SOUND AND HANDLING ENVIRON- MENT

Moderator: Angela Green  
Location: AUDITORIO 3A

- 11:55 Introduction
- 12:00 In-room break
- 12:15 C-1409 SOUND LEVELS IN A WEAN-TO-FINISH FACILITY IN BRAZIL (NOISE LEVELS IN A WEAN-TO-FINISH FACILITY IN BRAZIL)  
**Brenda Medeiros**  
Brenda B. L. Medeiros, Juliana M. Mas-sari, Ana Paula de Assis Maia, Rojane M. Kletecke, Rimena A. Vercellino, Juliana Sarubbi, Daniella J. Moura
- 12:30 C-0394 EFFECT OF LIGHT COLOR ON GROWTH AND WASTE EMISSION OF BROILERS  
**Jingsong Jiang**  
Jingsong Jiang, Jinming Pan, Yue Wang, Zhangying Ye, Yibin Ying
- 12:45 C-1766 DIFFERENT LIGHT INTENSITY ON THE BEHAVIOR AND WELFARE OF COMMERCIAL BROILER CHICKS  
**Rimena Vercellino Amaral**  
Rimena Vercellino Amaral; Daniella Jorge De Moura; Ana Paula De Assis Maia; Brenda Batista Medeiros; Thayla Ridolfi Morandi De Carvalho; Douglas D'alexandro Salgado; Irenilza De Alencar Nääs
- 13:00 C-1687 IMPROVING LOADING FACILITIES AND METHODS TO MINIMIZE STRESS INDUCING FACTORS ON ANIMALS DURING TRANSPORT  
**Girma Gebresenbet**  
Girma Gebresenbet
- 13:15 C-2015 AGGRESSIVENESS TEST IN BREEDING DOES  
**Irene Olivas**  
Irene Olivas; Aránzazu Villagrà

# 118 SESSION

## 11:55 -13:30 (SPC-05): AIR QUALITY MEASUREMENT

Moderator: Ken Casey  
Location: AUDITORIO 3B

- 11:55 Introduction
- 12:00 In-room break
- 12:15 C-1339 - AIR VELOCITY DISTRIBUTION IN A COMMERCIAL BROILER HOUSE  
**Brian Luck**  
Jeremiah D. Davis, Joseph L. Purswell, Johnathan Olsen, Emile Koury

- 12:30 C-1572 DETERMINING DAILY AVERAGE CONCENTRATIONS OF AMMONIA IN LIVESTOCK BUILDINGS USING A PHOTOACOUSTIC MONITOR AND ACID WET TRAPS  
**Fernando Estellés Barber**  
Fernando Estellés Barber, Irene Olivas Cáceres, Milagro Borrás Llopis, Salvador Calvet Sanz
- 12:45 C-1263 COMPARISON BETWEEN LIGHT SCATTERING AND GRAVIMETRIC DEVICES FOR SAMPLING PM10 MASS CONCENTRATION IN LIVESTOCK HOUSES  
**María Cambra-López**  
María Cambra-López, Albert Winkel, Julio Mosquera, Nico W. M. Oginck, André J. A. Aarnink
- 13:00 C-1538 AGLITE: A 3-WAVELENGTH LIDAR SYSTEM FOR QUANTITATIVE ASSESSMENT OF AGRICULTURAL AIR QUALITY AND WHOLE FACILITY EMISSIONS  
**Kori Moore**  
Michael Wojcik, Jerry Hatfield, Randy Martin, Kori Moore, Richard Pfeiffer, John Prueger
- 13:15 C-1158 PHOTO ACOUSTIC SPECTROSCOPY IN LIVESTOCK BUILDINGS: INTERFERENCE EFFECTS ON AMMONIA, NITROUS OXIDE AND METHANE CONCENTRATIONS.  
**Mélynda Hassouna**  
Mélynda Hassouna, Mélynda Hassouna, Paul Robin, Alicia Charpiot, Nadège Edouard, Bertrand Méda

# 119 SESSION

## 11:55 -13:30 (EN): ENERGY EFFICIENCY IN AGRICULTURE II

Moderator: Chris de Visser  
Location: MULTIPURPOSE 1A

- 11:55 Introduction
- 12:00 C-0700 IMPLICATIONS OF ENERGY EFFICIENCY MEASURES IN WHEAT PRODUCTION  
**Andreas Meyer-Aurich**  
Andreas Meyer-Aurich, Thomas Ziegler, Hasan Jubaer, Lukas Scholz, Tommy Dalgaard
- 12:15 C-1873 HANDLING, TREATMENT AND SPREADING OF PELLETED AGRICULTURAL WASTES FOR ORGANIC FERTILIZATION  
**Elio Romano**  
Elio Romano, Massimo Brambilla, Carlo Bisaglia, Eugenio Cavallo, Niccolò Pampuro, Ester Foppa Pedretti
- 12:30 C-0554 THE TREND OF ENERGY CONSUMPTION FOR SUGAR BEET PRODUCTION IN DIFFERENT LEVELS OF CULTIVATED AREA  
**Mohammad Ghahderijani**  
Mohammad Ghahderijani, Morteza Almassi, Masoud Nezamoleslami, Mohammad Hasan Ebrahimi, Babak Pourmehdi zanbouri, Seyed Alireza Ghadimi, Mohsen Shanzari



- 12:45 C-1238 DETERMINATION OF ENERGY INDEXES FOR MACHINE-BASED OPERATION IN AGRICULTURAL PRODUCTION (AGRONOMY AND HORTICULTURE) IN IRAN  
**Mohammad Ghahderijani**  
Hasan Moradi; Seyed Alireza Ghadimi; Reza Eshaghi; Mohammad Ghahderijani; Mehran Hesaraki; Raouf Hazinia; Vahid Jafari
- 13:00 C-0920 AIR HEATING SOLAR COLLECTORS FOR AGRICULTURAL PRODUCTION DRYING  
**Aivars Aboltins**  
Aivars Aboltins; Guntis Ruskis; Janis Palabinskis

## 120 SESSION

11:55 -13:30  
**(EN): BIOMASS LOGISTICS**  
**Moderator: Márcio Aredes Martins**  
**Location: MULTIPURPOSE 1B**

- 11:55 Introduction
- 12:00 C-0156 GENERIC DATA MODEL TO REPRESENT THE BIOMASS-TO BIOENERGY SUPPLY CHAIN LOGISTICS  
**Annelies De Meyer**  
Annelies De Meyer, Dirk Cattrysse, Monique Snoeck, Jos VanOrshoven
- 12:15 C-0689 OPTIMIZATION OF BIOMASS LOGISTICS FOR AGRICULTURAL RESIDUE USAGE IN WESTERN CANADA  
**Joy Agnew**  
Joy Agnew, Carrie Sampson
- 12:30 C-1026 MILP MODELS FOR BIOMASS SUPPLY CHAINS OPTIMIZATION: APPLICATIONS TO DISTRICT HEATING IN RESIDENTIAL AREAS  
**Antonio Pantaleo**  
Antonio Pantaleo, Sara Giarola, Achille Pellerano, Nilay Shah
- 12:45 C-1243 OPTIMIZATION OF HARVEST AND STORAGE TECHNOLOGY FOR EFFICIENT PRODUCTION OF BIOENERGY FROM SHORT ROTATION COPPICE ON FARMLAND  
**Ralf Pecenka**  
Ralf Pecenka, Christine Idler, Hannes Lenz, Volkhard Scholz, Jürgen Kern, Jürgen Kern
- 13:00 C-2254 A MACHINERY ALLOCATION AND SCHEDULING TOOL FOR THE BIOMASS COLLECTION CHAIN  
**Dionysis Bochtis**  
Anna Orfanou, Dionysis Bochtis, Dimitris Pavlou, Gareth Edwards, Claus Sørensen

## 121 SESSION

11:55 -13:30  
**(IT): ANIMAL MONITORING II**  
**Moderator: Morris Villarroel**  
**Location: MULTIPURPOSE 1C**

- 11:55 Introduction
- 12:00 C-1935 PRECISION DAIRY MANAGEMENT BASED ON ONLINE SYNERGISTIC CONTROL  
**Tjebbe Huybrechts**  
Tjebbe Huybrechts, Kristof Mertens, Bart De Ketelaere, Josse DeBaerdemaeker, Wouter Saey
- 12:15 C-0667 ADAPTIVE FILTER FOR DENOISING COWS EEG MEASUREMENTS BASED ON EMG SIGNAL.  
**Matti Pastell**  
Matti Pastell, Emma Ternman, Per Peetz Nielsen, Sigrid Agenas, Laura Hänninen
- 12:30 C-2071 EFFECTS OF CHICKEN EMBRYOS INCUBATED UNDER HIGH CO<sub>2</sub> LEVEL DURING LAST 3 DAYS OF INCUBATION  
**Qin Tong**  
Qin Tong, Imelda McGonnell, Carlos Eduardo Bites Romanini, Daniel Berckmans, Hakim Bergoug, Nancy Roulston, Pascal Garain, Theo Demmers
- 12:45 C-0986 DUST CONCENTRATION MEASUREMENT IN CONFINED LAYING HEN HOUSES USING DIGITAL IMAGE PROCESSING TECHNOLOGY  
**Li gen Yu**  
Ligen Yu, Guanghui Teng, Baoming Li, Chao Zong, Yingying Li
- 13:00 C-0591 AN INTEGRATED WARNING SYSTEM FOR IMPROVED LIVESTOCK PRODUCTION BASED ON MULTIVARIATE SYNERGISTIC CONTROL  
**Kristof Mertens**  
Kristof Mertens, Tjebbe Huybrechts, Bart Kemps, Josse DeBaerdemaeker, Wouter Saey, Bart De Ketelaere

## 122 SESSION

11:55 -13:30  
**(IT): ROBOTIC PLATFORM II**  
**Moderator: Jan Bontsema**  
**Location: ROOM 6+7**

- 11:55 Introduction
- 12:00 C-0234 MECHANICAL DESIGN AND DEVELOPMENT OF AN ELECTRIC MOBILE ROBOT FOR AGRICULTURAL TASKS IN GREENHOUSES  
**Julián Sánchez-Hermosilla**  
Julián Sánchez-Hermosilla López, Francisco Cesar Paez Cano, Victorj. Rincón Cervera, Julian Garcia Donaire

- 12:15 C-0795 PRESERVING STABILITY OF HUGE AGRICULTURE MACHINES WITH INTERNAL MOBILITIES: APPLICATION TO A GRAPE HARVESTER.  
**Michel Berducot**  
Dieumet Denis, Benoit Thuilot, Lenain Roland, Michel Berducot
- 12:30 C-0864 MONITORING THE PERFORMANCE OF GRAIN DRILL ON-THE GO FOR ROBOTIC TRACTORS  
**Ahmad Al-Mallahi**  
Ahmad Al-Mallahi, Takashi Kataoka
- 12:45 C-1165 ICT-AGRI: EFFORTS AND PROGRESS ON HARMONIZING EUROPEAN AGRICULTURAL RESEARCH IN ICT AND ROBOTICS AND RELATED ENVIRONMENTAL ISSUES  
**Mertens Koen C.**  
Mertens Koen C., Jürgen Vangeyte, Stephanie Van Weyenberg, Annett Latsch, Martin Holpp, Anaïs Wermeille, Per Mogensen, Iver Thysen
- 13:00 C-1449 ELECTRIC AGRICULTURAL ROBOT WITH MULTI-LAYERCONTROL  
**Hans W. Griepentrog**  
Hans W. Griepentrog, Claes L. Jaeger-Hansen, Karina Dühring
- 13:15 C-2196 FARM MACHINERY MANAGEMENT INFORMATION SYSTEM  
**Spyros Fountas**  
Spyros Fountas, Zisis Tsiropoulos, Chris Kavalaris, Vasilis Liakos, Anna Vatsani-dou, Claus Sorensen, Theofanis Gemtos, Simon Blackmore

## 123 SESSION

11:55 -13:30  
**(PF): NON DESTRUCTIVE TECHNIQUES II**  
**Moderator: Da-Wen Sun**  
**Location: ROOM 1**

- 11:55 Introduction
- 12:00 C-2092 HYPERSEPECTRAL VISION FOR EARLY DETECTION OF YEAST PRESENCE IN ORGANIC MEDIUM (AGAR)  
**Belen Diezma Iglesias**  
Lourdes Lleó, Laura Naranjo, Eva M<sup>a</sup> Rivas, Eva Cristina Correa, Jean-Michel Roger, Belén Diezma, M<sup>a</sup> Isabel de Silóniz, JoséMartínez Peinado, Pilar Barreiro Elorza
- 12:15 C-1164 PREDICTION OF DEGRADATION RATE OF BROCCOLI DURING STORAGE BY HYPER SPECTRAL IMAGING  
**Ayumi Hosaka**  
Ayumi Hosaka, Yoshio Makino, Yoshinori Kawagoe, Seiichi Oshita

- 12:30 C-1183 MULTISPECTRAL IMAGING TECHNIQUE FOR DETECTION OFFUNGI-INFECTED SEED POTATOES BASED ON HYPERSPECTRAL IMAGERY  
**Dae-Yong Kim**  
Dae-Yong Kim, Byoung-Kwan Cho, Youn-Su Lee
- 12:45 C-1804 CLASSIFICATION FOR THE RIPENESS OF PAPAYAS BY HYPERSPECTRAL IMAGING  
**Xuan Wei**  
Xuan Wei, Yong He, Lei Feng, Le He
- 13:00 C-1833 DETERMINATION OF LAMB MEAT TENDERNESS BY NIR HYPERSPECTRAL IMAGING  
**Mohammed Kamruzzaman**  
Mohammed Kamruzzaman, Gamal M. Elmasry, Da-Wen Sun, PaulAllen
- 13:15 C-0994 DETECTION AND CHARACTERIZATION OF FOODBORNE PATHOGENIC BACTERIA WITH HYPERSPECTRAL MICROSCOPE IMAGING  
**Bosoon Park**  
Bosoon Park, Jaya Sundaram, Arthur Hinton, Jr., Seung-Chul Yoon, Kurt Lawrence, William Windham

## 124 SESSION

11:55 -13:30  
**(PF): FOOD TECHNOLOGY II**  
**Moderator: Rungsinee Sothornvit**  
**Location: ROOM 4**

- 11:55 Introduction
- 12:00 C-0088 THE INFLUENCE OF CALCIUM CHLORIDE AND CALCIUM NITRATE TREATMENT ON THE ZIZIPHUS.SPP FRUIT QUALITY  
**Mansoor Shamili**  
Mansoor Shamili, Iman Hajiani
- 12:15 C-2104 EFFECT OF DIFFERENT TREATMENTS ON COLOR AND VITAMIN C RETENTION IN OSMO DEHYDROFROZEN PLUMS  
**Reihaneh Ahmadzadeh Ghavidel**  
Reihaneh Ahmadzadeh Ghavidel, Mehdi Ghiafeh Davoodi, Parastou Karimifar
- 12:30 C-0966 EFFECT OF ULTRASOUND IRRADIATION ON THE CONVECTIVE HEAT TRANSFER RATE DURING IMMERSION COOLING OF A STATIONARY SPHERE  
**Hossein Kiani**  
Hossein Kiani, Da-Wen Sun, Zhihang Zhang

## 125 SESSION

11:55 -13:30  
**(SPC02): MACHINE DESIGN AND PERFORMANCE I**  
**Moderator: Christopher Choi**  
**Location: ROOM 2**

- 11:55 Introduction

- 12:00 C-1836 HOMOGENIZATION OF AIRFLOW IN A FIXED-BED DRYER FOR MEDICINAL PLANTS BASED ON COMPUTATIONAL FLUID DYNAMICS (CFD)  
**Holger Scaar Uwe**  
Teodor Teodorov Dimov, Holger Scaar, Thomas Ziegler, Jochen Mellmann
- 12:15 C-1129 CFD SIMULATION OF INTEGRATED MECHANICAL MIXING AND GAS SPARGING IN ANAEROBIC DIGESTERS  
**Binxin Wu**  
Binxin Wu, Todd Hutchinson
- 12:30 C-1443 EFFECTS OF RADIATION SHIELDS AND CONDUCTIVE COOLING TO REDUCE HEAT STRESS IN DAIRY CATTLE  
**Christopher Choi**  
Christopher Choi, Mario Mondaca
- 12:45 C-1879 CFD-ANALYSIS OF HEAT EXCHANGE AROUND CHICKEN EGGS IN AN INCUBATOR  
**Elvira Galiullina**  
Elvira Galiullina, Vasileios Exadaktylos, Ali Youssef, Daniel Berckmans
- 13:00 C-2117 USING CFD TO OPTIMIZE THE DESIGN OF ONE LAYER STORAGE SYSTEM FOR TULIP BULBS  
**Athanasios Sapounas**  
Athanasios Sapounas, Jeroen Wildschut

## 126 SESSION

11:55 - 13:30  
**(SPC07): DISCRETE ELEMENT SIMULATION**  
Moderator: Alvaro Ramirez  
Location: ROOM 3

- 11:55 Introduction
- 12:00 C-1629 DISCRETE ELEMENT SIMULATION OF BOTTLENECK FLOW WITH OBSTACLE  
**Fernando Alonso-Marroquin**  
Fernando Alonso-Marroquin, Charmila Sathianandan
- 12:15 C-0823 DETERMINATION OF THE MECHANICAL PROPERTIES OF BIOMASS PELLETS FOR USE IN DEM SIMULATIONS  
**Francisco Ayuga**  
Carlos González-Montellano, Álvaro Ramírez-Gómez, José María Fuentes, Eutiquio Gallego, Francisco Ayuga
- 12:30 C-1145 A STUDY ON THE DISCHARGE RATE OF PELLETS STORED IN SILOS: DISCRETE ELEMENT ANALYSIS  
**Francisco Ayuga**  
Carlos González-Montellano, Eutiquio Gallego, Álvaro Ramírez-Gómez, José María Fuentes, Francisco Ayuga
- 12:45 C-1499 DISCRETE ELEMENT MODELING OF COHESIVE GRAIN MATERIAL  
**Zvi Asaf**  
Zvi Asaf, Itzhak Shmulevich, Ramy Catav

- 13:00 C-0366 VERTICAL LOAD ON DISC EMBEDDED IN STATIC AND FLOWING GRAIN: EXPERIMENTAL AND DEM SIMULATIONS  
**Rafal Kobyłka**  
Rafal Kobyłka, Marek Molenda
- 13:15 C-2113 VIBRATION INDUCED GRANULAR FLOW THROUGH AN ELBOW  
**Iván Sánchez**  
Iván Sánchez, Ramón Darias, Oliver Pozo

## 128 SESSION

11:55 - 13:30  
**(SPC03): NON-STANDARD IMAGING OUTDOORS**  
Moderator: Zeev Schmilovitch  
Location: ROOM 8+9

- 11:55 Introduction
- 12:00 C-1186 WEEDS-WHEAT DISCRIMINATION USING HYPERSPECTRAL IMAGERY  
**Xavier Hadoux**  
Xavier Hadoux, Nathalie Gorretta, Gilles Rabatel
- 12:15 C-2209 CLASSIFICATION BETWEEN VEGETATION AND NON VEGETATION USING HYPERSPECTRAL SENSING  
**Efi Vitzrabin**  
Efi Vitzrabin, Victor Alchanatis, Yael Edan
- 12:30 C-1496 USING THE WIENER PREDICTIVE FILTER APPROACH TO IMPROVE MEASUREMENTS OF SOIL DENSITY OBTAINED WITH AN X-RAY COMPUTED TOMOGRAPHY SCANNER  
**Paulo Cruvinel Estevo**  
Paulo E. Cruvinel, Mauricio F. Lima Pereira
- 12:45 C-1122 GETTING SIMULTANEOUS RED AND NEAR INFRARED BANDS FROM A SINGLE DIGITAL CAMERA FOR PLANT MONITORING APPLICATIONS  
**Gilles Rabatel**  
Gilles Rabatel, Nathalie Gorretta, Sylvain Labbé

## 129 SESSION

14:30 - 15:25  
**(PM): POWER AND MACHINERY -POSTER SESSION**  
Location: POSTERS ROOM

- P-0319 DESIGN, DEVELOPMENT, AND EVALUATION OF AMECHATRONICS TRANSMISSION SYSTEM FOR UPGRADING PERFORMANCE OF A ROW CROP PLANTER  
**Saadat Kamgar**  
Saadat Kamgar, Mohammad Javad Eslami
- P-0412 EXAMINATION OF ROLLING LOSSES ON LOAMY SAND  
**Laszlo Mathe**  
Laszlo Mathe

- P-0508 TRACTION FORCE IN ARABLE FARMING: AGRONOMIC AND ENVIRONMENTAL ASPECTS AFTER FIELD DATA ACQUISITION AND MODELLING  
**Thomas Anken**  
Etienne Diserens, Anken Thomas, Andrea Battiato
- P-0587 PERFORMANCE OF VACUUM SEED METERING IN LONGITUDINAL DISTRIBUTION OF COTTON SEEDS  
**Otávio Dias da Costa Machado**  
Airton dos Santos Alonço, Otávio Dias da Costa Machado, Mateus Potrich Bellé, Fernando Pissetti Rossato, Kátia Maria Cardinal, Hendrigo Alberto Torchelsen da Silveira
- P-0611 SAFETY ANALYSIS OF THE POWER HARROW THROUGH SIMULATION BASED ON THE CHARACTERISTICS OF THE SOIL  
**Jae Wan Lee**  
Jae Wan Lee, Young Joo Kim, Seong Il Kang, Joonyong Kim
- P-0844 OPTIMAL SELECTION OF FARM POWER AND MACHINERY SIZE BY MIXED INTEGER LINEAR PROGRAMMING  
**Rajab Tondro**  
Rajab Tondro, Hasan Aghel, Mahdi Khojastepour, Arash Dourandish
- P-0855 DEVELOPMENT AND TESTING OF INNOVATIVE DEVICES TO REDUCE THE DRIFT OF ABRASION POWDER DURING THE SOWING OF DRESSED SEEDS WITH PNEUMATIC DRILLS  
**Marcello Biocca**  
Daniele Pochi, Marcello Biocca, Roberto Fanigliulo, Pietro Gallo, Patrizio Pulcini
- P-0929 CROP-LIVESTOCK INTEGRATION: EVALUATION OPERATING PERFORMANCE ON INTERCROPPED OF MAIZE STRAW WITH FORAGES  
**Carlos Chioderoli Alessandro**  
Carlos Alessandro Chioderoli, Carlos Eduardo Angeli Furlani, Rafael Henrique de Freitas Noronha, Rafael Scabello Bertonha, Ariel Muncio Compagnon
- P-0943 KINEMATIC ANALYSIS OF FINGERED TYPE MOUNTED MOWER CRANK MECHANISM BY USING MSC ADAMS SOFTWARE  
**Abdullah Beyaz**  
Abdullah Beyaz, Ugur Yegul
- P-0981 MAIZE SEEDING IN CROP-LIVESTOCK INTEGRATION SYSTEM IN THE SECOND CROP YEAR  
**Carlos Chioderoli Alessandro**  
Carlos Alessandro Chioderoli, Carlos Eduardo Angeli Furlani, Marcelo Boamorte Raveli, Marcelo Tufaille Cassia, Fábio Alexandre Cavichioli
- P-0988 NON-LINEAR STRESS ANALYSIS FOR THE BOLT CONNECTIONS OF A CHISEL TINE USING FINITE ELEMENT METHOD  
**H. Kursat Celik**  
H. Kursat Celik, Allan. E. W. Rennie, Ibrahim Akinci
- P-0992 POPULATION OF PLANTS IN MAIZE STRAW INTERCROPPED WITH FORAGES IN THE CROP-LIVESTOCK INTEGRATION  
**Carlos Eduardo Angeli Furlani**  
Carlos Eduardo Angeli Furlani, José Maria do Nascimento, Carlos Alessandro Chioderoli, Rafael Scabello Bertonha, Fábio Alexandre Cavichioli
- P-1133 SEEDER PERFORMANCE FOR RAPESEED  
**Arlindo Almeida**  
Arlindo Almeida, Ângelo Rodrigues
- P-1229 EVALUATION OF ENERGY REQUIREMENTS AND RESIDUE BURIAL EFFICIENCY OF THREE PRIMARY TILLAGE METHODS IN A HEAVY CLAY SOIL  
**Marcello Biocca**  
Roberto Fanigliulo, Marcello Biocca, Marco Fedrizzi, Mauro Pagano, Daniele Pochi
- P-1437 INVESTIGATION OF THE SOIL-TOOL INTERACTION BY SPH (SMOOTH PARTICLE HYDRODYNAMICS) BASED SIMULATION  
**György Kerényi**  
Márton Urbán, Krisztián Kotroc, György Kerényi
- P-1513 PERFORMANCE OF TWO PLANTERS PROTOTYPES OF DIRECT SEEDING (NO-TILL)  
**Vilnei Dias**  
Vilnei Dias, Airton dos Santos Alonço
- P-1535 USING EARNING VALUE MANAGEMENT (EVM) TO EVALUATE THE QUALITY OF FARMING OPERATIONS  
**Marcelo Dodson Sans**  
Marcelo Dodson
- P-1589 INVESTIGATION THE EFFECTS OF MOISTURE CONTENT, TRAFFIC AND LOADING ON THE SOIL SINKAGE  
**Reza Tabatabaekolooor**  
Reza Tabatabaekolooor, Seyed Reza Mousavi Seyed
- P-1615 MATHEMATICAL MODELING OF THE MOTION RESISTANCE RATIO OF TOWED PNEUMATIC AND RIGID BICYCLE WHEELS ON DEFORMABLE SURFACES  
**Fatai Akande Bukola**  
Fatai Akande Bukola, Desa Ahmad
- P-1634 EFFECT OF VIBRATORY AND NON-VIBRATORY SUBSOILING ON THE SOIL ENGINEERING PROPERTIES  
**Reza Tabatabaekolooor**  
Reza Tabatabaekolooor, Seyed Reza Mousavi Seyed

- P-1785 DESIGN AND EVALUATION OF A PAIRED ROW NO-TILL SEEDING SYSTEM  
**F. Javier López Díez**  
F. Javier López Díez, Pablo Pastrana
- P-1807 INNOVATIVE METHOD AND MATERIALS FOR TYRE FOOTPRINT EVALUATION ON SURFACE CAPABLE OF BEING DEFORMED  
**Carlo Bisaglia**  
Elio Romano, Maurizio Cutini, Carlo Bisaglia
- P-1830 SPECIFIC ENERGY CONSUMPTION AND FIELD PERFORMANCE AND IN PLOUGHING AND CULTIVATING  
**Gerhard Moitzi**  
Gerhard Moitzi, Martin Haas, Helmut Wagentristl, Josef Boxberger, Andreas Gronauer
- P-2025 EFFECTS OF TILLAGE METHODS ON ENERGY USE FOR WHEAT IN MEDITERRANEAN COASTAL OF TURKEY  
**Zeliha Barut Bereket**  
Zeliha Barut Bereket, Ismail Çelik, M. Murat Turgut
- P-2033 EFFECT OF TILLAGE EQUIPMENT ON CO<sub>2</sub> EMISSION FROM SOIL  
**Zeliha Barut Bereket**  
Zeliha Barut Bereket, M. Murat Turgut, Davut Akbolat, Ismail Çelik
- P-2168 EVALUATION OF ELECTRICAL PRUNING SHEARS IN GRAPEVINE  
**Carmen Jaren**  
Carmen Jaren, Gaizka Jauregi, Jesus Mangado, Pedro Arnal, Ainara López, Silvia Arazuri
- P-2238 SPEED SEEDING AND SOIL RESISTANCE PENETRATION IN DIRECT SOWING IN SAO PAULO STATE - BRAZIL  
**Wilson José Oliveira de Souza**  
Wilson José Oliveira de Souza, Samuel Ferrari, Elza Alves, César Henrique De Jesus, Alexandre Tsuyoshi Yamamoto
- P-2349 AGROBACTERIUM-MEDIATED GENETIC TRANSFORMATION OF CHRYSANTHEMUM (CHRYSANTHEMUM MORIFOLIUM RAMAT.) WITH AN APHIDICIDAL GENE, GCS (GAMMA-CADINENESYNTHASE)  
**Mahmood Valizadeh**  
Mahmood Valizadeh, Seyed Kamal Kazemitabar, Maarten A. Jongmsa
- P-2358 MODELING THE EFFECT OF NARROW BLADE GEOMETRY ON SOIL FAILURE AND DRAFT FORCE USING DISCRETE ELEMENT METHOD  
**Gholamhosein Shahgoli**  
Gholamhosein Shahgoli, Naser Shahi
- P-2359 GENOMIC AND FUNCTIONAL STUDY OF RHIZOSPHERIC BACTERIAL COMMUNITIES OF PINUS ROXBURGHII AND THEIR POTENTIAL USE IN AGRICULTURE  
**Muhammad Faisal**  
Tayyaba Younis, Muhammad Faisal

- P-0617 EFFECT OF TRACTOR TRAFFIC ON SOIL PHYSICAL PROPERTIES AND PERFORMANCE  
**Ali Raza Shah Sayed**
- P-1709 EFFECT OF MACRO SHAPE BLADE GEOMETRY ON DRAUGHT FORCE AND SOIL REDISTRIBUTION  
**Seth Manuwa Idowu**

130  
SESSION

14:30 - 15:25  
**(SW-SPC-01) POSTERS SESSION**  
Location: POSTERS ROOM

- P-1048 IMPROVING MAIZE IRRIGATION MANAGEMENT BY CSM-CERESMAIZE MODEL  
**Maliheh Rabie**  
Maliheh Rabie, Mehdi Gheysari, Seyed Majid Mirlatif
- P-0462 IMPACT OF CLIMATE VARIABILITY ON IRRIGATION REQUIREMENTS FOR TWO CROPS AND RUN OFF EFFECTS IN CONCORDIA; ENTRE RIOS, ARGENTINA  
**Alejandro Pannunzio**  
Alejandro Pannunzio, Pamela Norma Texeira Soria, Lida Borello
- P-0272 SOIL WATER MANAGEMENT STRATEGIES FOR ENHANCED CROP WATER PRODUCTIVITY IN DRY SEASON FARMING ON INLAND VALLEY SWAMPS OF THE TROPICS  
**Samuel Agele Ohikhen**
- P-1053 EUCALYPTUS IRRIGATION USING FACULTATIVE STABILIZATION POND EFFLUENT: POST TREATMENT EFFICIENCY OF THE SOIL-PLANT SYSTEM  
**Denis Roston Miguel**  
Denis Roston Miguel, Alex Henrique Veronez, Bruno Coraucci Filho, Ronaldo Stefanutti
- P-1810 WATER PRODUCTIVITY AT FARM-SCALE AS A FUNCTION OF EVAPOTRANSPIRATION IN PRODUCTION SYSTEMS USING THE EXAMPLE OF BRANDENBURG, GERMANY  
**Daniela Müller**  
Daniela Müller, Katrin Drastig, Annette Prochnow, Judy Libra
- P-1193 RELATIONSHIP BETWEEN CITRUS PRODUCTIVITY AND INDICATORS OF UNIFORMITY IN TRICKLE IRRIGATION SYSTEM.  
**João Carlos Saad Cury**  
João Carlos Saad Cury, Helio Moreira Da Silva Junior
- P-0012 GROWING MORE WITH LESS IN THE WESTLANDS WATER DISTRICT IN THE SAN JOAQUIN VALLEY, CALIFORNIA  
**James Ayars**  
James Ayars, Bakhodir Mirzaev

- P-0024 DAILY PENMAN-MONTEITH SENSITIVITY ANALYSIS IN MANY SUBCLASSES CLIMATES OF KERMAN BASED ON EXTENDEDDEDE MARTONNE CLASSIFICATION  
**Bahram Bakhtiari**  
Bahram Bakhtiari, Amin Baghizadeh
- P-0025 RECOGNITION AND ESTIMATION OF EFFECTIVE RAINFALL AS A DROUGHT MANAGEMENT STRATEGY IN RAINFED AGRICULTURE.  
**Jaber Rahimi**  
Jaber Rahimi
- P-0062 PRODUCTION OF HYBRID PAPAYA CULTIVATED UNDER DIFFERENT IRRIGATION LEVELS.  
**Juarez Pedroza Paz**  
Juarez Pedroza Paz
- P-0070 SEMINAL ROOT OF MAIZE VARIETIES IN RELATION TO REDUCTION IN THE SUBSTRATES MOISTURE CONTENT  
**Asad Shah**  
Asad Shah
- P-0211 MORPHOLOGICAL RESPONSES OF EUCALYPTUS GRANDIS SEEDLINGS SUBMITTED TO DIFFERENT WATER STRESS LEVELS DURING HARDENING  
**Magali Silva Ribeiro da**  
Magali Ribeiro da Silva, Antonio Carlos Nogueira, Carlos Marchesi deCarvalho, Danilo Simões
- P-0215 TRANSPIRATION OF EUCALYPTUS SPP SEEDLINGS SUBMITTED TO DIFFERENT FERTIGATION MANagements  
**Magali Silva Ribeiro da**  
Magali Ribeiro daSilva, Simone Fernandes Ciavatta, Danilo Simões
- P-0255 ADEQUACY OF THE PENMAN-MONTEITH METHOD TOIRRIGATED SURFACE WITH DIFFERENT EXPOSURES AND DECLIVITY  
**José Eduardo Pitelli Turco**  
José Eduardo Pitelli Turco, Adhemar Pitelli Milani, Edemo João Fernandes
- P-0409 EVAPOTRANSPIRATION AND CROP COEFFICIENT OF ONION (ALLIUM CEPA L.) UNDER THE MULCH OF PLASTIC FILM IN ANARID REGION, NORTHWEST CHINA  
**Jianhua zheng**  
Jianhua Zheng, Guanhua Huang, Jun Wang, Quanzhong Huang
- P-0424 IRRIGATION AND BIOFERTILIZER EFFECTS ON GROWTH OF GARLIC  
**João Galbiatti Antonio**  
João Galbiatti Antonio, Aline Rombega Tito Rosa, Barbara BarofaldiAriguchi
- P-0426 THE BENEFITS OF LENTIL AUTUMN SOWING  
**SeyedSaeid Hojjat**  
SeyedSaeid Hojjat
- P-0428 EFFECT OF SEED SIZE ON SEED GERMINATION BEHAVIOR OF LENTIL GENOTYPES (LENS CULINARIS MEDIK.)  
**SeyedSaeid Hojjat**  
SeyedSaeid Hojjat
- P-0600 RESPONSE OF MELON (CUCUMIS MELO L.) YIELD AND QUALITYTO WATER UNDER FURROW IRRIGATION IN AN ARID REGION OF NORTHWEST CHINA  
**Guanhua Huang Huang**  
Jun Wang, Guanhua Huang, Jianhua Zheng, Quanzhong Huang, Haijun Liu
- P-0710 YIELD AND BEAN SIZE OF COFFEA ARABICA (CV CATUAI)CULTIVED UNDER DIFFERENT POPULATION ARRANGEMENTS AND WATER AVAILABILITY  
**Eduardo Agnellos Barbosa Augusto**  
Eduardo Agnellos Barbosa Augusto, Emilio Sakai, Jane MariaCarvalho Silveira, Regina Célia de Matos Pires
- P-0739 AGRICULTURAL WATER FOOTPRINT OF ETHANOL AND SUGAR FROM SUGAR CANE UNDER FERTIGATION PRODUCTION SYSTEM  
**Aderson Soares Andrade Junior**  
Aderson Soares Andrade Junior, Edson Alves Bastos, AntenorOliveira Aguiar Netto, Darlan Leao Braga, Maria Eveline da Silva,Donavan Holanda Noletto
- P-0756 SUGARCANE FERTIRRIGATED WITH MINERAL FERTILIZER AND VINASSE UNDER SUBSURFACE DRIP IRRIGATION DURING FOUR YEARS  
**Eduardo Agnellos Barbosa Augusto**  
Eduardo Agnellos Barbosa Augusto, Flávio Bussmeyer Arruda,Regina Célia de Matos Pires, Tonny Jose de Araujo Silva, EmilioSakai
- P-0779 ESTIMATION OF CROP WATER PRODUCTIVITY IN THE ZAYANDEHRUD BASIN BASED ON FIELD INVESTIGATION (CASE STUDY: ABSHAR RIGHT IRRIGATION NETWORK)  
**Vahid Rezaverdinejad**  
Vahid Rezaverdinejad, Hojjat Ahmadi, Sina Besharat
- P-0826 CALIBRATION OF HARGREAVES EQUATION FOR ESTIMATINGTHE REFERENCE EVAPOTRANSPIRATION IN THE SOUTHEAST OF SPAIN  
**Antonio Ruiz Canales**  
Antonio Ruiz Canales, José Miguel Molina Martínez, Daniel Gfernandez-Pacheco, Herminia Puerto Molina, Ramón Lópezurrea
- P-1061 PRODUCTIVE PERFORMANCE OF MAIZE GENOTYPES UNDER WATER DEFICIT IN TERESINA, PIAUÍ STATE, BRAZIL  
**Edson Bastos Alves**  
Edson Bastos Alves, Milton Jose Cardoso, Ricardo Silva de Sousa,Aderson Soares De Andrade Júnior, Valdenir Queiroz Ribeiro,Ramilos Rodrigues de Brito

- P-1063 SIMULATION OF WATER FLOW WITH ROOT WATER UPTAKE PROPOSED THE NEW SOFTWARE SWMRUM  
**Sina Besharat**  
Sina Besharat
- P-1291 ACCUMULATION OF THE CHLORIDE AND SODIUM IN PRECOCIOUS DWARF CASHEW IRRIGATED WITH SALINE WATER DURING THE FRUITING STAGE  
**Arlington Ricardo Ribeiro De Oliveira**  
Arlington Ricardo Ribeiro De Oliveira, Ronaldo Nascimento, Maiene De Fátima Cordeiro Queiroga, Hugo Orlando Carvalho Guerra
- P-1328 ENHANCEMENTS OF USING RTD INSTEAD OF THERMOCOUPLES FOR ESTIMATING EVAPOTRANSPIRATION BY MEANS OF ENERGY BALANCE METHOD  
**José Miguel Molina Martínez**  
David Escarabajal Henarejos, José Miguel Molina Martínez, Daniel García Fernández-Pacheco, Antonio Ruiz-Canales, Ramón LópezUrrea
- P-1365 EVALUATING CLIMATE CHANGE IMPACT ON IRRIGATION VULNERABILITY IN SOUTH KOREA  
**Min-Won Jang**  
Min-Won Jang, Soo-Jin Kim, Dae-Sik Kim, Sang-Min Kim
- P-1444 IMPROVEMENT OF ICEBERG LETTUCE IRRIGATION IN THE 'CAMPO DE CARTAGENA' AREA  
**Herminia Puerto Molina**  
Herminia Puerto Molina, Javier Juárez López, Antonio Ruiz Canales, José Miguel Molina Martínez
- P-1628 WIND-INDUCED FLOW IN A CLOSED WATER BODY WITH FLOATING CULTURE SYSTEM  
**Kunihiko Hamagami**  
Kunihiko Hamagami, Masayuki Fujihara, Ken Mori, Hidekazu Yoshioka
- P-1712 DRIP IRRIGATION BASED ON PAN EVAPORATION VALUES FOR MUSKMELON (CUCUMIS MELO L.) IN PLASTIC GREENHOUSE  
**Bao-Zhong Yuan**  
Bao-Zhong Yuan, Jie Sun, Zhi-Long Bie, Yaohu Kang
- P-1880 SURFACE ENERGY BALANCE TO ESTIMATE EVAPOTRANSPIRATION OF IRRIGATED ORANGE ORCHARDS UNDER MEDITERRANEAN SEMI-ARID CONDITIONS  
**Rita Papa**  
Simona Consoli, Rita Papa
- P-1882 ON THE TRUE ORIGINS OF THE HEAT PROPAGATION MODEL FOR THE PREDICTION OF SUBTERRANEAN TEMPERATURES  
**Fernando Ruiz-Mazarrón**  
José Francisco Romero-García, Ignacio Cañas Guerrero, Fernando Ruiz-Mazarrón
- P-1929 INEFFICIENCY AN INDEX FOR DROUGHT ANALYSIS  
**Hamid Babaei**  
Hamid Babaei, Shahab Araghinejad
- P-2018 DEVELOP A SIMPLE ECONOMICAL EVAPORATION PAN  
**El-Sayed E. Omran**  
El-Sayed Omran Ewis, Mohamed A. Rashad
- P-2103 DUAL CROP COEFFICIENTS FOR IRRIGATED MAIZE IN SOUTHERN BRAZIL: MODEL CALIBRATION AND VALIDATION  
**Gonçalo Rodrigues Caleia**  
Juliano D. Martins, Gonçalo C. Rodrigues, Mirta T. Petry, Reimar Carlesso, Paula Paredes, Ricardo D. Rosa, Luis S. Pereira,

# 131 SESSION

14:30 - 15:25

**SPC-05: POSTERS SESSION**

Location: POSTERS ROOM

- P-0277 MEASUREMENTS AND CALCULATIONS OF VENTILATION RATE FOR NATURALLY VENTILATED ANIMAL BUILDINGS: A REVIEW  
**Peifeng Liu Songming Zhu**  
Nan Yang, Peifeng Liu, Jinsong He, Zhangying Ye
- P-0459 AMMONIA, CARBON DIOXIDE AND HYDROGEN SULFUREMISSIONS FROM STORED SLURRY AS AFFECTED BY SPATIAL AND TEMPORALLY DISTRIBUTED SLURRY ADDITIONS  
**Xiaorong Dai**  
Xiaorong Dai, Dani García, Victoria Blanes-Vidal, Guoqiang Zhang
- P-0824 INFLUENCE OF MANURE STRATEGY IN LAYER HOUSES WITH VIEW TO AMMONIA AND DUST PRODUCTION.  
**Tatjana Winter**  
Tatjana Winter, Torsten Hinz
- P-0934 EMISSION OF AMMONIA AND GREENHOUSE GASES FROM TWO NATURALLY VENTILATED BARN FOR DAIRY COWS  
**Wentao Wu**  
Wentao Wu, Chao Zong, Guoqiang Zhang
- P-1923 EMISSIONS OF HARMFUL GASES IN PIG FATTENING  
**Zuzana Palkovicova**  
Zuzana Palkovicova, Jan Broucek, Jan Broucek
- P-0618 EFFECTS OF PHOTOPERIOD ON BEHAVIOR AND MORTALITY RATE IN BEIJING YOU-CHICKEN BEFORE 8 WEEKS OLD  
**Furong Zhao**  
Furong Zhao, Ailian Geng, Weiwei Jiao, Hongjie Hu

- P-0750 ESTIMATING THE MOST IMPORTANT CRITERIA FOR HATCHING EGGS AS FUNCTION OF BROILER BREEDERS AGE  
**Marta Dos Santos Baracho**  
Marta Dos Santos Baracho, Diego Pereira Neves, Irenilza Dealencar Naas, Juliano De Araújo Cassiano, Fabiana Goncalveslima
- P-0753 LOSSES IN HATCHERY EGGS PRODUCTION: MULTIVARIATE DATA ANALYSIS  
**Marta Dos Santos Baracho**  
Marta Dos Santos Baracho, Irenilza De Alencar Naas, Fabiana Goncalves Lima, Juliano De Araújo Cassiano
- P-0866 ANALYSIS OF QUALITY OF HEALTH OF DIFFERENT BROILER LITTER REUSED SEQUENTIALLY  
**Fátima Vieira Araújo**  
Fátima Vieira Araújo, Richard S. Gates, Ilda de Fátima Ferreira Tinôco, Déborah Cassuce, Bernadete Santos, Gabriela Costa
- P-0930 INFLUENCE OF ARTIFICIAL LIGHTING IN THE OCCURRENCE OF DIARRHEA IN PIGLETS IN THE NURSERY PHASE IN THE SUMMER AND WINTER SEASON  
**Paulo Giovanni De Abreu**  
Vilmar Rodrigues De Sousa Júnior, Paulo Giovanni De Abreu, Luana Araújo Sabino, Gustavo Júlio Mello Monteiro De Lima, Arleicoldebella, Valeria Maria Nascimento Abreu, Letícia Dos Santos Lopes, Taiana Cestonaro
- P-0980 INFLUENCE OF ARTIFICIAL LIGHTING IN THE ZOOTECNICAL PERFORMANCE OF PIGS IN THE NURSERY PHASE IN PERIODS OF WINTER AND SUMMER  
**Luana Araújo Sabino**  
Vilmar Rodrigues de Sousa Júnior, Paulo Giovanni de Abreu, Luana Araújo Sabino, Arlei Coldebella, Letícia dos Santos Lopes, Valeria Maria Nascimento Abreu, Gustavo Júlio Mello Monteiro de Lima
- P-1770 THE EFFECTS OF AIR QUALITY ON CHICKEN HEALTH  
**Huong Lai**  
Huong Lai, Mike G. B. Nieuwland, Andre J. A. Aarnink, Bas Kemp, Henk K. Parmentier
- P-0251 THERMAL PERFORMANCES OF A PHOTOVOLTAIC-INTEGRATED ROOFING SOLUTION FOR LIVESTOCK BUILDINGS: COMPARISON WITH CONVENTIONAL COVERINGS  
**Matteo Barbari**  
Matteo Barbari, Lorenzo Leso, Stefano Simonini
- P-0658 IMPROVEMENT ON AIR EXCHANGE RATE CALCULATION BY USING CO2 BALANCE METHOD AND ESTIMATION OF AMMONIA EMISSION FROM NATURAL VENTILATED DAIRY BUILDINGS  
**Zhihui Yan**  
Zhihui Yan, Lixin Xu, Zheng Xiang Shi, Baoming Li
- P-1060 HEAT TRANSFER TO CALCULATE MINIMUM VENTILATION RATES FOR BROILERS HOUSE  
**Thayla Morandi Ridolfi de Carvalho**  
Thayla Morandi Ridolfi de Carvalho, Daniella Jorge de Moura, Paulo Ademar Martins Leal, Juliana Maria Massari, Karla Andrea Oliveira Lima
- P-1382 Improving Commercial Broiler Attic Inlet Ventilation through CFD Analysis  
**Jonathan Olsen**  
Johnathan Olsen, Joseph L. Purswell, Jeremiah D. Davis, Brian Luck, Emile Koury
- P-1901 EVALUATION OF THE THERMAL EFFICIENCY OF MATERIALS USED AS ROOFING SYSTEMS IN POULTRY HOUSES  
**Ariane Castro Cristina**  
Ariane Cristina de Castro, Iran Oliveira da Silva, Elenilson Sguizzato Bortolini, Maria Luisa Appendino Nunes
- P-2174 ANALYSIS OF ALTERNATIVE VENTILATION SYSTEM DESIGNS FOR A PIGSTY: A COMPARATIVE LITERATURE REVIEW  
**Viktorija Zagorska**  
Viktorija Zagorska, Tomas Norton
- P-0191 A SURVEY TO INVESTIGATE AWARENESS OF PEOPLE ABOUT ANIMAL WELFARE IN BRAZIL  
**Raquel Baracat Tosi Rodrigues da Silva**  
Raquel Baracat Tosi Rodrigues da Silva, Irenilza Alencar Nääs
- P-0708 STUDY OF COMFORT TEMPERATURE FOR BROILERS UP TO 21 DAYS OF AGE  
**Déborah Cassuce**  
Déborah Cassuce, Ilda de Fátima Ferreira Tinôco, Fernando Baêta, Roque Mesquita Filho, Fernanda Sousa, Diogo Coelho
- P-0895 USING DECISION TREE FOR CLASSIFYING FARROWING PIGLETS STRESS CONDITIONS USING VOCALIZATION  
**Alexandra Cordeiro**  
Alexandra Cordeiro, Irenilza De Alencar Naas, Stanley Oliveira, Andreia Almeida, Diego Pereira Neves, Flavia Jacob
- P-1477 ANIMAL WELFARE EDUCATION FROM AN ENGINEERING PERSPECTIVE: USA PENN STATE EXTENSION INITIATIVE  
**Eileen Wheeler**  
Eileen F. Wheeler
- P-1913 BLOOD PARAMETERS OF CHICKS FROM EGGS INJECTED WITH ASCORBIC ACID AND SUBJECTED TO THERMAL STRESS  
**Sarah Sgavioli**  
Sarah Sgavioli, João Batista Matos Júnior, Liliana Longo Borges, Maria Fernanda Praes Ferreira Menegucci, Euclides Braga Malheiros, Isabel Cristina Boleli



- P-1916 BALANCE OF PH OF CHICKS FROM EGGS INJECTED WITH ASCORBIC ACID AND SUBJECTED TO THERMAL STRESS  
**Sarah Sgavioli**  
Sarah Sgavioli, Vitor Rosa De Almeida, Viviane de Souza Morita, Gisele Lamberti Zaniratu, João Ademir de Oliveira, Isabel Cristina Boleli
- P-2027 ASSESSING FEAR IN RABBITS. PRELIMINARY RESULTS.  
**Aranxa Villagrà García**  
Irene Olivas, Aránzazu Villagrà
- P-2100 METHODOLOGY FOR REGISTERING INTERNAL SWINE TEMPERATURE USING SKIN SURFACE TEMPERATURE SENSORS  
**Gustavo Mostaco Marques**  
Gustavo Mostaco Marques, Késia Oliveira Da Silva Miranda

132  
SESSION

14:30 - 15:25

**EN: POSTERS SESSION**

Location: POSTERS ROOM

- P-0002 BIOFERTILIZER PROTECTOR WITH FREE LIVING DIAZOTROPHIC AND FUNGI CHITOSAN ON GREEN PEPPER COMMERCIAL CHARACTERISTICS  
**Newton Stamford Pereira**  
Rosângela S Santana, Newton P Stamford, Sebastião S Júnior, Vinicius Gedeão Bezerra de Carvalho, Clayton A Sousa, Thayza Christina Montenegro Stamford
- P-0140 CHANGES IN SOIL PROPERTIES AND MELON YIELD AS AFFECTED BY BIOPROTECTOR WITH DIAZOTROPHIC BACTERIA AND FUNGI CHITOSAN  
**Thayza Stamford Montenegro**  
Newton P Stamford, W J Oliveira, EVN Silva, TCM Stamford, T.L.M Stamford
- P-0180 BIODIESEL FROM PULP AND KERNEL OF MACAUBA (ACROCOMIA ACULEATA)  
**Roseli Ferrari Aparecida**  
Roseli Aparecida Ferrari, Joaquim Adeline de Azevedo Filho
- P-0259 FEASIBILITY OF THE ELECTRICAL SUPPLY BY WIND POWER IN DAIRY CATTLE FARMS  
**Lidia Osorio Castelao**  
Lidia Osorio, Ramón Velo, María Dolores Fernández, Manuel Ramiro Rodríguez
- P-0330 UTILIDAD DE LOS RESIDUOS DE LA DESTILACION DE PLANTAS DE CYMBOPOGON CITRATUS.(D.C.) STAPF (CAÑA SANTA).  
**María Cristina Escandón Arbolay**  
Rafaela Soto Ortiz, María Cristina Escandón Arbolay, María Cristina Escandón Arbolay
- P-0340 STUDY OF JATROPHA CURCAS L. CAKE DETOXIFICATION  
**Anna Leticia Montenegro Turtelli Pighinelli**  
Anna Leticia Montenegro Turtelli Pighinelli, Roseli Aparecida Ferrari, Maria Cristina Noronha Abrahão Machado, Kil Jin Park
- P-0539 INVESTIGATION AND DETERMINATION OF ENERGY MANAGEMENT INDEXES FOR DRY LAND FARMING OF CANOLA IN GOLESTAN PROVINCE OF IRAN  
**Zahra Kalabi**  
Seyed Alireza Ghadimi, Mohammad Emami, Pourya Nasrabadi, Zahra Kalabi Gharelar, Mohammad Ghahderijani, Masoud Nezamoleslami
- P-0656 REUSE OF AGRICULTURAL RESERVOIR SEDIMENT CONTAMINATED BY HIGH CONCENTRATION OF ORGANIC MATTER  
**Eunhee Choi**  
Eunhee Choi, Jongmin Oh
- P-0720 PRODUCTION OF 2-PHENYLETHANOL BY MICROORGANISMS IN CASSAVA WASTEWATER  
**Simone Oliveira Maria Menegatti**  
Simone Oliveira Maria Menegatti, Simone Damasceno Gomes, Luciane Sene, Silvia Renata Machado Coelho, Ana Claudia Barana
- P-0846 REGIONAL CLIMATE CHANGE IMPACT ON FUTURE ENERGY CONSUMPTION OF GREENHOUSES  
**Thomas Rath**  
Holger Hoffmann, Thomas Rath
- P-0868 EVALUATION OF A GRID-CONNECTED PHOTOVOLTAIC SYSTEM SUPPLYING POWER TO A DAIRY FARM  
**Lelia Murgia**  
Lelia Murgia, Giuseppe Todde, Maria Caria
- P-0890 FAST PYROLYSIS OF BONE MEAL WASTE TO OBTAIN BIO-OIL AND BIOCHAR  
**Rosa Helena Aguiar**  
Jussara Bertho Fantinatti, Juan M. Mesa Perez, José D. Rocha, Robson C. Martins, Rosa H. Aguiar
- P-0949 INFLATABLE SOLAR AIR HEATING COLLECTOR AND ITS RESEARCH USING IN AGRICULTURE PRODUCT DRYING  
**Guntis Ruskis**  
Guntis Ruskis, Aivars Aboltins, Janis Palabinskis
- P-1185 PREDICTION THE BIODYNAMIC RESPONSE OF THE SEATED HUMAN BODY IN THE SYSTEM HUMAN OPERATOR AGRICULTURAL COMBINATION  
**Jacek Kromulski**  
Jan Szczepaniak, Jacek Kromulski

- P-1255 THE POTENTIAL FOR ENERGY SAVINGS IN CHOSEN SECTORS OF AGRICULTURAL PRODUCTION IN POLAND  
**Janusz Golaszewski**  
Janusz Golaszewski, Ryszard Myhan, Zbigniew Brodzinski, MariuszStolarski, Ewelina Olba-Ziety
- P-1396 PRODUCTION OF BIODIESEL FROM MICRO ALGAE AND DETERMINING SOME OF ITS PHYSICAL AND CHEMICAL PROPERTIES  
**Heydar Mohammad-Ghasemnejad Maleki**  
Heydar Mohammad-Ghasem Nejad Maleki
- P-1464 UBIQUITOUS MONITORING OF SOIL WATER AND SALT CONTENT IN PADDY FIELDS DAMAGED BY TSUNAMI IN JAPAN  
**Masaru Mizoguchi**  
Masaru Mizoguchi, Katsumi Chiba, Yoshiko Muto, Koh Kato
- P-1518 CARBON AND NITROGEN STOCKS IN DIFFERENT SOIL MANAGEMENT SYSTEMS IN COASTAL PLAINS OF PARAIBA STATE  
**Lucia Chaves Helena Garofalo**  
Lucia Helena Garofalo Chaves, José Deomar De Souza Barros, LuciaChaves, lêde De Brito Chaves, Carlos Henrique de A. Farias Farias
- P-1604 EVALUATION OF MICROSTRUCTURAL CHANGES DURING DELIGNIFICATION OF AGAVE (AGAVE ATROVIRENS) FIBERS BYPHOTONIC, ELECTRONIC MICROCOPY AND IMAGE ANALYSIS  
**Hilda María Hernández Hernández**  
Hilda María Hernández Hernández, Leonor Guadarrama Fernández,Reynold Ramón Farrera Rebollo, José Jorge Channona Pérez, Eduardo Palacios González, Alberto de Vega, Pablo Ligeró, VicenteGaribay Febles, Georgina Calderón Domínguez, Jorge AlbertoMendoza Pérez
- P-1624 ENERGY CONSUMPTION PATTERN AND OPTIMIZING CANOLA PRODUCTION IN USING LINEAR PROGRAMMING  
**Heydar Mohammad-Ghasemnejad Maleki**  
Heydar Mohammad-Ghasem Nejad Maleki
- P-1717 GENETIC VARIABILITY OF GROWTH CHARACTERS OF JATROPHA CURCAS  
**Edson Seizo Mori**  
Edson Seizo Mori, Kairo Henrique Pereira Fernandes, Neide TomitaMori, Heloisa Mattana Saturnino
- P-1903 ELECTRICAL ENERGY GENERATION IN SMALL HYDROELECTRIC POWER PLANT AS A NEW CRITERION FOR THE ECOLOGICAL SALE TAX? CASE STUDY FOR MINAS GERAIS STATE, BRAZIL  
**Delly Oliveira Filho**  
Júlio César Oliveira; Delly Oliveira Filho; José Helvécio Martins; Paulo Marcos Barros Monteiro; Maria Joselma Moraes
- P-1932 ADVANCEMENT OF RAPESEED PRODUCTION FOR EDIBLE OIL AND BIODIESEL IN TURKEY  
**Özden Öztürk**  
Özden Öztürk, Fikret Akinerdem
- P-2090 ENERGY EFFICIENCY OF GROUND HEAT EXCHANGERS COOPERATING WITH THE HEAT PUMP COMPRESSOR  
**Slawomir Kurpaska**  
Slawomir Kurpaska, Hubert Latala
- P-2144 ENERGY CHARACTERISTIC OF SOLAR THERMAL COLLECTORS OF PLASTICS  
**José M<sup>o</sup> Cámara-Zapata**  
José M<sup>o</sup> Cámara Zapata, Arturo José Pascual Granged
- P-2151 PERFORMANCE OF A ELECTRONIC INJECTION DIESEL ENGINE FUELED A BLENDED PREHEATED 50% SOYBEAN OIL IN PETRODIESEL  
**Pedro Weirich Neto Henrique**  
Hevandro Delalibera, Nilson Campolina, Pedro Weirich NetoHenrique, Ricardo Ralisch
- P-2163 IMPORTANCE OF IMPACTS SCENARIOS FOR THE ADAPTATION OF AGRICULTURE TO CLIMATE CHANGE  
**Jurandir Zullo Junior**  
Jurandir Zullo Junior, Celso Macedo Junior, Hilton Silveira Pinto,Eduardo Delgado Assad, Andrea Koga Vicente
- P-2169 SOLAR THERMAL ENERGY TO SUPPORT THE HEATING OF GREENHOUSES IN THE SOUTHEASTERN SPANISH  
**José M<sup>o</sup> Cámara-Zapata**  
José M<sup>o</sup> Cámara Zapata
- P-2210 LOOFAH (LUFFA CYLINDRICA, L.) BIODIESEL AS FUEL FORDIESEL ENGINE  
**Oluwatoyin Oniya Oluwole**  
Oluwatoyin Oniya Oluwole, Isaac Bamgboye
- P-2236 THE POTENTIAL USE OF WINE LEES IN HEALTH APPLICATIONS  
**Alaa El-din Bekhit**  
Alaa El-din Bekhit, Adnan Bekhit
- P-2295 UTILIZATION OF SWEET SORGHUM AS A CATCH CROP FOR PRODUCING RAW MATERIALS TO BE USED FOR PRODUCTION OF BIOETHANOL AND BIOGAS  
**Franz Theuretzbacher**  
Franz Theuretzbacher, Philipp Kravanja, Manuel Becker, BarbaraAmon, Alexander Bauer, Anton Friedl, Antje Potthast, ThomasAmon
- P-2338 LOWER LIMIT OF OXYGEN SUPPLYING RATE FOR AN ENERGY SAVING COMPOSTING SYSTEM OF DAIRY MANURE  
**Kazunori Iwabuchi**  
Iwabuchi Kazunori, Mori Tsugumi, Kondo Ryutaró, Miyatake Fumihito, Maeda Takeki, Koki Maeda, Ronaldo B. Saludes,

- P-1930 CULTIVAR AND SOWING DATE EFFECTS ON OIL YIELD OF SAFFLOWER  
**Özden Öztürk**  
Özden Öztürk, Ramazan Keles
- P-0633 THE SENSITIVITY ANALYSIS OF ENERGY USE FOR COTTON PRODUCTION IN IRAN  
**Mohammad Ghahderijani**  
Mohammad Ghahderijani; Seyyed Hassan Pishgar-komleh; Paria Sefeedpari
- P-2291 A DECISION SUPPORT SYSTEM FOR MANAGEMENT OF ENERGY USE IN INEYARDS OF IRAN  
**Alireza Khoshroo**
- P-1863 ENERGY EFFICIENCY AND AUTOMATION IN MOTORS: A CASE STUDY FOR EXHAUSTION SYSTEMS  
**Aurelio Melo Gouvea**  
Aurelio Melo Gouvea; Milena Pinto; Dely Oliveira; Olga Toledo
- P-2191 THE EFFECTS OF DIFFERENT SOWING TIMES ON SOME AGRICULTURAL PROPERTIES OF SUFFLOWER VARIETIES (C.TINCTORIUS L.) AND BIODIESEL QUALITY  
**Fikret Akinerdem**  
Fikret Akinerdem; Ebru Atabey
- P-0693 APPLICATION OF VEHICLE LINEAR MODELS IN SYSTEMS SUPPORTING WORK OF AGRICULTURAL MACHINE DRIVER  
**Ryszard Grzechowiak**  
Tadeusz Pawlowski, Ryszard Grzechowiak
- P-0775 PARALLEL COMPUTING AND STATE MACHINE SOFTWARE DEVELOPMENT FOR MULTIPLE TEMPORARY IMMERSION BIOREACTOR SYSTEMS SEQUENCE CONTROL  
**Poonpat Poonnoy**  
Poonpat Poonnoy, Nopmanee Topoonyanont
- P-0805 AUTOMATIC PROCESSING AND BEHAVIOR RECOGNITION SYSTEM IN LAYING HENS PRODUCTION  
**Fengdan Lao**  
Lao Fengdan, Guanghui Teng
- P-0852 ONLINE STEREOVISION BASED SOFTWARE TO ESTIMATE CROP PARAMETERS IN GREENHOUSES  
**Julian Garcia Donaire**  
José Cantón Claro, Julian Garcia Donaire, Julián Sánchezhermosilla López
- P-0881 A STUDY ON DETERMINATION OF OPTIMUM WINDOW VENTILATION OPENING RATIO IN GREENHOUSES BY THE DECISION TREE METHOD  
**Can Ertekin**  
Nuri Caglayan, Can Ertekin
- P-0931 LABORATORY STUDY OF THE OPERATION OF A MONOGRAN VACUUM METERING SYSTEM  
**Medina Mabel Azucena**  
Gastón Bourges, Gustavo Fabian Nardón, Mabel Azucena Medina
- P-1124 DISCRETE EVENT SIMULATION OF HARVESTING OPERATIONS  
**Reem Al-Halimi**  
Reem Al-Halimi, Medhat Moussa
- P-1220 THE MULTI-LOOP STRUCTURE OF THE DRIVER VEHICLE SYSTEM APPLICABLE TO THE AGRICULTURAL SET STEERING TASK  
**Jacek Kromulski**  
Jacek Kromulski, Jan Szczepaniak, Tadeusz Pawlowski
- P-1337 STUDY OF AGRICULTURAL MECHANIZATION SITUATION IN IRAN (EMPHASIS ON HORTICULTURAL CROPS)  
**Nasim Khodakaramian**  
Behnoush Hasananzad Fanid, Mahsa SamieiFar, Hajar Valouzi, Shahrzad Hashemi, Mohammad Mehdi Amiri khorie, Masoud-Nezamoleslami
- P-0721 DESIGN AND EVALUATION OF AN ON-THE-GO INTEGRATED SENSOR FOR MEASURING SOIL MECHANICAL RESISTANCE  
**Abbas Hemmat**
- P-0288 A STUDY ON SPATIAL AND TEMPORAL SOIL WATER DISTRIBUTION USING AN UNDERGROUND SENSOR-BASED PLATFORM  
**Ioannis Gravalos**  
Ioannis Gravalos, Dimitrios Moshou, Theodoros Gialamas, Dimitrios Kateris, Zisis Tsiropoulos, Avgoustinos Avgousti
- P-0407 SIG APPLIED IN SPATIAL DISTRIBUTION OF THE CAPACITY OF SOIL USE OF A WATERSHED  
**Sérgio Campos**  
Sergio Campos, Gabriel Rondina Pupo da Silveria, Katiuscia Fernandes Moreira, Monica Yuri Mashiki, Nathalia Maria Salvadeo Parizoto
- P-0433 RAPID PROTOPLASTS EXTRACTION AND LYSIS FROM ORCHID LEAF USING A MICROFLUIDIC DEVICE  
**Min-Sheng Hung**  
Min-Sheng Hung, Chih-Pin Chen

133  
SESSION

14:30 - 15:25

(IT): POSTERS SESSION

Location: POSTERS ROOM

- P-1383 DEVELOPMENT OF AN INTEGRATED MULTIMEDIA ENVIRONMENT FOR A MANUALIZATION FRAMEWORK APPLIED TO AGRICULTURAL MACHINERY  
**Iria Brucker Roggia**  
Iria Brucker Roggia, Airton dos Santos Alonço, Roseclea DuarteMedina, Oni de Almeida Oliveira Sichonany
- P-1405 A DECISION TOOL FOR SILAGE CORN HARVEST OPERATIONS  
**Javier Bueno Lema**  
Javier Bueno Lema, Daniel Expósito, José Manuel Pereira, CarlosAmiama
- P-1566 DEVELOPMENT OF AN ACOUSTIC HORIZONTAL MULTIPLE-TIP PENETROMETER FOR DETERMINATION OF SOIL FAILURE MODE AND MECHANICAL RESISTANCE  
**Abbas Hemmat**  
Tayebeh Rahnama, Abbas Hemmat, Zahra Vahabi
- P-1788 OPTIMUM DETACHING MOVEMENT FOR APPLES-HARVESTING ROBOT  
**Tien Thanh Nguyen**  
Tien Thanh Nguyen, Dieter van Eessen, Josse de Baerdemaeker, Wouter Saeys
- P-2008 A METHODOLOGY FOR EVALUATING THE TEMPORAL STABILITY OF SPATIAL PATTERNS OF VINEYARD VARIATION  
**Filippo gambella**  
Filippo gambella
- P-2076 A MULTIVARIATE TIME-LAG MODELLING APPROACH TO PREDICT GRAMINEAE POLLEN ONSET BY METEOROLOGICAL DATA  
**Corrado Costa**  
Maria Antonia Brighetti, Corrado Costa, Alessandro Travaglini, Francesca Antonucci, Paolo Menesatti
- P-2267 AUTOMATIC EXTRACTION OF MULTI-MACHINERY FIELD OPERATION PERFORMANCE STATISTICS FROM GNSS RECORDINGS.  
**Martin Andreas Falk Jensen**  
Martin Andreas Falk Jensen, Dionysis Bochtis, Claus Aage GronSorensen
- P-0085 MATHEMATICAL MODELING CHANGES IN RHEOLOGICAL AND MECHANICAL PROPERTIES OF PEARS DURING STORAGE UNDER VARIABLE CONDITIONS  
**Ayman Amer Eissa Hafiz**  
Ayman Hafiz Amer Eissa, Abdulrahman Alghannam
- P-0100 DESIGN, CONSTRUCTION AND TESTING OF THE EXPERIMENTAL MACHINE VISION SORTING SYSTEM FOR TOMATOES  
**Omid Omid**  
Omid Omid, Asad Moddares Motlagh, Parviz Ahmadi Moghaddam
- P-0122 A FEASIBILITY STUDY FOR THE NONDESTRUCTIVE DETECTION OF GRANULATION IN TANGERINE FRUIT USING A CAPACITY BASED TECHNIQUE  
**Sontisuk Teerachaichayut**  
Sontisuk Teerachaichayut, Anupun Terdwongworakul, KanokpornKeawsumnuk, Malinee Rangsi, Kanitta Seangkeaw
- P-0158 CRITICAL DROP HEIGHT IN APPLE AS AFFECTED BY TEMPERATURE AND TYPE OF IMPACT SURFACE  
**Amir H. Afkari-Sayyah**  
Amir H. Afkar-sayyah, Yousef Abbaspour-Gilandeh, MansourRasekh, Sedigheh Shekarbigi
- P-0199 TEMPERATURE AND CONCENTRATION EFFECTS ON SOME ENGINEERING PROPERTIES OF CAMEL MILK  
**Ali Hobani**  
Ali Hobani
- P-0281 RHEOLOGICAL CHARACTERISTICS OF OZONATED WHEAT FLOUR  
**Juliana Paes Lobo**  
Juliana Paes Lobo, Juliana Lobo Paes, Lêda Rita DAntonino Faroni, Mônica Ribeiro Pirozi, Marcela Silva Carvalho, Paulo Roberto Cecon
- P-0294 TEXTURE PARAMETERS OF BEEF FROM POLISH BLACK-ANDWHITE AND POLISH BLACK-AND-WHITE X LIMOUSIN YOUNG BULLS  
**Jacek Niedzwiedz**  
Jacek Niedzwiedz, Halina Ostoja, Marek Cierach
- P-0297 PHYSICAL PROPERTIES OF CULINARY BEEF FROM BEEF AND DAIRY CATTLE CROSSBREEDS  
**Marek Cierach**  
Marek Cierach, Karolina Tabaka, Jacek Niedzwiedz
- P-0341 MOISTURE-DEPENDENT PHYSICAL PROPERTIES OF RED SPECKLED WHITE KIDNEY BEAN (PHASEOLUS VULGARIS L.)GRAINS  
**Mansour Rasekh**  
Mansour Rasekh, Amir H. Afkar-sayyah, Farideh Qahari Kermani
- P-0065 PREPARATION AND PROPERTIES OF PALM DATE POWDER  
**Alhussein Assiry M.**  
Alhussein Assiry M.

134  
SESSION

14:30 - 15:25  
**(PF): POSTERS SESSION**  
Location: POSTERS ROOM

- P-0388 SIMULATED IN-TRANSIT VIBRATION DAMAGE TO APRICOTS  
**Feizollah Shahbazi**  
Feizollah Shahbazi
- P-0429 EFFECT OF MOISTURE CONTENT ON SOME PHYSICAL PROPERTIES ON WHITE MAIZE SEEDS  
**Alireza Ghodsvali**  
Alireza Ghodsvali
- P-0602 PHYSICAL PROPERTIES OF HARVESTED CARROTS IN KOREA FOR GRADE STANDARD  
**Sukwon Kang**  
Sukwon Kang, Kangjin Lee, Jongguk Lim, Changhyun Mo, JongryulPark, Jaegyung Kim
- P-0642 DEVELOPMENT OF GINGER SPLITTING MACHINE  
**Kayode Simonyan Joshua**  
Simonyan Kayode Joshua, A.B. Eke, D.A. Okpara, U.N. Onwuka, J.C.Adama, B.N. Nwankwojike, R. Iheke, J. Ehiem,
- P-0797 DESIGN OF SEPARATION MACHINE FOR SHATTER RESISTANT SESAME AFTER THRESHING  
**Hyun Kwon Noh**  
Hyun Kwon Noh, Sun Ah Kim, Tae Kyung Choi
- P-0821 TOMATO SORTING BASED ON MATURITY, SURFACE DEFECTS AND SHAPE BY USING OF MACHINE VISION SYSTEM  
**Parviz Ahmadi Moghaddam**  
Parviz Ahmadi Moghaddam, Sina Besharat
- P-0922 REAL TIME NON-DESTRUCTIVE DETECTION OF SEEDS IN NADORCOTT MANDARIN AND GRANULATION DISORDER IN NAVEL ORANGE BY MEANS OF X-RAY CT FOR ONLINE SORTING.  
**Sekina Lebotsa Phalane**  
Sekina Lebotsa Phalane
- P-0971 A HYDRO-THERMO-RHEOLOGICAL MODEL FOR PREDICTION OF STRESS RELAXATION OF DATE FRUIT  
**Seyed Mehdi Nassiri**  
Seyed Mehdi Nassiri, Mohsen Alirezaei, Dariush Zare
- P-1009 EFFECT OF OSMOTIC DEHYDRATION ON THE PHYSICAL CHEMICAL PROPERTIES OF PINEAPPLE  
**Luiz Gabriel Pereira Martin Luiz**  
Gabriel Pereira Martin Luiz, Audirene Amorim Santana, RafaelAugustus de Oliveira, Kil Jin Park
- P-1011 STUDY OF PHYSICO-CHEMICAL PROPERTIES OF GUAVA AND MANGO POWDER OBTAINED BY SPRAY-DRYING TO USE AS NATURAL ADDITIVES  
**Silvia Germer**  
Rebeca Dalla Dea, Silvia Germer, Heitor Cozero, Cristhiane Ferrari
- P-1067 STRESS RELAXATION OF DATE AT DIFFERENT TEMPERATURE AND MOISTURE CONTENT OF PRODUCT: A NEW APPROACH  
**Dariush Zare**  
Dariush Zare, Mohsen Alirezaei, Seyed Mehdi Nassiri
- P-1097 MEASURING SOME ENGINEERING PARAMETERS OF ROSE FLOWER  
**Adel Heidari**  
Adel Heidari, Gholam Reza Chegini, Mohammad Hossein Kianmehr, Siavash Azimi
- P-1099 MODELLING THE EFFECT OF TIME AND TEMPERATURE ON RESPIRATION RATE OF POMEGRANATE ARILS (CV. ACCO ANDHERSKAWITZ)  
**Oluwafemi Caleb**  
Oluwafemi J. Caleb, Oluwafemi J. Caleb, Pramod V. Mahajan, Umezuruike Linus Opara
- P-1114 DESIGN AND CONSTRUCTION OF A HARVESTING SAFFLOWER PETALS MACHINE  
**Adel Heidari**  
Siavash Azimi, Gholam Reza Chegini, Mohammad Hosseinkianmehr, Adel Heidari
- P-1120 DESIGN AND CONSTRUCTION OF A LEAF STRIPPER MACHINE  
**Siavash Azimi**  
Adel Heidari, Gholam Reza Chegini, Seyed Reza Hassan-Beygi, Siavash Azimi
- P-1130 MECHANICAL STRENGTH TESTING OF ROSE FLOWER STEM AND PICKING FORCE EVALUATION  
**Siavash Azimi**  
Adel Heidari, Gholam Reza Chegini, Mohammad Hossein Kianmehr, Seyed Reza Hassan-Beygi, Siavash Azimi
- P-1184 EFFECTS OF STRAIN, STRAIN DIRECTION AND DRYING RATES ON CASTOR BEANS DECORTICATION PERFORMANCE  
**Adriano Bastos**  
Adriano Bastos Chaves, Antonio Carlos Ferraz
- P-1239 MECHANICAL AND RHEOLOGICAL PROPERTIES OF CARROTS  
**Andras Fekete**  
Timea Kaszab, Gyorgy Csima, Aniko Lambert-Mereti, Andras Fekete
- P-1261 THE INVESTIGATION OF PHYSICAL PROPERTIES OF SPRAY DRIED HONEY PREPARATION AND ITS CHANGES DURING STORAGE  
**Katarzyna Samborska**  
Katarzyna Samborska, Bogumila Bienkowska
- P-1271 THE INFLUENCE OF DIFFERENT EXTRUSION PARAMETERS ON ACOUSTIC PROPERTIES OF CRISP BREAD  
**Ewa Gonddek**  
Ewa Gonddek, Ewa Jakubczyk, Dorota Witrowa-Rajchert, Aleksandra Antoniuk

- P-1292 THE EFFECT OF EXTRUSION CONDITIONS ON MECHANICAL PROPERTIES OF WHOLEGRAIN BREAD  
**Ewa Jakubczyk**  
Ewa Jakubczyk, Ewa Gondek, Dorota Witrowa-Rajchert, Aleksandra Antoniuk
- P-1321 MONITORING LEAFY VEGETABLES THROUGH PACKAGING FILMS WITH HYPERSPECTRAL IMAGES  
**Belen Diezma Iglesias**  
Belén Diezma Iglesias, Miguel Angel Lara, Marta Molina, Lourdes Lleó, Margarita Ruiz-Altisent, Francisco Artés, Jean M Roger
- P-1345 CHLOROPHYLL IN SUGAR CANE CULTIVATED IN DIFFERENT LEVELS OF NITROGEN AND MOLYBDENUM IN THE FINAL STAGE OF DEVELOPMENT ARLINGTON  
**Ricardo Ribeiro De Oliveira**  
Arlington Ricardo Ribeiro De Oliveira, Ronaldo Nascimento, Maiene De Fátima Cordeiro Queiroga, Sabrina Cordeiro De Lima
- P-1370 NON DESTRUCTIVE DETECTION OF INTERNAL BROWN SPOT IN POTATOES BY TIME-RESOLVED REFLECTANCE SPECTROSCOPY: PRELIMINARY RESULTS ON SUSCEPTIBLE CULTIVAR  
**Alessandro Torricelli**  
Maristella Vanoli, Anna Rizzolo, Lorenzo Spinelli, Bruno Parisi, Alessandro Torricelli
- P-1388 ESTIMATED SUGAR LOSS DUE TO MECHANICAL HARVESTING AND POSTHARVEST PROCESS  
**Heydar Mohammed Ghasem Nejad Maleki**  
Heydar Mohammad-Ghasem Nejad Maleki
- P-1490 RELATIONSHIP BETWEEN SOLAR RADIATION AND WATERCORE ON APPLE FRUIT ASSESSED WITH MRI  
**Pilar Barreiro**  
Angela Melado, Miguel Angel Muñoz-garcía, Pilar Barreiro Elorza, Alvaro Blanco, Jesus Val, María Encarnación Fernández-Valle
- P-1627 POTATOES PHYSICAL PROPERTIES RESEARCHING IN MECHANIZED HARVESTING (AGERIA VARIETY)  
**Negar Ahangarnezhad**  
Negar Ahangarnezhad, Morteza Malek Yarand, Maryam Shirmohammadi, Gholam Reza Chegini, Reza Alimardani, Amir Zaki
- P-1666 WATER DESORPTION THERMODYNAMIC PROPERTIES OF PAPAYA  
**Louise Emy Kurozawa**  
Louise Emy Kurozawa, Rafael Augustus Oliveira, Miriam DupasHubinger, Kil Jin Park
- P-1748 DESIGN, DEVELOPMENT AND TESTING OF A SCREW PRESSEXPPELLER FOR PALM KERNEL AND SOYBEAN OIL EXTRACTION  
**Adesoji Matthew Olaniyan**  
Adesoji Matthew Olaniyan, Kamaldeen Yusuf, Adebayo LukumanWahab, Kunle Olamide Afolayan
- P-1778 NIR SPECTROSCOPY FOR DETECTION AND QUANTIFICATION OF ADULTERANTS IN FRESH AND THAWED MINCED BEEF USING LINEAR AND NON-LINEAR MODELS  
**Gamal ElMasry**  
Noha Morsy, Gamal M. Elmasry, Da-Wen Sun
- P-1851 QUICK QUALITY EVALUATION OF CHILEAN GRAPE BY APORTABLE VIS/NIR DEVICE  
**Roberto Beghi**  
Roberto Beghi, Aira Mena, Valentina Giovenzana, Raffaele Civelli, Stanley Best, L.F. León G., Riccardo Guidetti,
- P-2012 ON-LINE UV-C PROTOTYPE FOR POSTHARVEST ANTIFUNGAL TREATMENT OF CITRUS FRUITS  
**Carlos Adrados Blaise**  
Salvador Ibiza Mauri, Clara Montesinos Herrero, Lluís Palou Valls, Carlos Adrados Blaise
- P-2021 EFFECTS OF PRE-DRYING ON INFRARED DRYING OF YACON ROOTS  
**Rafael Augustus de Oliveira**  
Rafael Augustus de Oliveira, Auro Augusto Araujo, Carolina María Sánchez Sáenz, Kil Jin Park
- P-2061 SURVEYING MICROBIOLOGICAL QUALITY OF CHILLED READY TO EAT SEAFOOD MARKETED IN ISTANBUL  
**Didem Uçok Alakavuk**  
Didem Uçok Alakavuk, Suhendan Mol
- P-2069 NOVEL METHODS FOR THE MONITORING OF POSTHARVEST CHANGES OF DIFFERENT PEAR CULTIVARS  
**Jozsef Felföldi**  
Jozsef Felföldi, Tamas Zsom, Viktoria Zsom-Muha, Denes Lajos Denes, Hella Ecseki
- P-2072 FRESH PRODUCE SAFETY IN THE POSTHARVEST HANDLING CHAIN: CHANGES AND CHALLENGES  
**Jorge M Fonseca**  
Jorge Fonseca
- P-2106 USE OF MULTISPECTRAL INFORMATION TO PREDICT PHENOL CONTENT AND ANTIOXIDANT ACTIVITY OF FRESH-CUT APPLES (CV. STARK RED)  
**Maria Luisa Amodio**  
Maria Luisa Amodio, Giancarlo Colelli

- P-2177 OSMODEHYDROFREEZING OF STRAWBERRY FRUITS AND STUDIES ON QUALITY CHARACTERISTICS OF THE PRODUCTS  
**Reihaneh Ahmadzadeh Ghavidel**  
Reihaneh Ahmadzadeh Ghavidel, Mehdi Ghiafeh Davoodi, Maryam Ameli
- P-2183 APPLICATION OF OSMODEHYDRO-FREEZING OF KIWI FRUITS AND STUDIES ON QUALITY CHARACTERISTICS OF THE PRODUCTS  
**Mehdi Ghiafeh Davoodi**  
Mehdi Ghiafeh Davoodi, Reihaneh Ahmadzadeh Ghavidel, Vajiheh Nouri Golkhandan
- P-2190 APPLICATION OF IMPEDANCE SPECTROSCOPY TO THE EVALUATION OF THE THERMAL PROCESSING OF CHICKEN BREAST CUTS  
**Franciny Schmidt**  
Franciny Schmidt, Ana Fuentes, José Manuel Barat, Joao BorgesLaurindo, Rafael Masot, Miguel Alcañiz
- P-2243 EFFECT OF 1-METHYLCYCLOPROPENE (1-MCP) ON QUALITY PRESERVATION IN POSTHARVEST BROCCOLI (BRASSICA OLERACEA VAR. ITALICA)  
**Eriko Yasunaga**  
Eriko Yasunaga, Toshitaka Uchino
- P-2262 DELAYED STORAGE AND REFRIGERATION OF ?RAINHA CLÁUDIA VERDE? PLUMS: INSTRUMENTAL AND SENSORY ANALYSIS  
**Ana Elisa Rato**  
Ana Elisa Rato
- P-2302 EFFECT OF HONEY CONCENTRATION ON PHYSICAL PROPERTIES, STRUCTURAL PROPERTIES AND SORPTION ISOTHERM OF SPRAY-DRIED MILK POWDER.  
**Vikas Nanda**  
Vikas Nanda, Savita Sharma, Manoj Tyagi
- P-2318 MANAGEMENT SPATIAL VARIABILITY OF AMBIENT FACTORS IN COLD STORES  
**Serap Akdemir**  
Serap Akdemir
- P-2362 A GENETIC ALGORITHM APPROACH IN HOT AIR DRYING OPTIMIZATION OF ROSA PETALS BASED ON NEURAL NETWORK MODELLING  
**Ahmad Banakar**  
S. Razi Karimi Akandi, Ahmad Banakar
- P-1893 GLASS TRANSITION TEMPERATURE OF ISTAMARAN CULTIVAR DATE POWDER  
**Morteza Sadeghi**  
Esmaeil Arrargate, Morteza Sadeghi, Jalil Razavi, Ali Nasirpour
- P-2250 QUANTITATIVE DETERMINATION OF USED EMULSIFIERS IN DOUGH FOR STRENGTHENING GLUTEN AND STARCH COMBINATION  
**Mahdi Karimi**  
Mahdi Karimi, Mehdi Ghiafeh Davoodi, Zahra Sheikholeslami, Bahareh Sahraian, Fariba Naghipour
- P-1128 DETERMINATION OF VITAMIN C IN TERAHERTZ REGION USING PRINCIPAL COMPONENT ARTIFICIAL NEURAL NETWORKS (PCANN)  
**Diding Suhandy**  
Diding Suhandy; Meirilwita Yulia; Yuichi Ogawa; Naoshi Kondo
- P-1138 COMBINED MICROWAVE-FLUIDIZED BED DRYING OF MOIST GRANULAR PARTICLES: CFD MODELING AND VALIDATION  
**Dariush Zare**  
Dariush Zare; Mohsen Ranjbaran
- P-1010 FRESH CUT CASSAVA SUBJECTED TO ELECTRONS ACCELERATOR RADIATION  
**Rogério Vieites Lopes**  
Rogério Vieites Lopes; Érica Regina Daiuto; Lidia Raquel De Carvalho; Viviane Citadine Russo; Ligia Mourigushi Watanabe
- P-1162 INFLUENCE OF NON-DIRECT PLASMA TREATMENT ON TOTAL VIABLE COUNT AND QUALITY ATTRIBUTES OF FRESH PORK  
**Martin Geyer**  
Antje Fröhling; Julia Durek; Uta Schnabel; Jörg Ehlbeck; Janina Bolling; Oliver Schlüter; Martin Geyer
- P-1542 EXTRACTION OF ANTIOXIDANT PHENOLIC COMPOUNDS FROM SALAK FRUIT  
**Sze Pheng Ong**  
Sze Pheng Ong, Chung Lim Law
- P-1423 HEAVY METAL LEVELS IN FISH SPECIES FROM THE GOLDEN HORN, TURKEY  
**Özkan Özden**  
Özkan Özden, Arif Kaygusuz, Sehnaz Tosun Yasemin, Ahmet Yüceokur
- P-1474 PHYSIOLOGICAL QUALITY MAINTENANCE OF SEEDS OF PHASEOLUS VULGARIS TREATED WITH VEGETABLE OILS  
**Maiene de Fátima Cordeiro de Queiroga Queiroga**  
Maiene De Fátima Cordeiro De Queiroga, Josivanda Palmeira, Gomes, Arlington Ricardo Ribeiro De Oliveira, Gilmara Gurjão Carneiro Carneiro
- P-2057 DETERMINATION OF ENTEROBACTERIACEAE ON HORSE MACKEREL (TRACHURUS TRACHURUS) SOLD IN ISTANBUL DISTRICT BAZAARS  
**Sehnaz Yasemin Tosun**  
Sehnaz Tosun Yasemin, Didem Uçok Alakavuk, Suhendan Mol
- P-0447 EFFECT OF DIFFERENT PROTEIN-BASED EDIBLE COATING FILMS ON QUALITY AND SHELF LIFE OF REFRIGERATED SEABASS (DICENTRARCHUS LABRAX)  
**Nuray Erkan Özden**  
Nuray Erkan Özden, Seda Dursun, Safak Ulusoy, Selinacay, Murat Yesiltas

# 135 SESSION

14:30 -15:25

## SPC-02 POSTERS SESSION Location: POSTERS ROOM

- P-0107 EXPERIMENT AND OPTIMIZATION OF LARGE-SCALE DOUBLE SUCTION PUMP WITH SEMI-VOLUTE SUCTION CHAMBER  
**Wang xiuli Wang**  
Wang xiuli Wang, Chen jingjun Chen, Yuan Shouqi Yuan, ZhuRongsheng Zhu, chen jing jun chen chen jing jun
- P-0238 OPTIMIZATION OF AIR CONDITIONING DIFFUSERS LOCATION IN LARGEAGRI-CULTURAL WAREHOUSES USING CFD TECHNIQUES  
**Daniel Valero Huerta**  
Daniel Valero Huerta, R García-Bartual
- P-0558 CFD SIMULATION OF WATER EVA-PORATION IN CLASS-A PAN WITH A TRANSIENT ANALYSIS  
**Bernardo Martin-Gorriz**  
Pablo Vidal, Bernardo Martin-Gorriz, Victoriano Martínez-Alvarez, Belen Gallego-Elvira
- P-0958 NUMERICAL STUDIES OF THE FLUID FLOW BETWEEN THE PLATES OF THE HEAT EXCHANGER IN THE ANALYSIS OF CIP CLEANING CONDITIONS  
**Joanna Piepiorka Stepuk**  
Joanna Piepiorka Stepuk, Marek Jakubowski
- P-1059 MODELING AND SIMULATION OF TRANSIENT RESPONSE OF TEMPERATURE AND RELATIVE HUMIDITY SENSORS WITH HOUSING AND WITHOUT IT  
**José Helvecio Martins**  
Keller Sullivan Oliveira Rocha, José Helvecio Martins, Marcio ArêdesMartins, Jairo Alexander Osorio Saraz, Luiz Henrique MartinsFernandes
- P-1131 A CFD PLATFORM FOR BIOCONVERSION OF BIOMASS TO BIOGAS  
**Binxin Wu**  
Binxin Wu, Todd Hutchinson
- P-1331 EVALUATION OF A FUNGICIDE FOGGING SYSTEM FOR POSTHARVEST TREATMENTS OF FRUITS  
**Pieter Verboven**  
Pieter Verboven, Thijs Defraeye, Alema-yehu Ambaw, Bert Tijskens, Bart Nicolai
- P-1581 SIMULATION OF THE PROFILE OF LOSS IN CHARGE OF AIR FLOW IN A CHAR-COAL FIXED BED  
**Ivanildo da Silva dos Santos**  
Ivanildo Siva dos Santos, Marcelo P. Coelho, Emanuele GraciosaPereira, Márcio Aredes Martins, Angélica de Cássia O. Carneiro

- P-1637 COUPLING GLOBAL AND DISTRIBUTED CLIMATE MODELS TO BETTER ASSESS HEAT TRANSFERS THROUGH THE COVER OF A GREENHOUSE  
**Lazhar Serir**  
Lazhar Serir; Pierre Emmanuel Bournet; Amor Bouhdjar
- P-1638 UTILIZATION OF LIQUID NITROGEN FOR REFRIGERATION ANDATMOSPHERE MODIFICATION IN THE GRAIN STORAGE: A SIMULATION  
**Marcio Martins Aredes**  
Daniel Carvalho Rizzo, Ivanildo da Silva dos Santos, GuillermoVargas, Márcio Arêdes Martins, Ana Paula Sato Ferreira
- P-2181 CFD STUDY OF THE HEAD LOSS REDUCTION BY NEUTRAL VANE IN HIGH EFFICIENCY CYCLONES  
**Diego Pinheiro Fagundes**  
Diego Pinheiro Fagundes, Marcelo Pereira Coelho, Marcio AredesMartins, Michel Oliveira dos Santos, Lucas De Paula Corredo

# 136 SESSION

14:30 -15:25

## SPC-07 POSTERS SESSION Location: POSTERS ROOM

- P-0323 MECHANICAL PROPERTIES OF POTATO STARCH MODIFIED BY MOISTURE CONTENT AND ADDITION OF LUBRICANT  
**Mateusz Stasiak**  
Mateusz Stasiak, Marek Molenda
- P-0626 EXPERIMENTAL AND NUMERICAL STUDIES ON UNIAXIAL COMPRESSION BEHAVIOR OF SLIGHTLY OBLONG PARTICLES AT CROSSOVER FROM QUASI-2D TO 3D  
**Piotr Parafiniuk**  
Piotr Parafiniuk, Joanna Wiacek, Józef Horabik, Marek Molenda
- P-1154 ANALYSIS OF MECHANICAL PROPERTIES OF VENTED CORRUGATED CONTAINER FOR FRESH HORTICULTURAL PRODUCE BY FINITE ELEMENT METHOD  
**Pankaj B. Pathare**  
Pankaj B. Pathare, Umezuruike Linus Opara, Mulugeta AdmasuDelele
- P-1754 DESIGN CRITERIA FOR STRUCTURAL DESIGN OF SILAGE SILO WALLS  
**Hans von Wachenfelt Einar**  
Hans von Wachenfelt Einar, Christer Nilsson
- P-1832 WET GRANULAR FLOWS REGISTERED IN SILO MODELS  
**Irena Sielamowicz**  
Irena Sielamowicz, Tomasz A. Kowalewski



- P-1858 COMPOSITE SILOS FOR STORING GRANULAR MATERIALS  
**Irena Sielamowicz**  
Irena Sielamowicz
- P-2237 FLOW PROPERTIES OF POWDER FOOD MATERIALS  
**José Wallace Nascimento**  
José Wallace Nascimento, José Wallace B. Nascimento, José Pinheiro Lopes Neto, Valneide R. Silva
- P-2239 MOMENT NONUNIFORM IN WALLS OF STEEL SILOS WITH DIFFERENT RATIO H/D  
**José Wallace Nascimento**  
José Wallace Nascimento, José Wallace Nascimento, Michael D. Montross
- P-1757 UNSYMMETRICAL FRICTION FORCES IN VERTICAL SILO WALLS  
**José Wallace Barbosa Nascimento**  
José Pinheiro Lopes Neto; José Wallace Barbosa Nascimento

# 137

SESSION

14:30 - 15:25  
**(ED): POSTERS SESSION**  
Location: POSTERS ROOM

- P-0144 ROCK BIOFERTILIZER WITH EAR-THWORM COMPOUND ENRICHED IN N BY DIAZOTROPHIC BACTERIA AND MYCORRHIZA PROVIDE NUTRIENTS FOR PLANTS  
**Newton Stamford Pereira**  
Newton P Stamford, Monaliza Mirella M. Andrade, Carolina Etienne R. S. Santos, Luciana Oliveira Franco, Thayza Christina Montenegro Stamford, Tânia Lúcia Montenegro Stamford
- P-0184 VALUATION OF THE WORKLOAD OF STUDENTS ENROLLED IN THE FIRST DEGREE OF NEW COURSES ADAPTED TO ECTS IN EUIT AGRICOLA (TECHNICAL UNIVERSITY OF MADRID)  
**Eutiquio Gallego Vazquez**  
Eutiquio Gallego, Virginia Diaz-Barcos, Eva Cristina Correa, Paloma García-Rebollar, Antonio Callejo
- P-0537 PERSONALISED KNOWLEDGE REPRESENTATION IN HORTICULTURAL ENGINEERING  
**Anne Kersebaum**  
Anne Kersebaum, Thomas Rath
- P-0884 TEACHING IN LANDSCAPE  
**Cruz Calleja Perucho**  
Cruz Calleja Perucho, Ana Pou Merina, María Angeles Ruíz Sánchez, Ignacio Cañas Guerrero, Jaime Cid Falceto

- P-1512 TOOLS OF LEARNING ENGINEERING ETHICS TO UNIVERSITY STUDENTS  
**Mohamed Y. E. Selim**  
Mohamed Y. E. Selim, Mohamed A. Al-Bayyiwomi
- P-1590 TRAINING OF WORKFORCE IN THE SUGAR AND ALCOHOL SECTOR  
**Lidiane Aparecida Kanesiro**  
Lidiane Aparecida Kanesiro, Mario Otavio Batalha, Alini Alves Moreira, Janaina Cristina Kanesiro, Maria Amalia Brunini
- P-1673 A SURVEY TO EVALUATE GENERIC SKILLS OF AGRICULTURAL ENGINEERING STUDENTS  
**Nemesio Fernández Martínez**  
Salvador Calvet Sanz, Andrea Conchado, Fernando Estellés Barber, Sara Ibáñez, María Vargas, Ana Jiménez-Belenguer, Héctor Moreno, José Miguel Carot, Nemesio Fernández Martínez,
- P-1960 EFFECTS OF ABIOTIC STRESS FACTORS ON PHYSIOLOGICAL PARAMETERS OF CROPS  
**Elif Ozdemir**  
Elif Ozdemir, Bayram Sade
- P-1912 SPECIFIC AND CROSSCURRICULAR COMPETENCES IN THE ENGINEERING AND ARCHITECTURE DEGREES IN SPAIN. COMPARISON BETWEEN SEVERAL ENGINEERING AND THE DEGREES OF AGRONOMIC STUDIES AND FORESTRY  
**Ignacio Cañas Guerrero**  
Ignacio Cañas Guerrero; César Porras Amores; Jaime Cid Falceto; Andrés Porras; María Angeles Ruiz Sanchez
- P-0262 HUMAN RESOURCES FOR AGRIBUSINESS: LESSONS FROM THE BRAZILIAN EXPERIENCE

# 138

SESSION

14:30 - 15:25  
**(SPC-03): POSTERS SESSION**  
Location: POSTERS ROOM

- P-0127 LOCATION OF PLANT STEM EMERGING POINTS IN IMAGES OF SUGAR BEETS IN EARLY GROWTH STAGES  
**Henrik Skov Midtby**  
Henrik Skov Midtby, Thomas Moesgaard Giselsson, Rasmus Nyholm Jorgensen
- P-0270 IMAGE ANALYSIS: A TOOL FOR CLASSIFICATION OF FEATHERS OF BIRDS OF PREY  
**Jose Blasco**  
A. Yona Solis-Ceja, José Jorge Chanona Pérez, Marcela Vergara-Onofre, Maria de Lourdes Alonso-Spilsbury, José Blasco Ivars

- P-0464 EXAMINATION OF RECOGNITION / WORK RECORD OF AGRICULTURAL BASIC INFORMATION USING COMPUTER VISION FOR AGRICULTURAL ROBOT WHICH EXTRACTS TACIT KNOWLEDGE  
**Yutaka Sasaki**  
Yutaka Sasaki, Sakae Shibusawa, Hanako Negishi
- P-0556 ANALYSIS OF CITRUS FRUIT DETACHED WITH AN UNIDIRECTIONAL SHAKER BY MEANS OF ARTIFICIAL VISION  
**Antonio Torregrosa Mira**  
Antonio Torregrosa Mira, Francisco Albert Gil, Nuria Aleixos Borrás, Coral Ortiz Sánchez, José Blasco Ivars
- P-0712 COMPUTER VISION BASED SYSTEM FOR GROWTH ANALYSIS OF LACTUCA SATIVA VAR. HIERRRO  
**José Miguel Molina Martínez**  
Daniel Garcia Fernandez-Pacheco, David Escarabajal Henarejos, Ramón López Urrea, Antonio Ruiz-Canales, Leandro Ruiz-Peñalver, José Miguel Molina Martínez
- P-1136 CAMERA KINETIC MODEL APPLIED TO CROP ROW TRACKING AND WEED DETECTION  
**Gonzalo Ruiz Ruiz**  
Gonzalo Ruiz Ruiz, Luis Manuel Navas Gracia, Jaime Gómez Gil
- P-1380 ORCHARD AND TREE MAPPING AND DESCRIPTION USING STEREO VISION AND LIDAR  
**Michael Nielsen**  
Michael Nielsen, David C. Slaughter, Chris Gliever, Shrini Upadhyaya
- P-1448 LOW-COST IMAGE ANALYSIS METHOD TO QUANTIFY ROOT SURFACE AREA  
**Jorge Lampurlanés Castel**  
Daniel Plaza-Bonilla, Carlos Cantero-Martínez, Jorge Álvaro-Fuentes, Jorge Lampurlanes Castel
- P-1789 DETERMINATION OF WEED COVERAGE PERCENTAGE USING DIGITAL IMAGES  
**Mário Cupertino da Silva Júnior**  
Mário Cupertino Da Silva Júnior, Francisco De Assis De Carvalho Pinto, Daniel Marçal de Queiroz, Gonzalo Ruiz Ruiz, Jaime Gómez Gil, Luis Manuel Navas Gracia
- P-2016 USE OF SPATIAL ANALYSIS TOOLS FOR GROUND COVER ESTIMATION AND IRRIGATION MANAGEMENT IN WATER USERS ASSOCIATION  
**Ester López Pérez**  
Ester López, Miguel Ángel Jiménez-Bello, Juan Manzano, Virginia Palau, Diego S. Intrigliolo, Alvaro Royuela
- P-2074 PRELIMINARY STUDY ON MEASUREMENT OF THE THICKNESS OF THE WHEAT'S SEED COAT BASED ON INFRARED MICROIMAGING  
**Lianlian Chen**  
Lianlian Chen, Dazhou ZHU, Pingzhou Li, Li, Cheng Wang Wang
- P-2366 USING NEURAL NETWORKS FOR MAINTENANCE TASKS IN AGRICULTURE: PRECISE WEED DETECTION  
**Gabriel Recatalá**  
Patricio Nebot, Joaquín Torres-Sospedra, Gabriel Recatalá

# 139 SESSION

15:25 -17:00

## (PM): TILLAGE FORCES II

**Moderator: Simone Bergonzoli / Luis Val**

**Location: AUDITORIO 1**

- 15:25 Introduction
- 15:30 C-0123 EFFECT OF A MODIFIED AND COMMON DISC OPENERS ON SOIL FAILURE AND FORCES USING IN DIRECT PLANTING  
**Arzhang Javadi**  
Arzhang Javadi, Reza Mohamadigol, Esmaeil Seyedi
- 15:45 C-1018 A THREE-POINT HITCH DYNAMOMETER FOR LOAD MEASUREMENTS BETWEEN TILLAGE IMPLEMENTS AND AGRICULTURAL TRACTORS DURING OPERATION  
**Jordi Pijuan Cases**  
Jordi Pijuan Cases, Jordi Berga, Martí Comellas, Xavi Potau, Joan Roca
- 16:00 C-0458 CONSERVATION AGRICULTURE IN DRY AREAS OF MOROCCO: RATIONAL FOR AGRICULTURAL SUSTAINABILITY UNDER CLIMATE AND SOCIO-ECONOMIC CHANGE  
**Rachid Mrabet**  
Rachid Mrabet
- 16:15 C-2354 EFFECT OF ORGANIC AND INORGANIC NITROGEN AMENDMENTS AND CROP ROTATION ON TILLAGE ENERGY IN A CLAY LOAM SOIL  
**Neil McLaughlin**  
Neil McLaughlin, Aizhen Liang, Bao-Luo Ma, Edward Gregorich, Malcolm Morrison, Stephen Burt, Scott Patterson, Lynne Evenson
- 16:30 C-2352 THE EFFECT OF PLANT GROWTH PROMOTING RHIZOBACTER STRAIN ON WHEAT YIELD AND QUALITY PARAMETERS  
**Metin Turan**  
Metin Turan, Medine Gulluce, Fikrettin Sahin, Guleray Agar

# 140

## SESSION

15:25 - 17:00  
**(SW-SPC01): PLANT WATER RELATIONSHIPS**  
**Moderator: Diego Intrigliolo**  
**Location: AUDITORIO 2**

- 15:25 Introduction
- 15:30 C-1620 MODELS OF CROP GROWTH AND REMOTE SENSING FOR ESTIMATING CROP YIELD IN IRRIGATED AGRICULTURE  
**Enrique Palacios-Vélez**  
 Enrique Palacios-Vélez, Luis Alberto Palacios-Sánchez, Enrique Mejía-Saenz
- 15:45 C-2065 EFFECT OF SUBSURFACE DRIP IRRIGATION ON MOISTURE DISTRIBUTION, ROOT GROWTH AND PRODUCTION OF CAULIFLOWER  
**Uday Khodke**  
 Uday Khodke, D. B. Patil
- 16:00 C-1224 WICK IRRIGATION SYSTEM USING SELF-COMPENSATED BENCHES FOR LETTUCE PRODUCTION  
**Rhuanito Soranz Ferrarezi**  
 Rhuanito Soranz Ferrarezi, Roberto Testezlaf
- 16:15 C-1536 IRRIGATION MANAGEMENT SYSTEM FOR OLIVE ORCHARDS AND VINEYARDS  
**Samuel Ortega-Farías**  
 Samuel Ortega-Farías, Marcos Carrasco, Fernando Flores
- 16:30 C-2263 EFFECT OF CONSERVATION TILLAGE AND IRRIGATION METHODS ON THE CROP YIELD AND WATER USE EFFICIENCY IN WHEAT-CORN ROTATION  
**Sadegh Afzalnia**  
 Sadegh Afzalnia, Ebrahim Dehghanian

# 141

## SESSION

15:25 - 17:00  
**(SPC-05): BIOAEROSOLS AND AIRBORNE PATHOGENS**  
**Moderator: Eileen Wheeler**  
**Location: AUDITORIO 3A**

- 15:25 Introduction
- 15:30 C-1300 DETECTION OF AIRBORNE SALMONELLA SPP. IN POULTRY FARMS USING IMPINGEMENT: CULTURE-DEPENDENT VS. CULTURE-INDEPENDENT METHODS  
**María Cambra-López**  
 Elisa Adell, Verónica Maset, Yang Zhao, Ana Jiménez, Alba Cerisuelo, María Cambra-López

- 15:45 C-0998 SHEDDING AND EMISSION OF AIRBORNE VIRAL MICROORGANISMS FROM ANIMAL HOUSES  
**Yang Zhao**  
 Yang Zhao, André J. A. Aarnink, Maria Cambra-Lopez, Teun Fabri
- 16:00 C-1281 ASSESSMENT OF INSTRUMENTATION EFFICIENCY FOR DETECTING AIRBORNE VIRUS  
**Taehwan Ha**  
 Taehwan Ha, In-bok Lee
- 16:15 C-1567 QUANTIFICATION OF ENVIRONMENTAL CONDITIONS IN AUSTRALIAN LIVESTOCK BUILDINGS  
**Thomas Banhazi**  
 Thomas Banhazi
- 16:30 C-1769 AIRBORNE PARTICLES IN ANIMAL HOUSES  
**Huong Lai**  
 Huong Lai, André J. A. Aarnink, María Cambra-López, Thuy T. T. Huynh, Henk K. Parmentier, Peter W. G. Groot Koerkamp
- 16:45 C-0968 EMISSIONS AND CONCENTRATIONS OF DUST AND PATHOGENS FROM GOAT HOUSES  
**Andre Aarnink**  
 André J. A. Aarnink, Maria Cambra-López, Hendrik Jan Roest, Yang Zhao, Julio Mosquera, Nico W. M. Ogink

# 142

## SESSION

15:25 - 17:00  
**(SPC05): AMMONIA EMISSIONS FROM ANIMAL HOUSING**  
**Moderator: Salvador Calvet**  
**Location: AUDITORIO 3B**

- 15:25 Introduction
- 15:30 C-2246 EMISSIONS CALCULATED FROM PARTICULATE MATTER AND GASEOUS AMMONIA MEASUREMENTS FROM A COMMERCIAL DAIRY IN CALIFORNIA, USA  
**Kori Moore**  
 Kori Moore, Christian Marchant, Randy Martin, Michael Wojcik, Emyrei Young, Richard Pfeiffer, John Prueger, Jerry Hatfield,
- 15:45 C-2245 AMMONIA EMISSIONS FROM A PIG BREEDER FACILITY IN THE OKLAHOMA PANHANDLE  
**Ken Casey**  
 Ken Casey, Erin Cortus, Al Heber, Al Caramanica

- 16:00 C-0965 COMPARISON OF AMMONIA EMISSIONS FROM POULTRY HOUSES BASED ON DIURNAL INTEGRATION VS. DAILY MEANS OF GAS CONCENTRATION AND BUILDING VENTILATION RATE  
**Yongxing Chen**  
Yongxing Chen, Hongwei Xin, Hong Li, Tim Shepherd, Morgan Hayes, John Stinn, Robert Burns, Richard S. Gates, Hongmin Dong
- 16:15 C-0699 SPATIAL VARIABILITY OF AMBIENT AMMONIA IN THE VICINITY OF A BROILER FARM  
**Kristina von Bobrutzki**  
Kristina von Bobrutzki, Werner Berg, Merike Fiedler, Alaa Kiwan
- 16:30 C-1375 AMMONIA EMISSIONS FROM CHOPPED WILLOW VS. PINE SHAVINGS AS BEDDING FOR BROILER CHICKENS  
**Michael Hile**  
M. L. Hile, Eileen.F. Wheeler, Paul. H. Patterson
- 16:45 C-1338 EVALUATION OF ENZYME FEED ADDITIVE ON AMMONIA EMISSION FROM BROILERS  
**Hong Li**  
Hong Li, Stephen Collier, Williams Brown, Jeannine Harter-Dennis

## 143 SESSION

15:25 -17:00  
**(EN): ENERGY EFFICIENCY IN AGRICULTURE III**  
**Moderator: Fatima Batista**  
**Location: MULTIPURPOSE IA**

- 15:25 Introduction
- 15:30 C-0822 ENERGY BALANCE OF CEREALS UNDER MOROCCAN CONDITIONS  
**Mohamed Ramah**  
Ramah Mohamed Ramah, El Houssain Baali
- 15:45 C-0112 METHODOLOGY FOR ENERGY AND MATERIAL EMBODIMENT DETERMINATION IN THE LIFE CYCLE OF AGRICULTURAL MACHINERY  
**Thiago Liborio Romanelli**  
Thiago Liborio Romanelli, Edemilson José Mantoam
- 16:00 C-0456 ENERGY CONSUMPTION BY CONVENTIONAL RURAL TECHNOLOGIES & FEASIBILITY STUDY FOR SUPERSEDEANCE OF THESE RESOURCES WITH RENEWABLE SOURCES OF ENERGY  
**Yaser Sahebi**  
Yaser Sahebi, Morteza Amassi, Mohammad J. Sheikhdavoodi, Hushang Bahrami, Hosseyn Bakhoda, Nima Nasirian

- 16:15 C-0623 COMPARISON OF DIFFERENT WORK PROCESSES FOR HARVEST LOGISTICS OF SILAGE MAIZE  
**Katja Heitkämper**  
Katja Heitkämper, Andrea Wagner, Matthias Schick
- 16:30 C-0634 ELECTRIC DRIVES IN AGRICULTURAL MACHINERY  
**Juergen Karner**  
Juergen Karner, Heinrich Prankl, Florian Kogler

## 144 SESSION

15:25 -17:00  
**(EN): LIQUID BIOFUELS**  
**Moderator: Xin Wang**  
**Location: MULTIPURPOSE IB**

- 15:25 Introduction
- 15:30 C-0185 OPTIMIZATION OF BIODIESEL PRODUCTION FROM HAEMATOCOCCUS PLUVIALIS USING RESPONSE SURFACE  
**Lanfang Zhang**  
Jiajie Xu, Antonio Galan, Jun Zhou, Shujun Li, Fengmin Zhao, Xiurong Su
- 15:45 C-0209 USING CARTHAMUS OXYACANTHA OIL METHYL ESTER AS BIODIESEL IN IRAN  
**Hamid Mashhadimeyghani**  
Hamid Mashhadimeyghani, Morteza Almasi, Alimohammad Borghei, Javad Azizian, Abdolvahed Khanahmadzade
- 16:00 C-0283 ANIMAL FATS BIODIESEL USES AS HEATING FUEL FOR AGRICULTURAL HOT AIR HEATER  
**Youngjung Kim**  
Youngjung Kim, Youngjin Kim, Seokho Park
- 16:15 C-1187 CLIMATE CHANGE IMPLICATIONS OF CROPPING PATTERN AND LAND USE CHANGES FOR ACHIEVING 15 BILLION GALLONS OF CORN ETHANOL  
**Kyo Suh**  
Kyo Suh, Taegon Kim, Sangwon Suh, Timothy Smith

## 145 SESSION

15:25 -17:00  
**(IT):AUTOMATIC GUIDANCE I**  
**Moderator: Michel Berducat**  
**Location: MULTIPURPOSE 1C**

- 15:25 Introduction
- 15:30 C-1429 AUTOMATION OF HYDROPONIC INSTALLATIONS USING A ROBOT WITH POSITION BASED VISUAL FEEDBACK  
**Niels Tanke**  
Niels Tanke, Guoming Long, Dhruv Agrawal, Abhinav Valada, George Kantor

- 15:45 C-0685 AUTOMATIC GUIDANCE OF AN OFF-ROAD MOBILE ROBOT WITH A TRAILER APPLICATION TO THE CONTROL OF AGRICULTURAL PASSIVE TOWED IMPLEMENTS  
**Christophe Cariou**  
Christophe Cariou, Roland Lenain, Benoit Thuilot, Michel Berducat
- 16:00 C-0314 DESIGN OF AN AUTOMATIC SPRAYER IN GREENHOUSES CONDITION  
**Hamid Mashhadimeyghani**  
Hamid Mashhadimeyghani, Davood kalantari, Alireza Rafigh
- 16:15 C-1455 GNSS RTK NETWORKS IN SELF-GUIDED SYSTEMS FOR AGRICULTURAL  
**Angel Felipe Pulido Moreno**  
Juan Morillo Barragán, Angel Felipe Pulido Moreno, Julio Hernández Blanco
- 16:30 C-1978 AUTOMATION OF UNLOADING WORK SEARCHING AND DETECTING A GRAIN CONTAINER AND PROPER POSITIONING OF A HARVESTER'S SPOUT  
**Hiroki Kurita**  
Hiroki Kurita, Michihisa Iida, Masahiko Suguri

## 146 SESSION

15:25 -17:00  
**(IT): SOIL PARAMETERS**  
**Moderator: Thomas Anken**  
**Location: ROOM 6+7**

- 15:25 Introduction
- 15:30 C-0411 FIELD SCALE MAPPING OF SOIL FERTILITY PARAMETERS BY COMBINATION OF PROXIMAL SOIL SENSORS  
**Michael Schirrmann**  
Michael Schirrmann, Kramer Eckart, Robin Gebbers
- 15:45 C-0155 BENEFITS OF VRA TECHNOLOGY BASED ON MOLE SOIL MAPS  
**Eddie Loonstra**  
Eddie Loonstra
- 16:00 C-1660 MEASUREMENT OF WATER VAPOUR EVAPORATION FROM SOIL SURFACE  
**Mikko Hakojärvi**  
Mikko Hautala, Mikko Hakojärvi, Laura Alakukku
- 16:15 C-1054 OPEN-SOURCE MODELICA-BASED MODELING AND SIMULATION FOR MEASURING SOIL MOISTURE CONTENT  
**Alan Kardek Rêgo Segundo**  
Alan Kardek Rêgo Segundo, José Helvecio Martins, Paulo Marcos de Barros Monteiro

## 147 SESSION

15:25 -17:00  
**(PF): QUALITY DETECTION**  
**Moderator: Josse De Baerdemaeker**  
**Location: ROOM 1**

- 15:25 Introduction
- 15:30 C-1908 DEVELOPING OF AN AUTOMATED QUALITY FOOD CLASSIFIER FOR ?HALLULLA? CHILEAN BREAD TYPE BY COMBINING SENSORIAL EVALUATION AND COMPUTER VISION TECHNIQUES  
**Franco Pedreschi Plasencia**  
Franco Pedreschi Plasencia, Salome Mariotti, Ivan Lillo, Natalia Quezada, Andrea Bunger
- 15:45 C-0220 MACHINE VISION PROTOTYPE FOR ORANGE GRADING USING PHOTOTRAN-SISTOR  
**Ayman Amer Eissa Hafiz**  
Ayman Hafiz Amer Eissa
- 16:00 C-0661 AUTOMATED PARTICLE LENGTH DISTRIBUTION ANALYSIS OF FORAGE MATERIALS BY MEANS OF COMPUTER VISION  
**Christian Rechberger**  
Christian Rechberger, Johann Prankl, Gerhard Obernberger, Heinrich Prankl, Franz Handler
- 16:15 C-0305 NONDESTRUCTIVE DETECTION OF PESTICIDES ON FRUITS AND VEGETABLES USING A UV CAMERA SYSTEM  
**Yoshio Makino**  
Yoshio Makino, Meilan Li, Seiichi Oshita, Yoshinori Kawagoe, Toshiaki Matsuoka, Kenji Hashimoto, Kazuo Arai

## 148 SESSION

15:25 -17:00  
**(PF) FOOD TECHNOLOGY III**  
**Moderator: Milagros Mateo**  
**Location: ROOM 4**

- 15:25 Introduction
- 15:30 C-1119 EFFECT OF CYTOCHALASIN B ON BIOSPECKLE ACTIVITY IN APPLE TISSUE  
**Andrzej Kurenda**  
Andrzej Kurenda, Artur Zdunek
- 15:45 C-1223 THE ROLE OF CHLOROPHYLL AND STARCH CONTENT IN BIOSPECKLE ACTIVITY OF APPLES  
**Artur Zdunek**  
Artur Zdunek, Werner B. Herppich, Justyna Cybulska

- 16:00 C-2158 CHEMOMETRIC STUDY OF CELL WALL COMPOSITION OF DIFFERENT VEGETABLES  
**Monika Szymanska-Chargot**  
Monika Szymanska-Chargot, Artur Zdunek
- 16:15 C-2009 EFFECT OF HIGH HYDROSTATIC PRESSURE ON LACTIC BACTERIA GROWTH IN TURKEY HAM STORED AT NORMAL AND ABUSIVE REFRIGERATION TEMPERATURES  
**Amauri Rosenthal**  
Simone Pereira Mathias, Amauri Rosenthal, Arlene Gaspar, Glaucia M.F. Aragao

## 149 SESSION

15:25 -17:00  
**(SPC02):MACHINE DESIGN AND PERFORMANCE II**  
Moderator: In-Bok Lee  
Location: ROOM 2

- 15:25 Introduction
- 15:30 C-1085 AIR-SEEDS FLOW ANALYSIS IN A DISTRIBUTOR HEAD OF AN AIR DRILL SEEDER  
**Medina Mabel Azucena**  
Gastón Bourges, Gustavo Fabian Nardón, Mabel Azucena Medina
- 15:45 C-1236 CFD ANALYSIS ON THE PERFORMANCE OF AN OVERTURNABLE WATER GATE FOR RESERVOIR SPILLWAY  
**In-bok Lee**  
Se-woon Hong, In-bok Lee, Hyun-seob Hwang, Il-hwan Seo, Jessie Pascual Bitog Piog, Kyeong-seok Kwon
- 16:00 C-0963 COMPUTATIONAL FLUID DYNAMICS MODELLING OF ORCHARD SPRAYER PERFORMANCE: MACHINE TYPE AND OPERATIONAL PARAMETERS CHARACTERIZATION  
**Ashenafi Tilahun Duga**  
Ashenafi Tilahun Duga, Ayenew Melese Endalew, Nico Hendrickx, Tim Goossens, Donald Dekeyser, David Nuyttens, Bart Nicolai, Pieter Verboven, ,
- 16:15 C-1226 APPLICATION OF SMALL-SCALE WIND POWER SYSTEMN IN LIVESTOCK BUILDINGS  
**Se-Woon Hong**  
Se-Woon Hong, In-bok Lee, Hyun-seob Hwang, Il-hwan Seo, Jessie Pascual Bitog Piog, Kyeong-seok Kwon
- 16:30 C-1265 OPTIMUM DESIGN OF MICROALGAE CULTIVATION SYSTEM USING BUBBLE-COLUMN PHOTO-BIOREACTOR  
**Il-hwan Seo**  
Il-hwan Seo, In-bok Lee, Hyun-seob Hwang, Se-woon Hwang, Jessie Pascual Bitog Piog, Kyeong-seok Kwon

- 16:45 C-0382 INVESTIGATION OF THE INFLUENCE OF METHANE IN CORN DUST EXPLOSION USING CFD.  
**Janaína de Andrade Silva**  
Janaína de Andrade Silva, Francisco Carlos Gomes, Jefferson Luiz Gomes Correa

## 150 SESSION

15:25 -17:00  
**(SPC07): DUST EXPLOSIONS AND MANAGEMENT**  
Moderator: Pedro Aguado  
Location: ROOM 3

- 15:25 Introduction
- 15:30 C-1036 TEST SILO FOR DUST EXPLOSIONS  
**Alvaro Ramírez Gómez**  
Alvaro Ramírez-Gómez, Alberto Tascón, Pedro José Aguado, Francisco Ayuga
- 15:45 C-1065 SIMULATIONS OF DUST EXPLOSIONS IN A 16 M3 SILO  
**Alberto Tascón**  
Alberto Tascón, Ángel Ruiz, Ángel Couto, Pedro José Aguado
- 16:00 C-0371 DUST EXPLOSION RISK DURING GRAPHITE-MODERATED REACTORS DECOMMISSIONING  
**Sophie Trelat**  
Sophie Trelat
- 16:15 C-0461 ANALYSIS OF THE PRESSURE EFFECTS IN CORN DUST EXPLOSION USING COMPUTACIONAL FLUID DYNAMIC  
**Janaína de Andrade Silva**  
Janaína de Andrade Silva, Francisco Carlos Gomes, Jefferson Luiz Gomes Correa
- 16:30 C-0143 EFFECTIVE TRANSFER CHUTE DESIGN INCLUDING DUST CONTROL FOR HANDLING GRAINS AND OTHER PRODUCTS  
**Tim Donohue**  
Tim Donohue, Alan Roberts, Craig Wheeler, Dusan Ilic, Andre Katterfeld
- 16:45 C-1894 EXPLOSION PROTECTION IN GRAIN HANDLING FACILITIES: FROM COUNT MOROZZO TO COMPUTATIONAL FLUID DYNAMICS.  
**Trygve Skjold**  
Trygve Skjold

## 151 SESSION

15:25 -17:00  
**(SPC06): WIRELESS COMMUNICATION IN AGRICULTURE**  
Moderator: Esmael Nadimi  
Location: ROOM 5

- 15:25 Introduction
- 15:30 Technical speaker: Tarokh Vahid

- 16:10 C1561 ASSESSING THE DYNAMIC BEHAVIOR OF WSN NOTES AND RFID SEMI-PASSIVE TAGS FOR TEMPERATURE MONITORING
- 16:25 C-0333 BASE STATION DESIGN AND ARCHITECTURE FOR WIRELESS SENSOR NETWORKS  
**David Kohanbash**  
David Kohanbash, Abhinav Valada, George Kantor
- 16:40 Round table I: Vahid Tarokh, Enrique Moltó, Esmail Nadimi

## 152 SESSION

15:25 -17:00  
**(SPC03): IMAGING OUTDOORS**  
Moderator: David Slaughter  
Location: ROOM 8+9

- 15:25 Introduction
- 15:30 C-0380 RECOGNITION OF IMMATURE GREEN CITRUS FRUIT UNDER DIFFERENT OUTDOOR CONDITIONS  
**Won Suk Lee**  
Subhajit Sengupta, Won Suk Lee
- 15:45 C-0150 AUTOMATIC DETECTION OF TULIP BREAKING VIRUS (TBV) IN TULIP FIELDS USING MACHINE VISION  
**Gerrit Polder**  
Gerrit Polder, Gerie (W.A.M.) van der Heijden, Joop van Doorn, Ton (A. H. M. C.) Baltissen
- 16:00 C-0954 CHARACTERIZATION OF VINEYARD'S CANOPY THROUGH FUZZY CLUSTERING AND SVM OVER COLOR IMAGES  
**Christian Correa Farias**  
Christian Correa, Constantino Valero, Pilar Barreiro Elorza
- 16:15 C-1417 MULTISPECTRAL IMAGE ANALYSIS FOR GRAPEVINE'S DISEASES AUTOMATIC DETECTION IN FIELD CONDITIONS  
**Roberto Oberti**  
Paolo Tirelli, Massimo Marchi, N. Alberto Borghese, roberto oberti
- 16:30 C-0360 FRUIT DETECTABILITY ANALYSIS FOR DIFFERENT CAMERA POSITIONS IN SWEET-PEPPER  
**Jochen Hemming**  
Jochen Hemming, Jos Ruizendaal, Jan Willem Hofstee, Eldert J. van Henten
- 16:45 C-2353 IMAGE ANALYSIS TECHNIQUES APPLIED TO CANOPIES, BERRIES, PLANT TISSUES AND LEAVES.  
**Sigfredo Fuentes**  
Sigfredo Fuentes, Roberta De Bei, Stephen D. Tyerman

## 153 SESSION

17:25-19:00  
**(PM): CONSERVATION TILLAGE I**  
Moderator: Joan Roca  
Location: AUDITORIO 1

- 17:25 Introduction
- 17:30 C-0298 A POWERED ROLLER/CRIMPER FOR WALK-BEHIND TRACTORS TO TERMINATE COVER CROPS IN CONSERVATION AGRICULTURE  
**Ted Kornecki S.**  
Ted Kornecki S.
- 17:45 C-0523 TRACTORS AND MACHINERIES FOR CONSERVATIVE SOIL TILLAGE IN CLIMATE CHANGE CONDITIONS  
**Simone Bergonzoli**  
Pieranna Servadio, Simone Bergonzoli
- 18:00 C-1257 COMPARING CONSERVATION AND CONVENTIONAL TILLAGE METHODS IN CORN-WHEAT ROTATION  
**Sadegh Afzalinia**  
Sadegh Afzalinia, Alidad Karami, Mansoor Alavimanesh

## 155 SESSION

17:25-19:00  
**(SPC-05): ANIMAL HEAT & MOISTURE EXCHANGE**  
Moderator: Tami Brown-Brandt  
Location: AUDITORIO 3A

- 17:25 Introduction
- 17:30 C-1478 Heat and Moisture Production of Commercial Broilers under Pad Cooling or Surface Wetting in Summer  
**Yi Liang**  
Yi Liang
- 17:45 C-1481 BIOENERGETICS OF HY-LINE BROWN HENS IN AVIARY HOUSES  
**Morgan Hayes**  
Morgan Hayes, Hongwei Xin, Hong Li, Timothy Shepherd, Yongxing Chen, Yang Zhao, John Stinn,
- 18:00 C-2234 THERMOREGULATORY RESPONSES OF DAY-OLD CHICKENS SUBMITTED TO SIMULATED TRANSPORT CONDITION: 2. EFFECT OF EXPOSURE TIME UNDER DIFFERENT THERMAL RANGES  
**Frederico Vieira**  
Frederico Vieira, Iran Silva, Késia Silva, Aérica Cirqueira Nazareno, Juliano Camargo, Afrânio Vieira
- 18:15 C-1450 HEAT LOSS IN LACTATING SOWS UNDER DIFFERENT VENTILATION SYSTEMS AND DIETS DURING SUMMER  
**Eliene Justino**  
Eliene Justino, Irenilza De Alencar Naas, Diego Pereira Neves, Douglas D'alessandro Salgado

# 156 SESSION

17:25-19:00  
**(SPC-05): AMMONIA & PM  
EMISSIONS MODELING**  
Moderator: Dennis Schulte  
Location: AUDITORIO 3B

- 17:25 Introduction
- 17:30 C-1323 SIMULTANEOUS MONITORING & CONTROL OF PIG GROWTH AND AMMONIA EMISSIONS  
**Theo Demmers**  
Theo Demmers, Yi Cao, Sophie Gauss, David Parsons, Christopher Wathes
- 17:45 C-1216 SENSITIVITY ANALYSIS OF A MECHANISTIC MODEL FOR THE AMMONIA EMISSION OF DAIRY COW HOUSES  
**Dennis Snoek**  
Dennis Snoek, Nico W. M. Ogink, P.w.g. Groot Koerkamp
- 18:00 C-0959 AMMONIA EMISSION FACTORS MODELLING FOR A NATURALLY VENTILATED DAIRY HOUSING SYSTEM WITH CUBICLES, SOLID FLOORS AND AN OUTDOOR EXERCISE AREA  
**Sabine Schrade**  
Sabine Schrade, Lorenz Gygax, Margret Keck
- 18:15 C-0673 RESIDENTIAL EXPOSURE TO OUTDOOR AIR POLLUTION FROM LIVESTOCK OPERATIONS AND PERCEIVED ANNOYANCE AMONG CITIZENS  
**Victoria Blanes-Vidal**  
Victoria Blanes-Vidal, Helen Suh, Esmaeil S. Nadimi, Per Lofstrom, Thomas Ellermann, Helle Andersen, Joel Schwartz

# 158 SESSION

17:25-19:00  
**(EN): LIQUID BIOFUELS II**  
Moderator: Axel Munack  
Location: MULTIPURPOSE IB

- 17:25 Introduction
- 17:30 C-1510 RENEWABLE OIL FROM SOLID JOJOBA BIOMASS WASTE  
**Mohamed Y. E. Selim**  
Mohamed Y. E. Selim, Yousef Haik, Salah A. B. Al-Omari, Habib Abdelrahman
- 17:45 C-1917 THE EFFECTS OF DIFFERENT SOWING TIMES ON SOME AGRICULTURAL PROPERTIES OF SUFFLOWER VARIETIES (C. TINCTORIUS L.) AND BIODIESEL QUALITY  
**Fikret Akinerdem**  
Ebru Günes, Fikret Akinerdem

- 18:00 C-0974 DEGRADATION KINETICS OF FIBRE COMPONENTS OF GRASS SILAGE IN THE FERMENTATION PROCESS AND EFFECTS OF ENZYME APPLICATION  
**Claudia Demmig**  
Claudia Demmig; Dirk Banemann; Michael Nelles
- 18:15 C-0531 BLENDS FROM BIODIESEL, DIESEL FUEL AND ALCOHOLS TO PREVENT CHEMICAL INTERACTIONS BETWEEN FUEL COMPONENTS  
**Axel Munack**  
Jürgen Krahl; Lasse Schmidt; Olaf Schröder; Kevin Schaper; Christoph Pabst; Axel Munack

# 159 SESSION

17:25-19:00  
**(IT): AUTOMATIC GUIDANCE  
II**  
Moderator: Thomas Toftegaard  
Location: MULTIPURPOSE IC

- 17:25 Introduction
- 17:30 C-0196 LASER-BASED GUIDING SYSTEM FOR AN AUTONOMOUS MOBILE ROBOT WORKING IN GREENHOUSES  
**Julian Garcia Donaire**  
Julian Garcia Donaire, Ramón González Sánchez, Francisco Rodríguez Díaz, Andrzej Pawlowski
- 17:45 C-1090 A HUMAN-ROBOT INTERFACE FOR A VINEYARD SPRAYER  
**Ron Berenstein**  
Ron Berenstein, Yael Edan
- 18:00 C-1103 MULTI-SENSOR SIMULATION METHOD FOR OUTDOOR PLANT PHENOTYPING BASED ON AUTONOMOUS FIELD ROBOTS  
**Vadim Tsukor**  
Vadim Tsukor, Arno Ruckelshausen, Ralph Klose
- 18:15 C-1599 FIRST OPERATING EXPERIENCES WITH A PROTOTYPE FOR AUTOMATED ATTACHMENT OF THE SUPPORTING WIRES THAT THE HOP VINES GROW ON IN HIGHTRELLIS HOP GARDENS  
**Zoltan Gobor**  
Zoltan Gobor, Georg Fröhlich, Harald Soller, Johann Portner

# 160 SESSION

17:25-19:00  
**(PF) NON DESTRUCTIVE  
TECHNIQUES III**  
Moderator: Nuria Aleixos  
Location: ROOM 1

- 17:25 Introduction



- 17:30 C-0939 PREDICTION OF POULTRY EGG FRESHNESS USING ULTRASOUND TECHNIQUE  
**Mohammad Aboonajmi**  
Mohammad Aboonajmi, S.Kamaledin Setaredan, Takahishi Nishizu, Naoshi Kondo
- 17:45 C-0131 CHANGES OF ULTRASOUND CHARACTERISTICS OF MANGO JUICE DURING FRUIT RIPENING  
**Marc Valente**  
Marc Valente, Didier Laux, Alexia Prades
- 18:00 C-1020 BIOLOGICAL ACTIVITY OF THE EGYPTIAN MORINGA PEREGRINA SEED OIL  
**Hanaa Abd El Baky Hanaa H Abd El Baky**  
Hanaa Abd El Baky, Gamal El Baroty, Prof. Dr. Gamal S El Baroty El Baroty
- 18:15 C-1575 ONLINE-SORTING OF WHITE ASPARAGUS USING ACOUSTIC RESONANCE ANALYSIS  
**Martin Geyer**  
Julia Foerster, Ingo Truppel, Martin Geyer

## 161 SESSION

17:25-19:00  
**(PF) FOOD TECHNOLOGY IV**  
Moderator: **Alejandra Salvador**  
Location: **ROOM 4**

- 17:25 Introduction
- 17:30 C-1212 THE WETTABILITY AND SURFACE FREE ENERGY OF THE WHITE SORGHUM STARCHES GELS ISOLATED BY ALKALINE AND ENZYMATIC METHODS.  
**Paula Correia Reis**  
Paula Correia, Susete Gonçalves
- 17:45 C-1963 EFFECT OF SEED PRIMING PROLINE CONTENT OF DIFFERENT WINTER BREAD WHEAT (TRITICUM AESTIVUM) CULTIVARS  
**Elif Ozdemir**  
Elif Ozdemir, Bayram Sade, Süleyman Soyly, Mehmet Hamurcu, Emine Atalay
- 18:00 C-0454 EVALUATION OF THE EFFECT OF YEAST-SALT METHOD ON DOUGH YIELD, BREAD YIELD AND ORGANOLEPTIC PROPERTIES IRANIAN LAVASH BREAD  
**Hossein Ahmadichenarbo**  
Sara Movahed, Ghasem Rooshenas, Hossein Ahmadichenarbo

## 162 SESSION

17:25-19:00  
**(SPC02): MACHINE DESIGN AND PERFORMANCE III**  
Moderator: **Meir Teitel**  
Location: **ROOM 2**

- 17:25 Commission Horticultural Engineering (CMEN) and CFD Working Group meeting

## 163 SESSION

17:25-19:00  
**(SPC07): SILO STRUCTURES**  
Moderator: **Jorgen Nielsen**  
Location: **ROOM 3**

- 17:25 Introduction
- 17:30 C-2002 SAFE STORAGE TIME OF CEREAL GRAIN SUMMARIZED IN A MATHEMATICAL MODEL  
**Nils Jonsson Erik**  
Nils Jonsson Erik, Pernilla Johnsson, Aldo Ritzzo, Monica Olsen, Leif Gustafsson
- 17:45 C-1578 THE HOUSEHOLD METAL SILO: A HELPFUL TECHNOLOGY FOR FOOD SECURITY  
**Danilo Mejía Lorío**  
Danilo Mejía Lorío

## 164 SESSION

17:25-19:00  
**(SPC06): WIRELESS SENSORS IN AGRICULTURE**  
Moderator: **Luis Ruiz**  
Location: **ROOM 5**

- 17:25 Introduction
- 17:30 C1276 SIMULTANEOUS IDENTIFICATION OF FATTENING PIGS USING UHF RFID TECHNOLOGY  
**Eva Gallmann**  
Tobias Stekeler; Eva Gallmann; Daniel Herd; Thomas Jungbluth
- 17:45 C-0372 WIRELESS SENSOR NETWORKS LOCALIZATION IN HETEROGENEOUS TRANSMISSION MEDIUM  
**Esmail S. Nadimi**  
Esmail S. Nadimi, Jakob Juul Larsen, Ole Green, Victoria Blanes-Vidal, Pilar Barreiro Elorza, Thomas Skjodeberg Toftegaard
- 18:00 Round table II: Victoria Blanes Vidal, Luis Ruiz, Thomas Toftegaard

## 165 SESSION

17:25-19:00  
**(RD): SUSTAINABILITY 2**  
Moderator: **Manuel Moya**  
Location: **ROOM 6+7**

- 17:25 Introduction

- 17:30 C-1848 THE LIFE QUALITY AND THE PRODUCTION SYSTEMS: A RESEARCH IN RURAL SETTLEMENTS OF THE SAO PAULO STATE - BRAZIL  
**Taísa Marotta Brosler**  
Taísa Marotta Brosler, Sonia Maria Pessoa Pereira Bergamasco, Erika de Souza Oliveira, Julieta Teresa Aier de Oliveira, Fernando Rabello Paes de Andrade
- 17:45 C-2212 THE EFFECT OF SHEEP MANAGEMENT ON NITROUS OXIDE EMISSIONS AND NATURAL STEPPE IN ARID AND SEMI ARID ZONES  
**Omar Hijazi**  
Omar Hijazi, Werner Berg, Samouil Mousa, Reiner Brunsch
- 18:00 C-0562 THE ROLE OF INDIGENOUS KNOWLEDGE AND BIODIVERSITY IN RURAL DEVELOPMENT IN IRAN.  
**Masoud nezamoleslmi**  
Masoud Nezamoleslami, Mohammad Hasan Ebrahimi, Babak Pourmehdi zambouri, Alireza Golnaraghi, Seyed Alireza Ghadimi, Mohammad Reza Behzadi, Mohammad Mehdi Amiri khorie,
- 18:15 C-0606 PARTICIPATION OF LOCAL ADMINISTRATIVE ORGANIZATION IN COMMUNITY CONFLICT RESOLUTION: A CASE STUDY OF PONGNOI VILLAGE, SUTHEP SUB-DISTRICT, MUANG DISTRICT, CHIANG MAI, THAILAND  
**jukkaphong poung-ngamchuen**  
Jukkaphong Poung-ngamchuen, Ratchanon somboonchai, Kamonwan Srijareonjit, Suthima Kanoonthong
- 18:30 C-1163 DIAGNOSTIC AND SUSTAINABLE MANAGEMENT PROPOSALS FOR THE FAMILY SELF-SUFFICIENCY IN THE SEMIARID REGION OF EL PARQUE CHAQUEÑO (ARGENTINE)  
**Manuel Moya Ignacio**  
Manuel Moya Ignacio, Alicia Calvo, Nórfo Ríos, Elena García

# TUESDAY JULY 10

8:00-9:00 John F. REID. Keynote Speaker General Session AUDITORIO1

## 201 SESSION

08:55 -10:30  
**(PM): CONSERVATION TILLAGE II**  
**Moderator: Ted Kornecki**  
**Location: AUDITORIO 1**

- 08:55 Introduction
- 09:00 C-0996 ESTABLISHMENT OF A LONG TERM EXPERIMENT INTO TILLAGE AND TRAFFIC MANAGEMENT. PART ONE: EXPERIMENTAL DESIGN AND FIELD EQUIPMENT  
**Emily Smith**  
Emily Smith, Koloman Kristof, Paula A. Misiewicz, Keith Chaney, David W. White, Richard John Godwin
- 09:15 C-1024 ESTABLISHMENT OF A LONG TERM EXPERIMENT INTO TILLAGE AND TRAFFIC MANAGEMENT. PART TWO: EVALUATION OF SPATIAL HETEROGENEITY FOR THE DESIGN AND LAYOUT OF EXPERIMENTAL SITES  
**Koloman Kristof**  
Koloman Kristof, Emily Smith, Paula A. Misiewicz, Milan Kroulik, David White, Richard John Godwin
- 09:30 C-1990 STRIP TILLAGE FOR CORN AND SUGAR BEET - RESULTS OF A THREE YEAR INVESTIGATION ON THREE LOCATIONS  
**Markus Demmel Richard**  
Markus Demmel, Robert Brandhuber, Hans Kirchmeier
- 09:45 C-1403 MODEL FOR PREDICTION OF THE BUILD-UP HEAP EFFECT DURING BULLDOZING OPERATION ? EXPERIMENTAL VERIFICATION  
**Itzhak Shmulevich**  
Dror Rubinstein, Itzhak Shmulevich, Yaron Franco, Yuval Hikind

10:00 C-1482 REMOTE MONITORING OF OPERATIONS IN CONSERVATION PLUS PRECISION AGRICULTURE, RESPECT CONVENTIONAL TILLAGE AS A METHOD TO STUDY THE REDUCTION OF GREENHOUSE GASSES EMISSION  
**Francisco Márquez García**  
 Jesus Antonio Gil Ribes, Juan Agüera-Vega, Francisco Márquez García, Emilio González-Sánchez, Gregorio Lorenzo Blanco Roldán

10:15 C-2032 TESTS TO DETERMINE SOME PARAMETERS THAT CHARACTERIZE TILLAGE FARMING OPERATIONS  
**Mariano Suarez de Cepeda Martinez**  
 Mariano Suarez de Cepeda Martinez, Raimundo Romero

## 202 SESSION

08:55 -10:30  
**(SW-SPC01): IRRIGATION MANAGEMENT**  
**Moderator: Carmen Rocamora**  
**Location: AUDITORIO 3A**

08:55 Introduction

09:00 C-1989 IRRIGATION PERFORMANCE IN A WATER USE ASSOCIATION IN VALENCIA, SPAIN. ENGINEERING AND PHYSIOLOGICAL INDICATORS.  
**Diego Intrigliolo**  
 Ester López, Miguel Ángel Jiménez-Bello, Juan Manzano, Virginia Palau, Álvaro Royuela, Diego S. Intrigliolo

09:15 C-1727 WEB-BASED DECISION SUPPORT SYSTEM IRRIGATION DESIGN: MODELS INTEGRATION FOR SURFACE AND SET SPRINKLER SYSTEMS  
**José Manuel Monteiro Gonçalves**  
 José Manuel Gonçalves, André Muga, Gonçalves C. Rodrigues, Paula Paredes, Hanaa Darouich, Luis Santos Pereira

09:30 C-1595 AUTOMATIC PROGRAMMERS FOR SOLID SET SPRINKLER IRRIGATION SYSTEMS  
**Nery Zapata**  
 Nery Zapata, Raquel Salvador, José caverro, Sergio Lecina, Enrique Playán

09:45 C-1412 PERFORMANCE ASSESSMENT OF A MONITORING SYSTEM FOR IRRIGATION SCHEDULING IN A COMMERCIAL VINEYARD  
**Herminia Puerto Molina**  
 Herminia Puerto Molina, Antonio Ruiz Canales, José Miguel Molina Martínez

10:00 C-2007 ADAPTATION TO WATER SCARCITY? THE CASE OF THE REAL ACEQUIA DE MONCADA  
**Mar Violeta Ortega-Reig**  
 Mar Violeta Ortega-Reig, Vicente Sales-Martinez, Antonio Calatayud-Clerigues, Francisco Sanchez-Sada, Marta Garcia, Guillermo Palau-Salvador

10:15 C-0364 FILTERED VOLUME AND OUTLET PARAMETERS PREDICTION WITH NEURAL NETWORKS IN A MICRO IRRIGATION SAND FILTER USING EFFLUENTS  
**Gerard Arbat Pujolràs**  
 Jaume Puig-Bargués, Miquel Duran-Ros, Gerard Arbat, Javier Barragán, Francisco Ramirez de Cartagena

## 203 SESSION

08:55 -10:30  
**(SPC-05): OVERVIEW OF MEASUREMENT AND VERIFICATION PROTOCOLS IN LIVESTOCK ENVIRONMENTS**  
**Moderator: Richard Gates and María Cambra-López**  
**Location: AUDITORIO 2**

08:55 ILES KEYNOTE: Peter ENGEL, Nico W.M. Ogink, Hongwei XIN

## 204 SESSION

08:55 -10:30  
**(EN): ENERGY EFFICIENCY IN AGRICULTURE V**  
**Moderator: Andreas Meyer-Aurich**  
**Location: MULTIPURPOSE IA**

08:55 Introduction

09:00 C-0961 EFFICIENT USE OF AGRICULTURAL LAND IN PRODUCTION OF ENERGY: NATURAL INSULATION VERSUS BIO-ENERGY  
**Daniel-Calin Ola**  
 Daniel-Calin Ola, Ralf Pecenka, Hans-Jörg Gusovius, Jörn Budde, Christian Füll

09:15 C-1242 ACOUSTICAL PROPERTIES OF DENSIFIED COMPOST DERIVED FROM SWINE SOLID FRACTION  
**Christian Preti**  
 Christian Preti, Niccolò Pampuro, Alessio Facello, Eugenio Cavallo

09:30 C-1277 ENERGY CONSUMPTION IN BROILER PRODUCTION  
**Mari Rajaniemi**  
 Mari Rajaniemi, Jukka Ahokas

09:45 C-1764 DEVELOPMENTS TOWARDS ENERGY EFFICIENCY IN AGRICULTURAL DRYING  
**Thomas Ziegler**  
 Thomas Ziegler, Jochen Mellmann, Hasan Jubaer, Fabian Weigler

10:00 C-1977 ENERGY CONSUMPTION MEASUREMENTS IN GRAIN DRYING  
**Tapani Jokiniemi**  
 Tapani Jokiniemi, Jukka Ahokas

## 205 SESSION

10 8:55-10:30  
**(EN): SOLAR ENERGY**  
Moderator: Veerle Van Linden  
Location: MULTIPURPOSE IB

- 08:55 Introduction
- 09:00 C-1644 FEASIBILITY ASSESSMENT OF PHOTO-VOLTAIC PUMPING FOR IRRIGATION IN WEST BENGAL, INDIA  
**Shamaila Zia**  
Shamaila Zia, Thorben Andersen, Sudipta Lai, Klaus Spohrer, Wolfram Spreer, Rabinindra Kumar Panda, Joachim Müller,
- 09:15 C-1920 SIMULATION OF PHOTOVOLTAIC GENERATION METHODOLOGY FOR THE PLANNING AND OPERATION OF ELECTRICAL ENERGY SYSTEMS  
**Olga Moraes Toledo**  
Olga Moraes Toledo, Delly Oliveira Filho, Antonia Sonia Alves Cardoso Diniz, Maria Helena Murta Vale, Jose Helvecio Martins
- 09:30 C-1926 POLICIES FOR PHOTOVOLTAIC SOLAR ENERGY USE IN THE WORLD AND PROSPECTS FOR BRAZIL  
**Delly Oliveira Filho**  
Gustavo Azevedo Xavier, Delly Oliveira Filho, Joyce Correna Carlo

## 206 SESSION

08:55 -10:30  
**(IT): CONTROL METHODS**  
Moderator: Claus Sorensen  
Location: MULTIPURPOSE 1C

- 08:55 Introduction
- 09:00 C-1252 KNOWLEDGE BASED METHODS FOR SPATIAL DATA INTEGRATION IN AGRICULTURE: CASE OF AUTOMATED COMPLIANCE CONTROL  
**Raimo Nikkilä**  
Raimo Nikkilä, Jens Wiebensohn, Ilkka Seilonen, Kari Koskinen
- 09:15 C-1392 HYBRID MODELING AND CONTROL OF GREENHOUSE TEMPERATURE THROUGH AERIAL-PIPES AND AIR-FAN HEATER SYSTEMS  
**Jorge Antonio Sánchez Molina**  
Ana Paola Montoya, Francisco Rodríguez, Jose Luis Guzman, Jorge Antonio Sánchez

- 09:30 C-1802 DEVELOPMENT OF AN ATTACHABLE YIELD MONITORING SYSTEM AND AN EVALUATION OF A REDUCED NITROGEN INPUT  
**Tadashi Chosa**  
Tadashi Chosa, Eiji Morimoto, Shogo Takemoto
- 09:45 C-2182 SYSTEM OF AUTOMATIC CONTROL OF TEMPERATURE AND AIRFLOW FOR DRYING OF AGRICULTURAL PRODUCTS WITH RECYCLING OF THE DRYING AIR  
**Cristiano Lúcio Cardoso Rodrigues**  
Cristiano Lúcio Cardoso Rodrigues, José Helvecio Martins, Paulo Marcos de Barros Monteiro, Evandro de Castro Melo, José Eduardo Carvalho Monte

## 207 SESSION

08:55 -10:30  
**(IT): FERTILIZER AND PESTI-  
CIDE APPLICATIONS**  
Moderator: Rafael Argiles  
Location: AUDITORIO 3B

- 08:55 Introduction
- 09:00 C-1391 FIRST RESULTS USING TERRESTRIAL LIDAR SENSOR FOR DRIFT DETECTION IN VINEYARD SPRAYING  
**Jordi Llorens Calveras**  
Jordi Llorens, Emilio Gil, Sònia Duarte, Jordi Llop
- 09:15 C-1387 ANALYSIS OF ERROR IN THE APPLICATION OF VARIABLE RATE FERTILIZER COMPARING THREE SPEEDS OF OPERATION  
**Ranière Vieira Rodrigues**  
Casimiro Dias Gadanha Junior, Mateus Marrafon Nicolosi, Edmar Casarin Zambianco, Marco Aurélio Polim Milan, Ranière Rodrigues Vieira
- 09:30 C-1681 DOSAFRUT, PESTICIDE DOSE ADJUSTMENT SYSTEM IN INTENSIVE FRUIT ORCHARDS  
**Santiago Planas de Martí**  
Santiago Planas de Martí, Ferran Camp, Francesc Solanelles, Alexandre Escolà, Ricardo Sanz, Joan Ramón Rosell-polo
- 09:45 C-0904 AN ADD-ON MINI- YIELD SENSOR ON GRAIN COMBINES ACCURATELY AND STABLY ESTIMATES TOTAL GRAIN WEIGHT UNDER VARYING THROUGHPUT OF THE CROP  
**Koichi Shoji**  
Koichi Shoji, Munenori Miyamoto
- 10:00 C-0242 VARIABLE RATE OF AERIAL RELEASE OF STERILE INSECTS IN AREA-WIDE PEST MANAGEMENT PROGRAMS  
**Rafael Argilés**  
Marta Briasco; Daniel Larrosa; Gustavo Salvador; Javier Montesa; Rafael Argilés

# 208 SESSION

08:55 - 10:30  
**(PF): NON-DESTRUCTIVE  
TECHNIQUES IV**  
Moderator: Park Bosson  
Location: ROOM 1

- 08:55 Introduction
- 09:00 C-2034 DETECTION OF AFLATOXINS B1, B2, G1, G2 IN NUTMEG EXTRACT USING FLUORESCENCE FINGERPRINT  
**Junichi Sugiyama**  
Junichi Sugiyama, Kaori Fujita, Mizuki Tsuta, Mario Shibata, Mito Kokawa, Hiroyuki Onda, Takehito Sagawa,
- 09:15 C-2058 DEVELOPMENT OF RAPID ESTIMATION METHOD OF AEROBIC BACTERIA POPULATION ON BEEF SURFACE BY FLUORESCENCE FINGERPRINTS  
**Masatoshi Yoshimura**  
Masatoshi Yoshimura, Mizuki Tsuta, Mario Shibata, Kaori Fujita, Mito Kokawa, Junichi Sugiyama
- 09:30 C-2244 A FEASIBILITY STUDY OF FAST AND NON-DESTRUCTIVE ESTIMATION OF DIASTASE ACTIVITY OF HONEY  
**Xiaoli Li**  
Chu Zhang, Xiaoli Li, Yidan Bao, Yong He
- 09:45 C-0837 APPLICATION OF BIOSPECKLE METHOD FOR MONITORING THE BULLS EYE ROT DEVELOPMENT AND QUALITY CHANGES OF APPLES AFTER VARIOUS STORAGE METHODS  
**Anna Adamiak**  
Anna Adamiak, Artur Zdunek, Andrzej Kurenda, Krzysztof Rutkowski
- 10:00 C-1415 QUALITY CONTROL IN GRAIN STORES BY USE OF IN BEDDED WIRELESS SENSORS  
**Erik Fløjgaard Kristensen**  
Erik Fløjgaard Kristensen, Jakob Juul Larsen, Johannes Ravn Jorgensen, Margrethe Balling Hostgaard, Ole Green

# 209 SESSION

08:55 - 10:30  
**(SPC02): INDOOR AEROLICS I**  
Moderator: Athanasios Sapounas  
Location: ROOM 2

- 08:55 Introduction
- 09:00 ESTABLISHING QUALITY AND TRUST IN CFD THROUGH ERCOFTAC  
Technical Speaker: **Philippe Geuziane**

- 09:30 C-0809 CFD MODELLING OF AIR COOLING OF MULTIPLE BEEF CARCASSES USING 3D GEOMETRICAL MODELS  
**Kumsa Delessa Kuffi**  
Kumsa Delessa Kuffi, Thijs Defraeye, Erwin Koninckx, Stefaan Lescouhier, Bart M. Nicolai, Stefaan De Smet, Annemie Geeraerd, Pieter Verboven
- 09:45 C-0860 CFD BASED ANALYSIS OF THE 3D SPATIAL AND TEMPORAL DISTRIBUTION OF 1-METHYLCYCLOPROPENE IN APPLE FRUIT STORAGE  
**Alemayehu Ambaw Tsige**  
Alemayehu Ambaw Tsige, Pieter Verboven, Mulugeta Admasu Delele, Thijs Defraeye, Engelbert Tijskens, Ann Schenk, Bart Nicolai
- 10:00 C-1170 CLIMATE DISTRIBUTION IN A FAN AND PAD EVAPORATIVE COOLED GREENHOUSE: A CFD APPROACH  
**Thomas Bartzanas**  
Thomas Bartzanas, Dimitrios Fidaros, Caterina Baxevanou, Constantinos Kittas
- 10:15 C-0711 3-DIMENSIONAL THERMAL ANALYSIS OF A GREENHOUSE WITH PLANE AND MULTISPAN ROOF BY USING COMPUTATIONAL FLUID DYNAMICS (CFD)  
**Jorge Flores**  
Jorge Flores, Enrique Mejia, Abraham Rojano, Irineo L. Lopez, Juan Ignacio Montero, Armando Hernandez Mendoza, Oscar Alberto Kempfener, Miguel Mendoza Campos

# 210 SESSION

08:55 - 10:30  
**(SE): LOADS AND STRUCTURES**  
Moderator: Quiang Zhang  
Location: ROOM 3

- 08:55 Introduction
- 09:00 C-0414 COLLAPSES AND DAMAGES ON SWEDISH FARM BUILDINGS DUE TO SNOW LOADS  
**Christer Nilsson**  
Christer Nilsson, Olof Friberg
- 09:15 C-1445 OPEN SOURCE SPREADSHEET FOR OPTIMIZING PORTAL FRAMED SINGLE-STORY STEEL BUILDINGS  
**Jorge Lampurlanés Castel**  
Carles Grau Masias, Lluís Puigdomènech Franquesa, Jorge Lampurlanes Castel
- 09:30 C-1153 AN ESTIMATION OF VERTICAL STRESSES AND SETTLEMENTS IN RESERVOIRS UNDER A LINEAR ELASTIC BEHAVIOR  
**Miguel Redon Santafe**  
Miguel Redon Santafe, Jose Javier Ferran Gosalvez, Carlos Manuel Ferrer Gisbert, Francisco Javier Sanchez Romero, Juan Bautista Torregrosa Soler

- 09:45 C-0605 DEVELOPMENT OF AN EQUIPMENT TO DETERMINE PHOTOSYNTHETIC PHOTON FLUX DISTRIBUTION AND ILLUMINATION EFFICIENCY OF LED LAMPS FOR PLANT GROWTH  
**Yong Hyeon Kim**  
Jong Ho Park, Jae Su Lee, Yong Hyeon Kim
- 10:00 C-0825 INVESTIGATION OF OUTDOOR AIRFLOW DISTRIBUTION UNDER DIFFERENT BUILDING DISTANCES  
**Xiong Shen**  
Georgios Ntinias, Xiong Shen, Guoqiang Zhang, Vassilios Fragos
- 10:15 C-1275 ANALYSIS OF A STRUT & TIE MODEL FOR RIGID SHALLOW FOUNDATIONS AND ECCENTRIC LOADS  
**Carlos Manuel Ferrer Gisbert**  
Jose Javier Ferran Gozalvez, Carlos Manuel Ferrer Gisbert, Miguel Redon Santafe, Francisco Javier Sanchez Romero, Juan Bautista Torregrosa Soler

## 211 SESSION

08:55 - 10:30  
**(SPC04): AUTOMATED NAVIGATION OF FARM EQUIPMENT**  
Moderator: **Francisco Rovira**  
Location: **ROOM 4**

- 08:55 Introduction
- 09:00 THE ATOE CONFERENCES: PAST, PRESENT, AND FUTURE  
**Qin Zhang**
- 09:15 C-0315 EMBEDDED CONTROL SYSTEM FOR LARGE SCALE UNMANNED TRACTOR  
**Timo Oksanen**  
Timo Oksanen
- 09:30 C-1498 PATH FOLLOWING ALGORITHM FOR FOUR WHEEL INDEPENDENT STEERED TRACTOR  
**Timo Oksanen**  
Timo Oksanen
- 09:45 C-0018 DEVELOPMENT OF A COMBINE HARVESTER MODEL FOR NAVIGATION SIMULATION  
**Ze Zhang**  
Ze Zhang; Noboru Noguchi; Kazunobu Ishii
- 10:00 C-2317 A PROJECT ON DEVELOPMENT OF AGRICULTURAL TRACTOR AUTOMATIC STEERING SYSTEM ((SYSTEM ARCHITECTURE AND LABORATORY TESTS)  
Bahattin Akdemir  
Bahattin Akdemir, Ahmet Urusan, Erdogan Kesici

## 212 SESSION

08:55 - 10:30  
**(SPC06): APPLICATIONS OF WSN IN AGRICULTURE, PRIVATE SECTOR I**  
Moderator: **Enrique Moltó**  
Location: **ROOM 5**

- 08:55 Introduction
- 09:00 Company (WebsTech)
- 09:30 C-0876 THE EFFECT ON WIRELESS SENSOR NETWORK COMMUNICATION WHEN EMBEDDED IN BIOMASS  
**Jakob Larsen**  
Jakob Juul Larsen, Ole Green, Esmaeil S. Nadimi, Thomas Skjodeberg Toftegaard
- 09:45 Hands on

## 213 SESSION

08:55 - 10:30  
**(RD):LANDSCAPE 1**  
Moderator: **Brian G. Sims**  
Location: **ROOM 6+7**

- 08:55 Introduction
- 09:00 C-0496 3D MODELING OF LANDSCAPE ENVIRONMENTS FOR THE INTEGRATION OF BUILDINGS INTO THE LANDSCAPE  
**Julio Hernández Blanco**  
Jacinto Garrido Velarde, Julio Hernández, Lorenzo García, María Jesús Montero Parejo
- 09:15 C-0871 THE ROLE OF VEGETATION AS A VISUAL TOOL FOR INTEGRATION OF RURAL BUILDINGS. A CASE OF STUDY IN THE BIOSPHERE RESERVE "SIERRA DE FRANCIA"  
**Julio Hernández Blanco**  
Julio Hernández Blanco, Elena Carabias, Jacinto Garrido
- 09:30 C-0829 A GIS FOR RURAL LANDSCAPE SAMPLING  
**Patrizia Tassinari**  
Daniele Torreggiani, Stefano Benni, Maroussa Zagoraiou, Elisabetta Carfagna, Patrizia Tassinari

## 214 SESSION

08:55 - 10:30  
**(SPC03): COLOR ANALYSIS**  
Moderator: **Wonsuk Daniel Lee**  
Location: **ROOM 8+9**

- 08:55 Introduction

- 09:00 C-1957 QUANTITATIVE COLOR APPEARANCE EVALUATION BASED ON SPECTRAL INFORMATION OF NATURAL LIGHTING  
**Atsushi Hashimoto**  
Atsushi Hashimoto, Kentarou Furusawa, Ken-ichiro Suehara, Takaharu Kameoka
- 09:15 C-2120 A NOVEL OPTICAL APPROACH TO MONITOR COLOR CHANGES OF MANGO PEEL FOR MACHINE-VISION APPLICATIONS  
**Marcus Nagle**  
Marcus Nagle, Giuseppe Romano, Kiatkamjon Intani, Wolfram Spreer, Busarakorn Mahayothee, Vicha Sardsud, Hansjoachim Müller
- 09:30 C-2197 ANALYSIS OF HUE SPECTRA DURING STORAGE OF PEPPER (CAPSICUM ANNUUM)  
**Laszlo Baranyai**  
Laszlo Baranyai, Denes Lajos Denes, Jozsef Felfoldi
- 09:45 C-2231 A CHROMATIC IMAGE ANALYSIS FOR EVALUATING APPEARANCE OF AGRICULTURAL PRODUCTS USING COLOR DISTRIBUTION ENTROPY  
**Takaharu Kameoka**  
Kyosuke Yamamoto, Takashi Togami, Atsushi Hashimoto, Yousuke Yoshioka, Seishi Ninomiya, Takaharu Kameoka
- 10:00 C-2266 ORANGE GRADING BASED ON VISUAL TEXTURE FEATURES USING MACHINE VISION  
**Abdolabbas Jafari**  
Abdolabbas Jafari, Mohammad Reza Zarezadeh, Atefeh Fazayeli
- 10:55-13:00  
**(PM): DRIFT AND PLANT PROTECTION**  
**Moderator: Paolo Balsari**  
**Location: AUDITORIO 1**
- 10:55 Introduction
- 11:00 C-2311 NOZZLE CLASSIFICATION SYSTEM IN JAPAN BASED ON THE RELATIVE SPRAY DRIFT POTENTIAL  
**Geng Bai**  
Geng Bai, Kazuhiro Nakano, Tomomichi Mizukami, Sumihiko Miyahara, Shintaroh Ohashi, Ken-ichi Takizawa, Haijun Yan,
- 11:15 C-1106 SPRAY DRIFT FROM AERIAL APPLICATION ON SUGARCANE  
**Ulisses Rocha Antuniassi**  
Ulisses Rocha Antuniassi, Edivaldo Domingues Velini, Caio Antonio Carbonari, Wellington Pereira Alencar Carvalho, Rone Batista Oliveira, Maria Aparecida Peres Oliveira
- 11:30 C-0499 SIMULATING COV FROM NOZZLES SPRAY DISTRIBUTION: A NECESSITY TO INVESTIGATE SPRAY DISTRIBUTION QUALITY WITH DRIFT REDUCING SURFACTANTS.  
**Jean Paul Douzals**  
Jean Paul Douzals, Antoine Porte, Pierre Fernandez
- 11:45 C-1364 DETERMINATION OF DRIFT POTENTIAL VALUE (DPV) FOR DIFFERENT FLAT FAN NOZZLES USING A HORIZONTAL DRIFT TEST BENCH  
**Emilio Gil**  
Emilio Gil, Montserrat Gallart, Jordi Llorens, Jordi Llop
- 12:00 C-1563 DRIFTSIM, A COMPUTER PROGRAM FOR ESTIMATING DRIFT DISTANCES OF DROPLETS  
**Heping Zhu**  
Heping Zhu, Erdal Ozkan
- 12:15 PM08: Sustainable crop protection
- 10:55-13:00  
**216 SESSION**  
**(SW-SPC01): IRRIGATION ENGINEERING**  
**Moderator: Daniele De Wrachien**  
**Location: AUDITORIO 3A**
- 10:55 Introduction
- 11:00 C-0369 CLASSICAL AND QUANTUM MECHANICAL ANALYSIS OF WATER DROPLET BALLISTICS IN SPRINKLER IRRIGATION SYSTEMS  
**Daniele De Wrachien**  
Daniele De Wrachien, Giulio Lorenzini, Stefano Mambretti
- 11:15 C-1073 DESIGN OF MICROIRRIGATION SUBUNITS WITH MINIMUM COST AND PROPER OPERATION. APPLICATION AT PEPPER AND VINEYARD IN SPAIN  
**José M<sup>a</sup> Tarjuelo Martin-Benito**  
José María Tarjuelo, Francisco Carrión, Amaro de Castillo, Miguel Angel Moreno Hidalgo
- 11:30 C-1144 WATER DISTRIBUTION UNIFORMITY IMPROVEMENT OF MICROTUBE-TYPE AND BUTTON-TYPE DRIP IRRIGATION SYSTEM USING ADJUSTABLE PRESSURE-LOSS LATERAL TAKEOFF VALVES  
**Victor Ella**  
Victor Ella, Jack Keller, Manuel Reyes, Bob Yoder
- 11:45 C-0891 POWER SUPPLY QUALITY AND HARMONIC GENERATION IN PUMPING STATIONS FOR IRRIGATION  
**Juan Ignacio Corcoles Tendero**  
Juan Ignacio Corcoles Tendero, Jose Fernando Ortega Alvarez, Pedro Carrion, Arturo De Juan Valero, Jose Maria Tarjuelo Martin - Benito, Miguel Angel Moreno

- 12:00 C-1824 ASSESSMENT OF HYDRAULIC BEHAVIOR OF REGULATED DRIP EMITTERS IN LABORATORY  
**Alvaro Royuela**  
Alvaro Royuela, Jose V. Turegano
- 12:15 C-1091 ENERGY MANAGEMENT SYSTEM FOR WATER USERS? ASSOCIATIONS  
**Carmen Rocamora Osorio**  
Carmen Rocamora Osorio, Ricardo Abadía Sánchez, Jorge Vera Morales
- 12:30 C-0989 ASSESMENT OF LOCAL HEAD LOSSES FOR DIFFERENT LATERAL INSERTIONS IN MANIFOLDS  
**Alvaro Royuela**  
Alvaro Royuela, Pau Martí, Manuel Zarzo, Jose V. Turegano

## 217 SESSION

10:55-13:00

### (SPC05): MULTI-PERSPECTIVE & HOLISTIC ASSESSMENT OF SYSTEMS

Moderator: André Aarnink  
Location: AUDITORIO 2

- 10:55 Introduction
- 11:00 C-0198 VENTILATION RATE, BALANCE TEMPERATURE AND SUPPLEMENTAL HEAT NEED IN ALTERNATIVE VS. CONVENTIONAL LAYING-HEN HOUSING SYSTEMS  
**Yang Zhao**  
Yang Zhao, Hongwei Xin, Tim Shepherd, Morgan Hayes, John Stinn
- 11:15 C-1268 ELECTRICITY AND FUEL USAGE OF AVIARY LAYING-HEN HOUSES IN THE MIDWESTERN UNITED STATES  
**Tim Shepherd**  
Morgan Hayes, Hongwei Xin, Hong Li, Tim Shepherd, John Stinn
- 11:30 C-1457 AMMONIA EMISSION AND PRODUCTIVITY OF LAYING HENS FED DIETS CONTAINING DISTILLER DRIED GRAINS  
**Eileen Wheeler**  
Eileen.F. Wheeler, Paul. H. Patterson, Heather Burley
- 11:45 C-0528 TOP LAYER HUMIDIFICATION OF BEDDING MATERIAL OF LAYING HEN HOUSES TO MITIGATE DUST EMISSIONS: EFFECTS OF WATER SPRAYING LEVELS ON DUST, AMMONIA AND ODOUR EMISSIONS  
**Nico Ogink**  
Nico W. M. Ogink, Jan van Harn, Rick van Emous, Hilko Ellen
- 12:00 C-0083 IMPACT OF THE REDUCTION OF STRAW ON AMMONIA, GHG AND ODORS EMITTED BY FATTENING PIGS HOUSED IN A DEEP-LITTER SYSTEM  
**Nadine Guingand**  
Nadine Guingand, Alexandre Rugani

- 12:15 C-1647 NITROGEN FLOW CHARACTERISATION OF LAYING HEN PRODUCTION SYSTEMS: A MASS BALANCE APPROACH  
**Frederic Pelletier**  
Frederic Pelletier; Stephane Godbout; Sebastien Fournel; Martin Belzile; Matthieu Girard
- 12:30 C-0921 ENVIRONMENTAL CONSEQUENCES OF SEGREGATING PIG URINE AND FAECES - A LIFE CYCLE PERSPECTIVE  
**Jerke W De Vries**  
J.W. De Vries, André J. A. Aarnink, P.w.g. Groot Koerkamp, I.J.M. De Boer
- 12:45 C-0945 METHODOLOGICAL ASPECTS OF ENVIRONMENTAL ASSESSMENT OF LIVESTOCK PRODUCTION BY LCA (LIFE CYCLE ASSESSMENT)  
**Lorie Hamelin**  
Lorie Hamelin, Henrik Wenzel

## 218 SESSION

10:55-13:00

### (EN): AGREE PROYECT MEETING

Location: MULTIPURPOSE IA

- 10:55 AGREE MEETING

## 219 SESSION

10:55-13:00

### (EN): BIOMASS TREATMENT

Moderator: Agirdas Jasinkas  
Location: MULTIPURPOSE IB

- 10:55 Introduction
- 11:00 C-1333 DETERMINATION OF ENERGY PLANTS CHOPPING QUALITY WHILE BIOFUEL PREPARATION  
**Algirdas Jasinkas**  
Algirdas Jasinkas
- 11:15 C-1574 EFFECTS OF COMPRESSIVE FORCE, PARTICLE SIZE AND MOISTURE CONTENT ON MECHANICAL PROPERTIES OF WORMY COMPOST PELLETS  
**Mohammad Hossein Kianmehr**  
Mohammad Hossein Kianmehr, Hadi Rahmzadeh Bahram, Seyed Reza Hassan-Beygi, Iman Valaei, Hossein Ali Alikhani
- 11:30 C-1814 PERFORMANCE EVALUATION OF A SMALL CHIPPER USING AN INNOVATIVE CUTTING SYSTEM  
**Alessio Facello**  
Alessio Facello, Eugenio Cavallo, Raffaele Spinelli



11:45 C-2294 BIOGASPRODUCTION USING STRONG LIGNIFIED HAY - OPTIMIZATION OF THE TIME TEMPERATURE COMBINATION USING STEAM EXPLOSION FOR PRE-TREATMENT

**Franz Theuretzbacher**

Franz Theuretzbacher, Alexander Bauer, Thomas Amon, Barbara Amon

12:00 C-2299 ENERGY USE AND CARBON DIOXIDE EMISSIONS ASSOCIATED WITH THE COMPRESSION OF OILSEED RAPE STRAW

**Leticia Chico Santamarta**

Leticia Chico Santamarta, Angel Ramirez, Richard John Godwin, Keith Chaney, David White, Andrea Humphries

12:30 C-0838 PLANTS DISCRIMINATION IN MAIZE FIELDS APPLYING HUMAN PERCEPTION TO DIGITAL IMAGES

**Juan Romeo Granados**

Juan romeo granados, Diego Oliva, Jose Miguel Guerrero, Martín Montalvo Martínez, Maria Guijarro, Gonzalo Pajares

12:45 C-0985 ASSESSMENT OF PESTICIDE APPLICATION METHOD EFFICIENCY USING HIGH-SPEED IMAGE ANALYSIS

**Mathieu Massinon**

Mathieu Massinon, Thierry Denis, Benjamin Perriot, Marie-France Destain, Frédéric Lebeau

## 220 SESSION

10:55-13:00

### (IT): SENSORS I

Moderator: Mahdi Alavi

Location: MULTIPURPOSE IC

10:55 Introduction

11:00 C-1888 DETECTION OF RICE PLANT LODGING USING CAMERA AND LASER RANGE FINDER

**Ryohei Masuda**

Ryohei Masuda, Kazuo Nomura, Michihisa Iida, Masahiko Suguri

11:15 C-1817 EXPERIMENTAL METHOD TO ESTIMATE CROP DENSITY BY LASER BEAM

**Ali Farmanesh**

Ali Farmanesh, Mohsen Shamsi

11:30 C-0445 NON-DESTRUCTIVE MEASURING OF ROOT CROP PROPERTIES USING UWB-RADAR

**Christian Peveling-Oberhag**

Christian Peveling-Oberhag, Peter Schulze Lammers

11:45 C-0406 SEEDLING DISCRIMINATION USING SHAPE FEATURES DERIVED FROM A DISTANCE TRANSFORM

**Rasmus Nyholm Jørgensen**

Thomas Moesgaard Giselsson, Henrik Skov Midtby, Rasmus Nyholm Jørgensen

12:00 C-0439 GREENHOUSE PLANT SEGMENTATION USING POINT DISTRIBUTION MODEL

**Medhat Moussa**

Asmaa Ali, Medhat Moussa

12:15 C-0485 INVESTIGATION OF CONTINUOUS IMAGING ANALYSIS OF GRAIN QUALITY ON A COMBINE HARVESTER

**Janine Berberich**

Janine Berberich, Hilke Risius, Markus Huth, Jürgen Hahn

## 221 SESSION

10:55-13:00

### (IT): WEED CONTROL

Moderator: David C. Slaughter

Location: AUDITORIO 3B

10:55 Introduction

11:00 C-1178 MECHANICAL WEED MANAGEMENT BASED ON AN ACCURATE ODOMETRY TECHNIQUES

**David Slaughter**

Manuel Pérez Ruiz, David C. Slaughter, Fadi Fathallah, Chris Gliever, Brandon Miller

11:15 C-1016 MODICOVI - MONOCOT AND DICOT COVERAGE RATIO VISION BASED METHOD FOR REAL TIME ESTIMATION CANOPY COVERAGE RATIO BETWEEN CEREAL CROPS AND DICOTYLEDON WEEDS

**Morten Laursen Stigaard**

Morten Laursen Stigaard, Henrik Skov Midtby, Norbert Krüger, Rasmus Nyholm Jørgensen

11:30 C-2125 WEED DETECTION AND DISCRIMINATION IN MAIZE FIELDS USING ULTRASONIC AND LIDAR SENSORS

**Alexandre Escolà**

Alexandre Escolà, Dionisio Andújar, José Dorado, César Fernández-Quintanilla, Joan R. Rosell-Polo

11:45 C-2019 A NON-SUPERVISED STRATEGY FOR IDENTIFYING WEEDS IN AGRICULTURAL AERIAL IMAGES

**Pedro Javier Herrera Caro**

P. Javier Herrera, Ana I. de Castro, Francisca López-Granados, Montserrat Jurado-Expósito, Angela Ribeiro

12:00 C-0780 ESTIMATION OF WEED CONTROL THRESHOLD FOR INTELLIGENT SPRAYER BOOM

**Asif Ali**

Asif Ali, Christian Andreasen, Jens.C. Streibig, Svend Christensen

# 223 SESSION

10:55-13:00  
**(SPC02):ENVIRONMENTAL  
AEROLICS AND HYDRAU-  
LICS**  
Moderator: Murat Kacira  
Location: ROOM 2

- 10:55 Introduction
- 11:00 C-0608 PREDICTION OF LIVESTOCK ODOUR DISPERSION OVER COMPLEX TERRAIN USING CFD TECHNOLOGY  
**Se-Woon Hong**  
Se-Woon Hong, In-Bok Lee, Il-Hwan Seo, Jessie P. Bitog, Kyeong-Seok Kwon
- 11:15 C-0614 INVESTIGATION OF WINDBREAK SYSTEMS TO CONTROL SOIL/DUST GENERATION AND DIFFUSION IN A RECLAIMED LAND: A NUMERICAL APPROACH  
**Jessie Pascual Bitog**  
Jessie Pascual Bitog Piog, In-Bok Lee, Hyun-Seob Hwang
- 11:30 C-0619 ATOMIZATION MODELING: AN EULERIAN APPROACH  
**Ariane Vallet**  
Ariane Vallet, Abdelhak Belhadeif
- 11:45 C-0935 ONGOING RESEARCH ON PESTICIDES AIR DISPERSION  
**Bernard Bonicelli**  
Bernard Bonicelli, Carole Sinfort, Bernadette Ruelle, Vincent De Rudnicki, Eric Cotteux
- 12:00 C-1260 CFD APPLICATION FOR ESTIMATION OF AIRBORNE SPREAD OF HPAI (HIGHLY PATHOGENIC AVIAN INFLUENZA)  
**Il-hwan Seo**  
Il-hwan Seo, In-bok Lee, Hyun-seob Hwang, Se-woon Hong, Jessie Pascual Bitog Piog, Kyeong-seok Kwon
- 12:15 C-1823 AIRFLOW AROUND ARTIFICIAL WIND-BREAKS WITH ELASTIC SUPPORT  
**Antonis Mistriotis**  
Anastasios Giannoulis, Antonis Mistriotis, Nikoleta Papardaki, Demetres Briassoulis
- 12:30 C-1618 NUMERICAL SIMULATION OF THE HYDRODYNAMICS AND TURBULENT MIXING PROCESS IN A WATER STORAGE TANK  
**Ignacio José Moncho Esteve**  
Ignacio José Moncho Esteve, Guillermo Palau-Salvador, Petra Amparo López-Jiménez, Markus Vaas, Wernher Brevis
- 12:45 C-0363 HYDRODYNAMIC BEHAVIOUR OF THE UNDERDRAINS IN A MICROIRRIGATION SAND FILTER USING CFD SOFTWARE  
**Gerard Arbat Pujolràs**  
Gerard Arbat, Toni Pujol, Jaume Puig-Bargués, Miquel Duran-Ros, Javier Barragán, Lino Montoro, Francisco Ramírez de Cartagena,

# 224 SESSION

10:55-13:00  
**(SE): MATERIALS**  
Moderator: Eutiquio Gallego  
Location: ROOM 3

- 10:55 Introduction
- 11:00 C-0484 THERMAL CONDUCTIVITY OF ENVIRONMENTALLY FRIENDLY PARTICLEBOARDS FROM ARUNDO DONAX BONDED WITH DIFFERENT STARCHES  
**Teresa García Ortuño**  
Teresa García Ortuño, María Teresa Ferrández García, Javier Andreu Rodríguez, Clara Eugenia Ferrández García, Manuel Ferrández-Villena García
- 11:15 C-1177 PROPERTIES OF RECYCLED PLASTIC FILMS OBTAINED FROM PROTECTED CULTIVATION  
**Aleksandra Dimitrijevic**  
Carmela Sica, Pietro Picuno, Giacomo Scarascia Mugnozza, Aleksandra Dimitrijevic
- 11:30 C-0361 CEMENT MORTARS NANOMATERIALS FOR USE IN LIVESTOCK FACILITIES  
**Elvira Sanchez Espinosa**  
Jordi Massana Guitart, Rebeca Antón, Arancha Hueso Doblado, Elvira Sánchez Espinosa
- 11:45 C-1623 USE OF BAMBOO ORGANOSOLV PULP AS REINFORCEMENT CEMENTITIOUS MATRICES  
**Viviane da Costa Correia**, Débora Oliveira, Alessandra Almeida, Holmer Savastano Junior
- 12:00 C-1320 INFLUENCE OF POLYVINYL ALCOHOL AND KERATIN ON MECHANICAL PROPERTIES OF THERMOPLASTIC STARCH (TPS)  
**Bozena Gladyszewska**  
Bozena Gladyszewska, Anna Ciupak, Dariusz Chocyk, Leszek Moscicki, Andrzej Rejak, Krzysztof Golacki
- 12:15 C-1156 MANUFACTURE AND PROPERTIES OF THREE-LAYERED LOW DENSITY PARTICLEBOARD FROM GIANT REED  
**Clara Eugenia Ferrández García**  
Clara Eugenia Ferrández García, Manuel Ferrández-Villena García, Juan Cuartero, Teresa García Ortuño, María Teresa Ferrández García, Javier Andreu Rodríguez
- 12:30 C-2167 SUGAR CANE STRAW ASHES AS ADDITION IN CEMENTITIOUS MATRICES  
**Michelle Rodrigues Santos**  
Michelle Rodrigues Santos, Antonio Ludovico Beraldo, Holmer Savastano Junior, Sergio Francisco Dos Santos

# 225 SESSION

10:55-13:00  
**(SPC04): PERCEPTION FOR INTELLIGENT VEHICLES AND FARM EQUIPMENT**  
Moderator: Shufeng Han  
Location: ROOM 4

- 10:55 Introduction
- 11:00 C-0991 REAL TIME PERCEPTION AND CLASSIFICATION OF RELEVANT OBJECTS IN RURAL ENVIRONMENT TO REACH SAFE AUTONOMOUS PILOTING OF A COMMERCIAL TRACTOR  
**Maria C. Garcia-Alegre**  
Maria C. Garcia-Alegre, David Martin, D. Miguel Guinea, Domingo Guinea
- 11:15 C-2288 DEVELOPMENT OF A REAL TIME MULTILENS BASED OMNI-DIRECTIONAL STEREO VISION SYSTEM  
**Liangliang YANG**  
Liangliang YANG, Noboru NOGUCHI, Kazunobu ISHII
- 11:30 C-1302 3D SIMULATION WITH VIRTUAL STEREO RIG FOR OPTIMIZING CENTRIFUGAL FERTILIZER SPREADING.  
**Jürgen Vangeyte**  
Bilal Hijazi, Jürgen Vangeyte, Frédéric Cointault, Michel Paindavoine, Jan G. Pieters
- 11:45 C-0345 MEASURING OLIVE LEAF MINERAL CONCENTRATION USING VIS\_NIR SPECTRAL REFLECTANCE  
**Zeev Schmilovitch**  
Zeev Schmilovitch, Nativ Rotbart, Yafit Choen, Victor Alchanatis, Uri Yermiyahu
- 12:00 C-1304 3D TIME-OF-FLIGHT CAMERA-BASED SENSOR SYSTEM FOR AUTOMATIC CROP HEIGHT MONITORING FOR PLANT PHENOTYPING  
**Christian Scholz**  
Ralph Klose, Christian Scholz, Arno Ruckelshausen
- 12:15 C-0560 SELECTIVE WEED CONTROL BY MEANS OF IMAGE ANALYSIS AND LASER APPLICATION  
**Christian Marx**  
Christian Marx, Julio César Pastrana Pérez, Michael Hustedt, Heinz Haferkamp, Stephan Barcikowski, Thomas Rath

# 226 SESSION

10:55-13:00  
**(SPC06): APPLICATIONS OF WSN IN AGRICULTURE, PRIVATE SECTOR II**  
Moderator: Ole Green  
Location: ROOM 5

- 10:55 Introduction
- 11:00 Company (Galtel)

- 11:30 C-0373 PLANT WATER STATUS IN VINEYARDS COMBINING SENSORS IN SOIL AND PLANT  
**Javier J. Cancela**  
María Fandiño; Emma M. Martínez; Benjamín J. Rey; Javier J. Cancela
- 11:45 C-0817 WIRELESS SENSOR NETWORKS TO MONITOR MICROCLIMATE VARIABILITY FOR PRECISION VITICULTURE IN CASTILLA-LAMANCHA  
**Francisco Montero García**  
Francisco Montero García, Antonio Brasa Ramos, Francisco Montero Riquelme
- 12:00 Hands on
- 12:45 Round table III: Closing & final remarks (Esmaeil Nadimi, Pilar Barreiro, Ole Green, Jorge Del Valle)

# 227 SESSION

10:55-13:00  
**(RD):SUSTAINABILITY I**  
Moderator: John H Lumkes  
Location: ROOM 6+7

- 10:55 Introduction
- 11:00 C-0645 SURVEY OF STRATEGIES METHOD FOR CONSERVATION AGRICULTURE DEVELOPMENT TOWARD SUSTAINABILITY IN IRAN RURAL SOCIETY  
**Masoud Nezamoleslmi**  
Mohammad Emami, Mohammad Hasan Ebrahimi, Babak Pourmehd izanbouri, Masoud Nezamoleslami, Hadi Tajeddin khoozani, Mohammad Ghahderijani, Mohammad Mehdi Amiri khorie
- 11:15 C-1104 THE PARAMO ECOSYSTEM, FOREST AND WETLANDS IN THE RIVER BASIN OF RIO GRANDE ANTIOQUIA (COLOMBIA) IN A PROPOSAL OF SUSTAINABLE WATER MANAGEMENT.  
**Eugenia González Castrillón**  
Eugenia González Castrillón
- 11:30 C-1167 ASSESSMENT OF SYSTEM SUSTAINABILITY INDEX FOR IRRIGATED RICE DOMAIN - A QUANTITATIVE APPROACH  
**Abu Ahmed Mokammel Haque**  
Abu Ahmed Mokammel Haque, Hla Myo Thwe
- 11:45 C-1205 SMALL SCALE RURAL INFRASTRUCTURE FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT IN AFRICA  
**Josef Kienzle**  
Muhammad Akhtar Bhatti, Josef Kienzle
- 12:00 C-2343 DESIGN OF A SUSTAINABLE, LOCALLY MANUFACTURABLE, AGRICULTURAL UTILITY VEHICLE FOR DEVELOPING COUNTRIES  
**John H. Lumkes Jr.**  
John H Lumkes

- 12:15 C-1486 DEVELOPMENT OF AGRICULTURAL MECHANIZATION FOR RICE PRODUCTION IN THAILAND  
**Phakwipha Sutthiwaree**  
Phakwipha Sutthiwaree, Minli Yang
- 12:30 C-1160 SOIL QUALITY MONITORING AND EVALUATION UNDER CONVENTIONAL PLOW-BASED AND CONSERVATION AGRICULTURE PRODUCTION SYSTEMS IN SOUTHERN PHILIPPINES  
**Victor Ella**  
Victor Ella, Manuel Reyes, Agustin Mercado

## 228 SESSION

10:55-13:00  
**(SPC03): SPECTROMETRY**  
Moderator: **Manuela Zude**  
Location: **ROOM 8+9**

- 10:55 Introduction
- 11:00 C-2214 WATER STRESS DETECTION BASED ON OPTICAL MULTISENSOR FUSION WITH A LEAST SQUARES SUPPORT VECTOR MACHINE CLASSIFIER  
**Dimitrios Moshou**  
Dimitrios Moshou, Ioannis Gravalos, Dimitrios Kateris, Xanthoula-Eirini Pantazi
- 11:15 C-0318 MONITORING PHYSICAL PARAMETERS OF TROPICAL FRUITS DURING DRYING BY APPLICATION OF LASER LIGHT IN THE VIS/NIR SPECTRUM  
**Giuseppe Romano**  
Giuseppe Romano, Marcus Nagle, Hansjoachim Müller
- 11:30 C-1583 NONDESTRUCTIVE MEASUREMENT OF FRUIT QUALITY BY MEANS OF NIR SPECTROSCOPE AND HYPERSPECTRAL IMAGING TECHNOLOGY  
**Yanchao Zhang**  
Yanchao Zhang, Yidan Bao, Yong He, Jiansong Yao
- 11:45 C-1775 USING SPECTRAL MEASUREMENTS TO DIFFERENTIATE BETWEEN ANTHOCYANIN AND BETACYANIN CONTAINING PLANT SPECIES  
**Reisha Peters**  
Reisha Peters, Scott Noble
- 12:00 C-2309 COMPARISON OF FOUR NONDESTRUCTIVE SENSORS FOR FIRMNESS ASSESSMENT OF APPLES  
**Renfu Lu**  
Renfu Lu, Fernando Mendoza
- 12:15 C-0571 FUSARIUM DETECTION AND DEOXYNIVALENOL CONTENT DETERMINATION IN WHEAT USING FOURIER TRANSFORM INFRARED SPECTROSCOPY  
**Jitendra Paliwal**  
Karen Starr, Jitendra Paliwal

## 229 SESSION

14:00-14:55  
**(PM) POSTERS SESSION**  
Location: **POSTERS ROOM**

- P-0021 SPRAYING CITRUS ORCHARDS WITH ANTIDRIFT NOZZLES  
**Luis Val Manterola**  
lucia dolera, rosa vercher, Cruz Garcera Figueroa, José M<sup>o</sup> Soler, luis val
- P-0237 EFFECTS OF DISC PLOUGHING ON THE MORPHOLOGICAL AND PHYSICAL PROPERTIES OF SOILS IN MUBI SOUTH LOCAL GOVERNMENT AREA, ADAMAWA STATE, NIGERIA  
**Mohammed Abubakar**  
Mohammed Abubakar, M Ahmed, A. I. Zata
- P-0402 ESTIMATION OF LEAF AREA INDEX (LAI) IN GREENHOUSE TOMATO CROP TO DETERMINE THE VOLUME RATE TO SPRAY  
**Julián Sánchez-Hermosilla**  
Victor J. Rincón Cervera, Francisco Cesar Paez Cano, Julián Sánchez-Hermosilla López, José Pérez Alonso, Angel Callejón Ferre
- P-1235 EFFICIENCY OF HYDROPNEUMATIC SPRAYERS FOR PHYTOSANITARY TREATMENT OF FRUIT CROPS GROWN IN THE CUYO REGION, ARGENTINA  
**Marcos Montoya**  
Marcos Montoya, Raúl del Monte, Alejandro Ambrogetti
- P-1245 INFLUENCE OF AIR FLOW VARIATION ON SPRAYING AND POWER DEMAND OF HYDROPNEUMATIC SPRAYERS  
**Marcos Montoya**  
Marcos Montoya, Raúl del Monte, Alejandro Ambrogetti
- P-1501 ASYMMETRIC CLASSIFICATION OF DRIFT REDUCING NOZZLES CONSIDERING FRONTAL OR LATERAL WIND CONDITIONS.  
**Jean Paul Douzals**  
Jean Paul Douzals
- P-1621 EVALUATION OF SPRAY NOZZLES FOR CONTROL OF FUSARIUM HEAD BLIGHT IN WHEAT CROPS  
**Juan José Olivet Martínez**  
Juan José Olivet Martínez, Juana Villalba, João Paulo Cunha, Jorge Volpi
- P-1639 A MACHINE PROTOTYPE FOR THE CHESTNUT MECHANICAL HARVEST IN STEEP ZONE  
**Andrea Formato**  
Andrea Formato, Domenico Guida, Antonio Lenza, Carlo Palcone, Giampiero Scaglione

- P-1665 TECHNO-ECONOMIC EVALUATION OF MECHANICAL WEEDERS IN THE PADDY FIELD  
**Mohammad Reza Alizadeh**
- P-1722 CHEMICAL THINNING RESPONSE OF 'WILLIAMS BON CHRETIEN' PEARS TO VOLUME RATE AND SURFACTANT  
**Jorge Magdalena Carlos**  
Jorge Carlos Magdalena, Mariela Curetti, Rodolfo Rodriguez
- P-1731 EFFECT OF A CROSS FLOW SPRAYER AND AN AIR-CARRIER, AXIAL-FAN SPRAYER ON THE QUALITY DISTRIBUTION, PEST CONTROL AND DRIFT IN AN APPLE ORCHARD  
**Jorge Magdalena Carlos**  
Jorge Carlos Magdalena, Luis Val Mantecola, Alcides Di Prinzi, Sergio Behmer
- P-1749 CHARACTERIZATION OF MANUAL SPRAY GUNS FOR PHYTOSANITARY TREATMENT OF PROTECTED HORTICULTURAL CROPS. TYPOLOGY AND OPERATIONAL PARAMETERS.  
**Francisco C. Páez Cano**  
Francisco Cesar Paez Cano, Victor J. Rincón Cervera, Miguel Giménez, Milagros Fernández, Julián Sánchez-Hermosilla López
- P-1854 PHYSICAL WEED CONTROL IN URBAN HARD SURFACES AND TURFGRASSES  
**Luisa Martelloni**  
Andrea Peruzzi, Christian Frascioni, Luisa Martelloni, Marco Fontanelli, Michele Raffaelli
- P-1864 EFFECT OF SPACE ON DROPLETS ELECTRICAL CHARGE DURING ELECTROSTATIC SPRAYING  
**Robson Shigueaki Sasaki**  
Robson Shigueaki Sasaki, Mauri Teixeira Martins, Haroldo Carlos Fernandes, Paulo Marcos de Barros Monteiro, Denilson Eduardo Rodrigues, Cleyton Batista de Alvarenga
- P-1875 EFFECT OF WATER VAPOR PRESSURE DEFICIT ON DROPLETS SPECTRUM DURING AN AIR-ASSISTED SPRAY  
**Robson Shigueaki Sasaki**  
Cleyton Batista de Alvarenga, Mauri Teixeira Martins, Sérgio Zolnier, Paulo Roberto Cecon, Robson Shigueaki Sasaki
- P-1895 EFFECT OF DROPLET SIZE IN THE CONTROL OF YELLOW LEAF SPOT IN WHEAT  
**Juan José Olivet Martínez**  
Juan José Olivet Martínez, Juana Villaba, Jorge Volpia
- P-2360 THE EFFECT OF NITROGEN AND POTASSIUM FERTILIZER ON YIELD, QUALITY AND SOME QUANTITATIVE CHARACTERISTICS OF FLUE-CURED TOBACCO CV.COKER347  
**Alireza Farrokh**  
Ali. Reza. Farrokh, Ibrahim Azizov, Atoosa Farrokh, Masoud Esfahani, Mehdi Rangbar Chobeh, Masoud Kavooosi

230  
SESSION

14:00-14:55  
(SW-SPC01) POSTERS SESSION

Location: POSTERS ROOM

- P-0029 SOIL MOISTURE AND TEMPERATURE MONITORING FOR SUSTAINABLE LAND AND WATER MANAGEMENT IN TRANSYLVANIAN PLAIN, ROMANIA  
**Teodor Rusu**  
Teodor Rusu, Paula Moraru, Mara Sopte-rean, Adrian Pop, Ileana Bogdan
- P-0030 SOIL TILLAGE CONSERVATION AND ITS EFFECT ON SOIL MANAGEMENT AND CLIMATIC CHANGES  
**Teodor Rusu**  
Paula Moraru, Teodor Rusu
- P-0064 RECOURSE AND MANAGEMENT OF WATER IN THE WORLDS  
**Mohammad Sharrifmoghaddasi**  
Mohammad Sharrifmoghaddasi
- P-0182 EFFECTS OF THE NITROGEN FERTILIZER AND AZOTOBACTER ON FLOWER YIELD AND CAROTENOID CONTENTS OF MARIGOLD (CALENDULA OFFICINALIS)  
**Mohammad Reza Haj Seyed Hadi**  
Mohammad Reza Haj Seyed Hadi, Mohammad Taghi Darzi, Zohreh Ghandeharilavijeh, Gholamhossein Riazzi
- P-0483 THE SPATIO-TEMPORAL ANALYSIS OF SOIL VOLUMETRIC MOISTURE CONTENT  
**Yujian Yang**
- P-0505 EXPERIMENTAL ASSESSMENT OF ARTIFICIAL MONOLAYERS IN REDUCING EVAPORATION FROM WATER STORAGE  
**Victoriano Martínez-Alvarez**  
Victoriano Martínez-Alvarez, Belen Gallego-Elvira, Bernardo Martín- Górriz, Pam Pittaway, Gavin Brink
- P-0527 ANALYSIS OF LEVELS OF LAND DEGRADATION USING LANDSAT-5, MUNICIPALITIES OF ARARIPINA (PE) CRATO AND BARBALHA (CE) AND MARCOLÂNDIA (PI), BRAZIL.  
**Maria De Fátima Fernandes Fátima**  
Maria De Fátima Fernandes Fátima, Marx Prestes Barbosa, João Miguel Moraes

- P-0559 WATER TECHNOLOGY IMPROVEMENTS AND THEIR EFFECT ON THE PROFITABILITY OF MEDITERRANEAN WOODY CROPS UNDER DIFFERENT WATER PRICING POLICIES  
**María Dolores de Miguel Gómez**  
María Dolores de Miguel Gómez, Alcon Provencio francisco José, Fernández- Zamudio M<sup>a</sup> Angeles
- P-0589 LAND SUITABILITY EVALUATION BASED ON THE PARAMETRIC EVALUATION APPROACH IN DOSALEGH PLAIN  
**Mohammad Albaji**  
Saeed Boroomand Nasab, Mohammad Albaji
- P-0590 LAND SUITABILITY EVALUATION FOR PRINCIPAL CROPS IN THE GARGAR REGION  
**Mohammad Albaji**  
Jabbar Hemadi, Saeed Boroomand Nasab, Mohammad Albaji
- P-0675 RAINFALL PATTERN AND STREAMFLOW VARIATION OF THE ATRAK CATCHMENT IN NORTH-EASTERN IRAN.  
**Mokhtar Karami**  
Mokhtar Karami, Sara Aliabadi, Alireza Aliabadi
- P-0765 OPTIMAL RESERVOIR OPERATION MODEL WITH A STREAMFLOW NETWORK MODEL AND A GLOBAL OPTIMIZATION METHOD  
**Mingoo Kang**  
Mingoo Kang, Seung Woo Park, Jooheon Lee
- P-0905 EFFICIENCY OF WATER AND ENERGY USE IN THE CROP OF LACTUCA SATIVA VAR. CAPITATA L. SOME PREVIOUS RESULTS IN A PLOT IN THE SOUTHWEST OF SPAIN.  
**Antonio Ruiz Canales**  
Antonio Ruiz Canales, José Miguel Molina Martínez, Daniel G Fernández-Pacheco, Francisco Javier Cánovas Rodríguez, Herminia Puerto Molina
- P-1089 OPERATION AND ENERGY OPTIMIZATION MODEL FOR GHARAH-BAGH WATER CONVEYANCE SYSTEM  
**Mohsen Besharat**  
Mohsen Besharat, Mohammad Taghi Aalami, Avin Dadfar, Sina Besharat
- P-1190 THE EXPERIENCE OF USING PURIFIED WASTEWATER FOR IRRIGATION IN THE MARINA BAIXA COUNTY (ALICANTE, SPAIN). PROPOSAL OF FUTURE HYDRIC DESIGN PLANS.  
**Miguel Redon Santafe**  
Macarena Cavestany Olivares, Jose Javier Ferran Gozalvez, Carlos Manuel Ferrer Gisbert, Modesto Perez Sanchez, Miguel Redon Santafe, Francisco Javier Sanchez Romero, Juan Bautista Torregrosa Soler, Elvira Santamaria Bravo, Francisco J. Zapata Raboso
- P-1241 COMPARISON BETWEEN CURVE NUMBER EMPIRICAL VALUES AND CURVE NUMBER OBTAINED BY HANDBOOK TABLES AT BASIN SCALE IN SICILY, ITALY  
**Francesco D'Asaro**  
Francesco D'Asaro, Giovanni Grillone, Giorgio Baiamonte
- P-1250 EMPIRICAL METHODS TO DETERMINE AVERAGE ANNUAL RUNOFF COEFFICIENT IN SICILIAN BASINS  
**Francesco D'Asaro**  
Giorgio Baiamonte, Francesco D'Asaro, Giovanni Grillone
- P-1384 EFFECT OF SUGAR CANE HARVEST MACHINERY TRAFFIC ON SOIL COMPACTION IN SUGARCANE FIELDS  
**Heydar Mohammed Ghasem Nejad Maleki**  
Heydar Mohammad-Ghasem Nejad Maleki
- P-1408 RESPONSE OF SUGAR CANE CROP TO IRRIGATION SPROUTING AND USE OF ORGANIC MULCH IN SOIL COVER IN THE CERRADO REGION, BRAZIL.  
**José Alves Júnior**  
Patrick Francino Campos, José Alves Jr, Pedro Henrique Pinto Ribeiro, Rogério Augusto Bremm Soares, Udo Rosenfeld, Adão W. Pego Evangelista, Derblai Casaroli
- P-1517 PAPAYA SEEDLINGS PRODUCTION FROM SOIL GROUP AND FORMOSA GENOTIPS UNDER WATER LEVELS IN SOIL  
**Lucia Chaves Helena Garofalo**  
Lucia Helena Garofalo Chaves, Evandro Franklin de Mesquita Mesquita, Lucia Helena Garofalo Chaves, Flaviana De Andrade Vieira
- P-1559 APPLICATION OF TREATED DOMESTIC SEWAGE IN THE SOIL FOR DESIGN THE SUBSURFACE DRIP IRRIGATION  
**Marcelo Leite Conde Elaiuy Elaiuy**  
Marcelo Elaiuy Leite Conde, Allan Charles Mendes de Sousa, Leonardo Nazário Silva dos Santos, Edson Eiji Matsura
- P-1576 EFFECT OF MACHINE TRAFFIC ON SOIL COMPACTION DURING THE SEMI-MECHANIZED PLANTING PROCESS OF SUGAR CANE  
**Adriano Bastos**  
Adriano Bastos Chaves, Henrique Silveira, Francelino Rodrigues Junior, Marcelo José Silva, Paulo S. Graziano Magalhães
- P-1593 A STUDY ON THE STREAM MANAGEMENT FLOW SUPPLY FOR THE RESTORATION OF RURAL STREAM ENVIRONMENT AND PREVENTION OF RURAL STREAM DRYING  
**Sang Min Kim**  
Sang Min Kim, Sung Jae Kim, Sung Min Kim

- P-1790 DEVELOPMENT OF A CONCEPTUAL MODEL FOR DROUGHT ANALYSIS  
**Hamid Babaei**  
Hamid Babaei, Shahab Araghinejad
- P-1861 APPLICATION OF MECHANICAL SHAKERS FOR COFFEE HARVESTING  
**Duncan Mbuge Onyango**  
Duncan Mbuge Onyango, Philip Langat
- P-1898 DEMAND SIDE MANAGEMENT IN IRRIGATED PERIMETER USING FREQUENCY INVERTER  
**André Luis Carvalho Mendes**  
André Luis Carvalho Mendes, Jorge Henrique A. C. Damião, Maria Joselma Moraes, Delly Oliveira Filho, Gerson Ovidio Luz Pedruzi
- P-1905 EFFECTS OF WATER MANAGEMENT PRACTICES ON PADDY RICE YIELD AND EMISSION OF GREENHOUSE GASES  
**Kosuke Noborio**  
Kosuke Noborio, Yuki Kudo, Takashi Kato, Naoto Shimoozono
- P-1966 FIELD CONSERVATION OF RAINWATER WITH ROCK FRAGMENTS  
**Majed Abu-zreig**
- P-1996 IDENTIFICATION OF FREE-FORM PARAMETERIZED SOIL HYDRAULIC PROPERTIES IN NON-ISOTHERMAL SUB-SURFACE WATER FLOW USING INVERSE TECHNIQUE  
**Tomoki Izumi**  
Tomoki Izumi, Masayuki Fujihara
- P-2014 ENVIRONMENTAL PLANNING USE OF LAND RESOURCES IN WATERSHEDS, BATATAIS COUNTY, SAO PAULO STATE, BRAZIL  
**Teresa Cristina Pissarra Tarlé**  
Teresa Cristina Pissarra Tarlé, Marcelo Zanata, Sergio Campos, Kati White Migliaccio, Christiano Luna Arraes
- P-2056 COAGULATION USING MORINGA OLEIFERA AND FILTRATION TO REMOVE OOCYSTS OF CRYPTOSPORIDIUM SPP THROUGH SIMULATION WITH POLYSTYRENE MICROSPHERES  
**Jose Euclides Paterniani**  
Adriana Ribeiro Francisco, Marcelo jacomini Moreira Silva, Jose Euclides Paterniani
- P-2064 MULTIVARIATE STATISTICAL OF PRINCIPAL COMPONENTS AND CLUSTER ANALYSIS IN THE STUDY SUPPORT OF REGIONALIZATION OF FLOW  
**Demetrius David Silva**  
Abrahão Alexandre Alden Elesbon, Demetrius David Silva, Gilberto Chohaku Sedyama, Carlos Antonio Alvares Soares Ribeiro
- P-2161 WATER MONITORING AND CHARACTERIZATION OF WATERSHEDS AS REFLECTION OF SOIL USAGE AND OCCUPATION  
**Michele Cláudia da Silva Michele**  
Michele Cláudia Da Silva, Rodrigo Garcia Brunini, Teresa Cristina Tarlé Pissarra
- P-2198 EMITTER CLOGGING UNDER LOW HEAD DRIP IRRIGATION WITH UNFILTERED NILE RIVER WATER  
**Mohamed Rashad Abouzeid**  
Mohamed A. Rashad, Mohammed W. M. Elwan, Khalid E. Abd El-Hamed, Samy A. M. Abd El-Azeem
- P-2201 ASSESSMENT OF EMITTER DISCHARGE IN LOW HEAD DRIP IRRIGATION SYSTEM AS AFFECTED BY GREYWATER  
**Mohamed Rashad Abouzeid**  
Mohamed A. Rashad, Khalid E. Abd El-Hamed, Mohammed W. M. Elwan, Samy A. M. Abd El-Azeem
- P-2256 A NEW APPROACH TO DERIVE AND ASSESS SOIL WETTING FRONT MAP UNDER TRICKLE IRRIGATION  
**El-Sayed E. Omran**  
El-Sayed Omran Ewis, Gamal M. Elmasry, Mohamed A. Rashad
- P-2278 BENCHMARKING OF IRRIGATED AGRICULTURE: THE CASE OF THESSALY-GREECE  
**Evangelini Kitta**  
Constantinos Kittas, Thomas Bartzanas, Nikos Katsoulas, Evagellini Kitta, Adriano Batilliani

# 231 SESSION

14:00-14:55

**(SPC-05) POSTERS SESSION**

Location: POSTERS ROOM

- P-0214 PRELIMINARY FINDINGS ON SEASONAL HEAT STRESS OF SHEEP  
**Thomas Bartzanas**  
D. K. Papanastasiou, Thomas Bartzanas, P. Panagakis, Constantinos Kittas
- P-0437 EVALUATING EFFECTIVENESS OF SPRAYING SYSTEMS TO REDUCE HEAT STRESS ON DAIRY COWS  
**Hao Li**  
Hao Li, Zheng Xiang Shi, Chao Yuan Wang, Tao Ding, Linjia Fan, Dinglei Yan, Lihu Bian, Xiaodong He, Ligen Yu,
- P-0599 EFFECTS OF DIETARY TYPES OR CONCENTRATE-TO-FORAGE RATIOS ON RUMEN METHANE EMISSIONS OF SHEEP  
**Liu Chong Liu Chong**  
Chong Liu, Zhu Zhiping Zhu, Bin Shang, Chen yongxing Chen, Guo Tongjun Guo, Luo Yongming Luo, Hongmin Dong,

- P-0694 MAPPING THERMAL ENVIRONMENT INSIDE BROILER BARNS FOR THE DIAGNOSIS OF COLD STRESS AT BIRD INITIAL GROWING STAGE  
**Luciano Mendes Barreto**  
Luciano Mendes Barreto, Keller Sullivan de Oliveira Rocha, Robinson Osorio Hernandez, Jairo Alexander Osorio Saraz, Ilda de Fátima Ferreira Tinôco, José Helvécio Martins, Adelson Luis Araújo Tinôco,
- P-0709 CLEANING OF THE AIR FROM THE MANURE CHANNEL WITH A BIOLOGICAL SCRUBBER: THE EFFECTS ON GAS EMISSIONS AND INDOOR CLIMATE  
**Jos Botermans**  
Jos Botermans; Knut-håkan Jeppsson
- P-0767 EXPERIMENTAL STUDY ON A PARTIAL COOLING SYSTEM USING UNDERGROUND WATER FOR THE OPEN DAIRY BULL BARNS  
**Chaoyuan Wang**  
Liansun Wu, Chao Yuan Wang, Xiaoyan Yuan, Jifeng Zhong, Zheng Xiang Shi
- P-0842 DETERMINATION OF METHANE PRODUCTION FROM LACTATING GOATS FED DIETS WITH DIFFERENT STARCH LEVELS  
**María del Carmen López Luján**  
María del Carmen López, Fernando Juan García-Diego, Fernando Estellés Barber, Vicente Javier Moya, Concepción Cervera, Carlos Fernández
- P-0853 EFFECT OF DIFFERENT QUANTITIES OF DIETARY BARLEY GRAIN ON METHANE PRODUCTION IN SHEEP  
**María del Carmen López Luján**  
María del Carmen López, Ion Pérez-Baena, José Vicente Martí, Salvador Calvet Sanz, Nemesio Fernández, Carlos Fernández
- P-0914 FREQUENCY OF COMFORT TEMPERATURE AND HUMIDITY IN NURSERY SWINE OF ILLUMINATION PROGRAMS DURING WINTER AND SUMMER  
**Vilmar Rodrigues de Sousa Júnior**  
Vilmar Rodrigues de Sousa Júnior, Paulo Giovanni de Abreu, Arlei Coldebella, Letícia dos Santos Lopes, Luana Araújo Sabino, Valeria Maria Nascimento Abreu
- P-1015 EVALUATION OF HEATING SYSTEMS CREEP AREA FOR PIGLETS IN THE WINTER  
**Paulo Giovanni de Abreu**  
Paulo Giovanni de Abreu, Valeria Maria Nascimento Abreu, Arlei Coldebella, Luana Araújo Sabino, Vilmar Rodrigues de Sousa Júnior
- P-1039 EVALUATION OF THE WELFARE OF BROILER CHICKENS REARED IN DIFFERENT HEATING SYSTEMS  
**Valeria Maria Nascimento Abreu**  
Valeria Maria Nascimento Abreu, Paulo Giovanni de Abreu, Fátima Regina Ferreira Jaenisch, Letícia dos Santos Lopes, Arlei Coldebella
- P-1146 OPTIMIZATION OF LOCAL VENTILATION SYSTEM FOR GASEOUS POLLUTANTS REMOVAL IN BROILER HOUSE USING CFD SIMULATION  
**Peifeng Liu**  
Songming Zhu, Peifeng Liu, Nan Yang, Jinsong He, Zhangying Ye
- P-1460 THE INFLUENCE OF NATURAL SHADING IN THE PRODUCTION INDEX OF BROILERS.  
**Adhemar Pitelli Milani**  
Adhemar Pitelli Milani, Fernando Augusto Souza
- P-1688 EVALUATION OF THE INTERNAL MICROCLIMATE OF PIGGY'S HOUSES WITH DIFFERENT TYPES OF FLOORS.  
**Holmer Savastano Junior**  
Débora Caroline Oliveira, Viviane da Costa Correia, César Gonçalves de Lima, Simone Raymundo de Oliveira, Holmer Savastano Junior
- P-1847 THE PREFERENCE AND PERFORMANCE OF BROILER CHICKENS IN DIFFERENT LIGHT SOURCES  
**Angélica Mendes**  
Angélica Mendes, Sandro José Paixão, Rasiel Restelatto, Juliéli Marostega
- P-1850 COMPARISON OF DIFFERENT COOLING SYSTEMS IN A DAIRY HOUSE IN MEDITERRANEAN CLIMATE  
**Giovanni Cascone**  
Giovanni Cascone, Rosalia Mazzarella, Giuseppe Licitra, Alessandro D'Emilio
- P-1906 HIGHLIGHTS OF THE AIR QUALITY EDUCATION IN ANIMAL AGRICULTURE PROJECT  
**Richard Stowell**  
Richard Stowell, Jill Heemstra, Ron Sheffield, Eileen.F. Wheeler, Dennis Schulte, Kevin Janni
- P-1954 TIME DERIVATIVES IN AIR TEMPERATURE AND ENTHALPY AS NON-INVASIVE WELFARE INDICATORS DURING LONG DISTANCE ANIMAL TRANSPORT IN SPAIN AND PORTUGAL  
**Morris Villarroel Robinson**  
Morris Villarroel Robinson, Nora Formoso-Rafferty, Pilar Barreiro Elorza
- P-1956 DESIGN OF A PIGLET RESTING AREA  
**Manuel Galicia Reyes**  
Manuel Galicia Reyes, Abraham Rojano
- P-2093 MEASURING ENTERIC METHANE FROM SMALL RUMINANTS USING RESPIRATION CHAMBERS: ASSESSING POTENTIAL EFFECTS OF ANIMAL BEHAVIOUR ON THE EMISSION RESULTS  
**Salvador Calvet Sanz**  
José Vicente Martí, Fernando Estellés Barber, Aránzazu Villagrà, Salvador Calvet Sanz



- P-2105 IMPLEMENTATION OF OPEN-CIRCUIT CHAMBERS FOR MONITORING GAS EMISSIONS FROM LARGE RUMINANTS  
**Nico Peiren**  
Nico Peiren, Bart Sonck, Jürgen Vangeyte, Sam De campeneere
- P-2141 THERMOREGULATORY RESPONSES OF DAY-OLD CHICKENS SUBMITTED TO SIMULATED TRANSPORT CONDITION: 1. EFFECT OF THERMAL ENVIRONMENT AND BOX PLACEMENT  
**Frederico Vieira**  
Frederico Vieira Márcio Corrêa, Iran Silva, Késia Silva, Aérica Cirqueira Nazareno, Priscila Faria
- P-2218 INNOVATIVE AIR TREATMENT UNIT TO IMPROVE SEPARATION DISTANCES BETWEEN SWINE BUILDINGS AND NEIGHBOURING POPULATIONS.  
**Martin Belzile**  
Martin Belzile, Matthieu Girard, Stéphane P. Lemay, Stéphane Godbout, Frédéric Pelletier
- P-2222 BIOTRICKLING FILTER FOR THE TREATMENT OF SWINE EXHAUST AIR  
**Matthieu Girard**  
Matthieu Girard, Martin Belzile, Stephane P. Lemay, Stephane Godbout, Frederic Pelletier
- P-2296 META ANALYSIS OF SWINE CARCASS CONDEMNATION IN COMMERCIAL SCALE  
**Irenilza Naas**  
Fabiana Ribeiro Caldara, Lesley Soares Bueno, Irenilza De Alencar Naas, Douglas D'alessandro Salgado, Rodrigo Garofallo Garcia
- P-0197 WATER HARVESTING FOR YOUNG TREES USING PELTIER PLATES POWERED BY PHOTOVOLTAIC SOLAR ENERGY  
**Miguel Muñoz-García**  
Miguel Angel Muñoz-garcía, Guillermo Moreda, Manuela-Pilar Raga-Arroyo, Omar Marín-González
- P-0311 IMAGE ANALYSIS AND MATHEMATICAL MODELING OF DRYING KINETICS IN FLUIDIZED BED IN EPIDERMIS WASTE OF AGAVE ATROVIRENS.  
**Mayuric Hernández-Botello Teresa**  
Mayuric Teresa Hernández Botello, José Jorge Chanona Pérez, Manuel E Sastre de Vicente, José Luis Barriada, María de Jesús Perea Flores, Jorge Alberto Mendoza-Pérez, Hilda María Hernández Hernández
- P-0387 ANAEROBIC DIGESTION TREATMENT FOR THE MIXTURE OF VEGETABLE WASTE JUICE AND SWINE MANURE  
**Sang Hun Kim**  
Sang Hun Kim, Gopi K. Kafle
- P-0466 PELLETTING FROM SWINE DUNG FOR ENERGY USE  
**In Hwan Oh**
- P-0686 METHANE PRODUCTION FROM TOMATOES WASTES VIA CO- FERMENTATION  
**Osman Yaldiz**  
Osman Yaldiz, Salih Sozer
- P-0703 USING FUZZY LOGIC TO CONTROL OXIDATION ZONE TEMPERATURE IN CONCURRENT BIOMASS GASIFIER  
**Svetlana Fialho Soria Galvarro**  
Oscar Luiz Teixeira de Rezende, Jadir Nogueira da Silva, Hans H. Kultz, Svetlana Fialho Soria Galvarro, Cássio Silva Machado
- P-0747 ANAEROBIC DIGESTION OF VINASSE AS ALTERNATIVE SOURCE OF ELECTRICITY  
**Eder Granato Fonzar**  
Eder Granato Fonzar, Jorge de Lucas Junior
- P-0793 NOVEL SUBSTRATES FOR BIOGAS PRODUCTION: PAXILLUS INVOLUTUS AND PHAEOLUS SCHWEINITZII MUSHROOM-BIOMASS  
**Janis Jasko**  
Janis Jasko, Eriks Skripsts, Vilis Dubrovskis
- P-0885 EFFECT OF THERMAL PRETREATED AGRICULTURAL RESIDUAL ON BIOGAS PRODUCTION  
**Zehra Sapci**  
Zehra Sapci, Roar Linjordet, John Morken
- P-0912 STARCH WASTEWATER TREATMENT IN ANAEROBIC REACTOR CONTAINING DOLOMITIC LIMESTONE  
**Simone Damasceno Gomes**  
Denise Palma; Simone Damasceno Gomes; Marney Pascoli Cereda; Adriana Neres De Lima; Julia P. Fernandes

232  
SESSION

14:00-14:55  
**(EN) POSTERS SESSION**  
Location: POSTERS ROOM

- P-0028 STUDY ON FORCED CONVECTION TYPE SOLAR TUNNEL DRYER FOR INDUSTRIAL APPLICATIONS  
**Mahendra Singh Dulawat**  
Mahendra Singh Dulawat, Narendra S. Rathore
- P-0046 EVALUATION OF CADAVERINE TREATMENT CANNABIS (CANNABIS SATIVA) ON THE GERMINATION CHARACTERISTICS SALT STRESS  
**Saeed Radpour Radpour**  
Saeed Radpour Radpour

- P-0990 COMPARISON AND EVALUATION OF QUALITY AND QUANTITY OF BIOGAS DERIVED FROM ANIMAL WASTES IN EXPERIMENTAL CONDITION  
**Rauf Hazinia**  
Rauf Hazinia, Morteza Almassi, Mohammad Ghahderijani, Hosseyn Bakhoda
- P-0997 APPLICATION OF TECHNICAL STANDARD CETESB - P 4.231 FOR DISTRIBUTION OF AGRICULTURAL LAND IN STILLAGE RESIDUE OF THE AGROINDUSTRY STATE OF SÃO PAULO  
**Eder Granato Fonzar**  
Eder Granato Fonzar, Jorge de Lucas Junior
- P-1175 THE RESIDUAL EFFECT OF SEWAGE SLUDGE ON TOTAL AND AVAILABLE CHROMIUM AND CADMIUM CONCENTRATION IN SOIL AND RICE PLANT  
**Mohammad Ali Bahmanyar**  
Mohammad Ali Bahmanyar, Akram Ahmadvour
- P-1195 RESPONSE OF DILL (ANETHUM GRAVEOLENS L.) GROWTH CHARACTERS AND MICRONUTRIENTS UPTAKE TO COINOCULATION OF MUNICIPAL WASTE COMPOST AND THREE TRICHODERMA SPECIES  
**Hemmatollah Pirdashti**  
Hemmatollah Pirdashti, alaleh Motaghian, Mohammad Ali Bahmanyar, Bahareh Mottaghian, Yaser Yaghoubian
- P-1230 BIOENERGY FOR HEAT AND POWER IN URBAN AREAS: POTENTIAL ROUTES, EVIDENCES FROM CASE STUDIES AND PERSPECTIVES  
**Antonio Pantaleo**  
Antonio Pantaleo, Nilay Shah, Achille Pellerano
- P-1248 DESIGN AND ASSESSMENT OF GREENHOUSE USING GROUND SOURCE HEAT PUMP SYSTEM  
**Sung-bok Lee**  
Sung-bok Lee, In-bok Lee, Hyun-seob Hwang, Se-woon Hong, Ilhwan Seo, Kyeong-seok Kwon, Tae-hwan Ha
- P-1251 ENERGETIC AND ENVIRONMENTAL BALANCE OF A BIOGAS PLANT IN NORTHERN ITALY  
**Jacopo Bacenetti**  
Jacopo Bacenetti, Aira Mena, Marco Negri, Piercarlo Cantarella, Stefano Bocchi, Marco Fiala
- P-1305 BIOLOGICAL NITROGEN REMOVAL CATTLE WASTEWATER FROM SLAUGHTERHOUSE USING SEQUENCING BATCH REACTOR  
**Adriana de Lima Neres**  
Adriana Neres de Lima, Benedito Martins Gomes, Simone Damasceno Gomes, Denise Palma
- P-1416 MEASUREMENT OF THERMAL CONDUCTIVITY IN ADOBES WITH "KD2 PRO" DEVICE. MEASUREMENT TIME: INFLUENCE ON OUTCOMES  
**Pablo Mosquera Arancibia**  
Pablo Mosquera Arancibia; Jaime Cid Falceto; Ignacio Cañas Guerrero; Francisco Marcos Martín
- P-1418 MATHEMATICAL MODELS FOR THERMAL CONDUCTIVITY CALCULATION IN MUD BLOCKS FOR BUILDING  
**Pablo Mosquera Arancibia**  
Francisco Marcos Martín, Pablo Mosquera Arancibia, Jaime Cid Falceto, Ignacio Cañas Guerrero
- P-1425 USING BIOLOGICAL PROCESS TO DESTROY LIGNOCELLULOSIC STRUCTURE FOR ENERGY CONVERSION  
**Jr\_ming Miao**  
Pomin Li, Chingwei Lee, Jr\_ming Miao
- P-1447 NEW LOW-COST REACTOR CONFIGURATION FOR HIGH-RATE ANAEROBIC DIGESTION AT SMALL DAIRIES  
**Shaun Dustin**  
Shaun Dustin, Zhongtang Yu, Conly Hansen
- P-1511 DISTRIBUTED ELECTRIC ENERGY PHOTOVOLTAIC GENERATION AND ENERGY STORAGE SYSTEMS INSERTION - CASE STUDY OF ONE BRAZILIAN CONSUMER  
**Olga Moraes Toledo**  
Olga Moraes Toledo, Dely Oliveira Filho, Antonia Sonia Alves Cardoso Diniz, Maria Helena Murta Vale, Jose Helvecio Martins
- P-1596 FLOW EFFECT ON THERMAL STRATIFICATION IN A HIGHLY STRATIFIED SOLAR STORAGE TANK  
**Eugenio García-Mari**  
Eugenio García-Mari, Rosa Penélope Gutiérrez-Colomer, María Gasque, Federico Ibáñez, Pablo González-Altozano
- P-1622 SYNTHESIS AND CHARACTERIZATION OF CELLULOSE NANOPARTICLES OBTAINED FROM AGAVE WASTE BY ELECTRON MICROSCOPY AND X-RAY DIFFRACTION  
**José Jorge Chanona Pérez**  
José Jorge Chanona Pérez, Eduardo Palacios González, Claudia Ericka Ponce Reyes, Vicente Garibay Febles, Georgina Calderón Domínguez
- P-1651 THE STUDY ON THERMAL FLOW PATTERN IN SOIL FOR A GEOTHERMAL HEAT PUMP ACCIDENT  
**Yongbeom Lee**  
Yongbeom Lee, Jaehan Lee, Geum-choon Kang
- P-1862 PHOTOVOLTAIC SOLAR TRACKING SYSTEM TO USE IN RURAL AREAS: MODELING AND EXPERIMENTATION  
**Milena Pinto Faria**  
Milena Pinto Faria; Aurelio Melo; Dely Oliveira

- P-1869 INFLUENCE OF A MECHANICAL PRE-TREATMENT ON THE ANAEROBIC DIGESTION PROCESS  
**Paz Gómez Pérez**  
M. Paz Gómez Pérez, M. Begoña Ruiz Fuertes, Andrés Pascual Vidal, Konrad Koch, Diana Andrade
- P-1900 QUANTIFICATION OF BIOMASS AND LIPIDS PRODUCTION OF MICROALGAE SUPPLEMENTED WITH INCINERATION GASES  
**Rosana Mendonça Peixoto**  
Rosana Mendonça Peixoto, Marcio Arêdes Martins, Lucas De Paula Corredo, Michel dos Santos, Marcelo Pereira Coelho, Emanuele Pereira
- P-1918 BACILLUS SUBTILLIS AND EXOGENOUS ENZYMES ADDITION TO BROILER DIET AND ITS EFFECTS ON BIOGAS PRODUCTION FROM POULTRY LITTER AND QUALITY TREATED IN CONTINUOUS DIGESTERS  
**Jorge De Lucas Junior**  
Jorge De Lucas Junior, Maria Fernanda Ferreira Meneguacci Praes, Jorge De Lucas Junior, Natasha Panosso Okushiro, Livia Maria Soares Ferreira, Paula Maria Pilotto Branco, Sarah Sgavioli
- P-1943 EFFECT OF FLUIDIZED-BED DRYING ON THE STRUCTURE, DEHULLING AND OIL EXTRACTION OF THE RICINUS COMMUNIS SEEDS (AN ALTERNATIVE SOURCE OF BIOFUELS)  
**Nayeli Vélez Rivera**  
Maria De Jesús Perea Flores, José Jorge Chanona Pérez, Vicente Garibay Febles, Nayeli Vélez Rivera, Eduardo Terres Rojas, Georgina Calderón Domínguez, Israel Arzate Vázquez, Juan Vicente Méndez Méndez
- P-2063 TREATMENT OF SWINE WASTEWATER IN UASB REACTORS AND BATCH REACTOR WITH AEROBIC PHASE, IN SERIES, AND REUSE IN MAIZE AND SORGHUM PRODUCTION  
**Roberto Alves de Oliveira**  
Roberto Alves de Oliveira, Estevão Urbinati
- P-2067 PERFORMANCE OF ANAEROBIC SYSTEM IN TWO STAGES FOLLOWED OF TRICKLING FILTER FOR TREATMENT OF SWINE WASTEWATER.  
**Rose Maria Duda**  
Rose Maria Duda, Roberto Alves de Oliveira
- P-2070 EVALUATION OF SYSTEM COMPOSITION ANAEROBIC AND AEROBIC IN THE SWINE WASTEWATER TREATMENT.  
**Rose Maria Duda**  
Rose Maria Duda, Adriana Miranda de Santana Arauco, Roberto Alves de Oliveira
- P-2166 ANAEROBIC, AEROBIC AND ANOXIC TREATMENT SYSTEM FOR SWINE WASTEWATER: ORGANIC MATTER, NUTRIENTS AND COLIFORMS REMOVALS  
**Roberto Alves de Oliveira**  
Roberto Alves de Oliveira, Samantha Cristhine dos Santos
- P-2265 ANAEROBIC DIGESTION OF CATTLE MANURE CONFINED WITH AND WITHOUT SEPARATION OF SOLID FRACTION  
**Juliana Bega Junqueira**  
Juliana Bega Junqueira, Jorge de Lucas Junior
- P-2322 SUGAR CANE AND SUGAR CANE SILAGE IN CO-DIGESTION WITH CATTLE MANURE IN ORDER TO PRODUCE BIOGAS  
**Silvana Loureça de Meneses**  
Silvana Loureça de Meneses, Juliana Bega Junqueira, Jorge de Lucas Junior

233  
SESSION

14:00-14:55

(IT) POSTERS SESSION  
Location: POSTERS ROOM

- P-0336 MEASUREMENT OF SOLAR RADIATION USING SOLAR MODULE AND ARTIFICIAL NEURAL NETWORK  
**JoonYong Kim**  
JoonYong Kim, Seung-Hwan Yang, ChunGu Lee, Tae Hyeong Kwon, Alireza Ashtiani-Araghi, Young Joo Kim, Joong-Yong Rhee,
- P-0348 DYNAMIC TEST OF SENSORS TO MEASURE THE DISTANCE BETWEEN TWO MACHINES  
**Rodrigo Baldo Fernando**  
Rodrigo Baldo, Rodrigo Zandonadi, Timothy Stombaugh, Paulo S.Graziano Magalhães
- P-0467 NIR SENSING TECHNIQUE FOR INTERNAL IMAGING OF FARM PRODUCE  
**Tsuneaki Genta**  
Tsuneaki Genta, Hiroto Tashima, Ryo Shimokita, Mitsuo Fukuda
- P-0507 DETECTION OF IMAGES WITH HIGH CCD CHARGE LEVEL DUE TO INDIRECT SUNLIGHT IN MAIZE FIELDS.  
**José Miguel Guerrero Hernández**  
José Miguel Guerrero, Martín Montalvo Martínez, Juan Romeo, Diego Oliva, María Guijarro, Gonzalo Pajares
- P-0512 UNSUPERVISED LEARNING FOR CROP/WEEDS DISCRIMINATION IN MAIZE FIELDS WITH HIGH WEED DENSITIES  
**Martín Montalvo Martínez**  
Martín Montalvo Martínez, José Miguel Guerrero, Juan Romeo, Diego Oliva, María Guijarro, Gonzalo Pajares

- P-0654 MODELING THE EXTERNAL AREA OF THE ZUCCHINI USING IMAGE PROCESSING TECHNIQUE  
**Parviz Ahmadi Moghaddam**  
Parviz Ahmadi Moghaddam, Sina Besharat
- P-0762 DISPOSABLE NITRATE-SELECTIVE OPTICAL SENSOR BASED ON FLUORESCENT DYE  
**Giyoung Kim**  
Gi Young Kim, Ken Sudduth, Newell Kitchen, Sheila Grant
- P-0763 DEVELOPMENT OF NANOGOLD-BASED LATERAL FLOW IMMUNOASSAY FOR THE DETECTION OF OCHRATOXIN A  
**Ji Hea Moon**  
Ji Hea Moon, Sang Dae Lee, Gi Young Kim
- P-0777 DESIGN, DEVELOPMENT AND LABORATORY EVALUATION OF A VARIABLE-RATE FLAME WEEDER USING MACHINE VISION  
**Mohammad Loghavi**  
Reihaneh Loni; Mohammad Loghavi
- P-0786 DESIGN, DEVELOPMENT AND EVALUATION OF A VARIABLE RATE GRANULAR FERTILIZER APPLICATION SYSTEM BASED ON CROP CANOPY USING MACHINE VISION TECHNOLOGY (CASE STUDY: SAFFLOWER)  
**Mohammad Loghavi**  
Mohammad Loghavi; Vahid Kebriaee
- P-0889 DIGITAL IMAGE PROCESSING FOR IDENTIFICATION OF BLACK SIGATOKA IN BANANA CROP  
**Silvia Helena Modenese Gorla da Silva**  
Silvia Helena Modenese Gorla da Silva, Wilson da Silva Moraes, Hugo do Nascimento Bendini, Carlos Roberto Padovani, Juliana Domingues Lima, Danilo Eduardo Rozane, João Francisco Modenese,
- P-1209 VALIDATION OF GENERAL CALIBRATION MODELS FOR ON-LINE VISIBLE AND NEAR INFRARED SPECTROSCOPY BASED SENSOR FOR MEASUREMENT OF KEY SOIL FERTILITY PROPERTIES  
**Omar Marin Gonzalez**  
Omar Marin Gonzalez, Abdoul Mounem Mouazen
- P-1407 ADAPTIVE RFID SENSING OF RELATIVE TEMPERATURE AND HUMIDITY FOR SMART FARM QUALITY CONTROLLER SYSTEM.  
**Chalitda Madhyampurush**  
Chalitda Madhyampurush
- P-1468 CHANG-POINT DETECTION IN TIME-SERIES DATA OF VIBRATION OF AGRICULTURAL MACHINERY BASED ON SST  
**Muneshi Mitsuoka**  
Muneshi Mitsuoka, Kazuaki Nagaosa, Eiji Inoue, Takashi Okayasu
- P-1554 PREDICTION OF RAINFED WHEAT GRAIN YIELD AND BIOMASS USING ARTIFICIAL NEURAL NETWORKS AND MULTIPLE LINEAR REGRESSIONS AND DETERMINE THE MOST FACTORS BY SENSITIVITY ANALYSIS  
**Abdolmohammad Mehnatkesh**  
Abdolmohammad Mehnatkesh, Abdolmohammad Mehnatkesh, Shamsollah Ayoubi, Ahmad Jalalian, Amir Ahmad Dehghani
- P-1762 METROLOGICAL CHARACTERIZATION OF TEMPERATURE AND RELATIVE HUMIDITY SENSORS USED IN HYGROTHERMAL ANALYSIS OF AGRO-FOOD CONSTRUCTIONS  
**César Porras Amores**  
Robert Benyon, Tomás Vicente Mussons, Fernando Ruiz Mazarrón, César Porras Amores, Ignacio Cañas Guerrero
- P-1808 POTENTIAL APPLICATIONS OF LOW-ALTITUDE REMOTE SENSING (LARS) WITH RADIO-CONTROLLED HELICOPTER PLATFORMS: CASE STUDIES ON NUTRIENT AND PEST MANAGEMENT UNDER AGRICULTURAL SYSTEMS IN DEVELOPING COUNTRIES  
**Hemantha P W Jayasuriya**  
Hemantha P W Jayasuriya; Kishore Chandra Swain; Grianggai Samseemoung
- P-2030 DEVELOPMENT A NEW TOOL FOR TASK MONITORING OF PNEUMATIC SEED DRILLS USING SOUND PROCESSING TECHNIQUE  
**Abdolabbas Jafari**  
Abdolabbas Jafari; Ghasem Bahrami
- P-2112 THE USE OF ARTIFICIAL NEURAL NETWORKS TO PREDICT THE SPATIAL VARIABILITY OF GRAIN QUALITY DURING COMBINE HARVEST OF WHEAT  
**Gniewko Niedbala**  
Gniewko Niedbala, Mirosław Czechowski, Tomasz Wojciechowski
- P-2204 FEASIBILITY STUDY ON INFORMATIZATION AGRICULTURAL SUPPORTING SYSTEM AND EVALUATION OF ITS VALIDITY  
**Takashi Okayasu**  
Takashi Okayasu, Hiromichi Yoshida, Andri Prima Nugroho, Muneshi Mitsuoka, Eiji Inoue

234  
SESSION

14:00-14:55  
**(PF) POSTERS SESSION**  
Location: POSTERS ROOM

- P-0036 APPLICATION OF ESSENTIAL OILS FROM ORIGANUM VULGARE L. AND ROSMARI-  
NUS OFFICINALIS TO INHIBIT BACTERIA  
AND MICROFLORA ASSOCIATED WITH  
MINIMALLY PROCESSED VEGETABLES  
**Tânia Lúcia Stamford Montenegro**  
T.L.M Stamford, G.A Azerêdo, P.C Nunes,  
N.J Gomes-Neto, E.G Oliveira, E.L Souza
- P-0092 AQUEOUS EXTRACTION OF VIRGIN OLIVE  
OIL USING INDUSTRIAL ENZYMES  
**Alireza Ghodsvali**  
Alireza Ghodsvali, Levente. L Diosady
- P-0135 COMPARATIVE ANALYSIS OF TOTAL  
PHENOLICS, FLAVONOID CONTENT AND  
ANTIOXIDANT PROFILE OF DIFFERENT  
DATE VARIETIES (PHOENIX DACTYLIFE-  
RA L.) FROM SULTANATE OF OMAN  
**Nejib Guizani**  
Nejib Guizani, Vandita Singh, Mohamed  
Essa, Mohamed Shafiur Rahman
- P-0137 THE EFFECT OF ULTRAVIOLET C IRRADI-  
ATION IN MYCELIAL GROWTH OF  
FUSARIUM SOLANI F.SP. EUMARTII  
**Artur Batista de Oliveira Rocha**  
Artur Batista de Oliveira Rocha, Rosa He-  
lena Aguiar, Sylvio Luis Honório, Claudio  
Luiz Messias
- P-0282 SENSORY ANALYSIS OF WHEAT FLOUR  
AND BREADS ELABORATED WITH OZO-  
NATED FLOUR  
**Juliana Paes Lobo**  
Juliana Paes Lobo, Juliana Lobo Paes,  
Lêda Rita D'Antonino Faroni, Maria Cris-  
tina Dantas Vanetti, André Rodrigues da  
Costa, Valéria Paula Rodrigues Minim
- P-0423 EFFECTS OF DIFFERENT IMMERSION  
LEVELS IN WATER ON IMMERSION  
VACUUM COOLED SAUSAGES  
**Chaohui Feng**  
Chaohui Feng, Liana Drummond, Zhihang  
Zhang, Da-Wen Sun
- P-0492 MILK COLLECTION CENTERS DEVELO-  
PMENT IN EASTERN AFGHANISTAN.  
ADDED VALUE OF ADVANCED  
TECHNOLOGICAL EQUIPMENT.  
**Pavel Burian**  
Pavel Burian, Vladimir Krepl, Martin  
Hejral
- P-0584 EFFECTS OF GAMMA IRRADIATION  
ON SUGARS COMPOSITION OF WILD  
MUSHROOMS FROM THE NORTHEAST  
OF PORTUGAL  
**Amilcar L. Antonio**  
Ângela Fernandes, Amilcar Lopes  
Antonio, M. Beatriz P. P. Oliveira, Anabela  
Martins, Isabel C. F. R. Ferreira
- P-0652 EFFECT OF ULTRAVIOLET RADIATION  
C IN THE MORTALITY OF CERATITIS  
CAPITATA (DIPTERA - TEPHRITIDAE) IN  
GUAVA  
**Stella Vieira Maria**  
Stella Vieira Maria, Adalton Raga, Be-  
nedito Carlos Benedetti, Perla Di Marco  
Gomez, Rosa Helena Aguiar
- P-0688 COMPARISON OF VACUUM COOLING  
AND IMMERSION VACUUM COOLING OF  
SAUSAGES  
**Chaohui Feng**  
Chaohui Feng, Liana Drummond, Zhihang  
Zhang, Da-Wen Sun
- P-0745 TOMATOES PRODUCED IN THE GREEN-  
HOUSE, IRRIGATED WITH RAW WATER  
AND WASTEWATER, AND ORGANOLEP-  
TIC QUALITY  
**Honorato Ccalli Pacco**  
Honorato Ccalli Pacco, Delvio Sandri,  
Maria Magdalena Rinaldi, Pedro Henri-  
que Costa Neves<sup>4</sup>; Costa Neves, Ricardo  
Reis de Morais Valente
- P-0776 MICROWAVE EXTRACTION OF PHENOLIC  
COMPOUNDS FROM CAPER  
**Gulum Sumnu**  
Ezgi Durmaz, Gulum Sumnu, Serpil Sahin
- P-0836 EXPERIMENTAL RESEARCH INTO THE  
STAGES OF FORMATION OF A CONE OF  
SUBSTITUTE SEDIMENT IN A WHIRL-  
POOL LABORATORY TANK  
**Marek Jakubowski**  
Marek Jakubowski
- P-0924 EVALUATION OF PAD MATERIALS AND  
SHAPES FOR CONSTRUCTING EVAPORA-  
TIVE COOLING SYSTEMS IN THE  
HUMID TROPICS OF SOUTHWESTERN  
NIGERIA
- P-0956 THE ANALYSIS OF THE MICROSTRUCTU-  
RE OF MILK FOULING AFTER  
THE CLEANING PROCESS IN THE CIP  
SYSTEM  
**Joanna Piepiorka Stepuk**  
Joanna Piepiorka Stepuk, Katarzyna  
Tandecka
- P-1027 NUTRITIONAL AND COOKING QUALITY  
VARIABILITY OF SOME GENOTYPES OF  
COMMON BEANS (PHASEOLUS VULGA-  
RIS L.) GROWN IN BRAZIL  
**Silvia Coelho Renata Machado**  
Silvia Coelho Renata Machado, Eduardo  
Manoel Branco, Nelson da Silva Fonseca  
Júnior, vanderleia schoeninger
- P-1083 SAVING ENRGY BY RECYCLING OF THE  
OUTLET AIR OF FLUIDIZED BED  
**Vahid Vartehparvar**  
Vahid Vartehparvar, Akbar Arabhosseini,  
Mohammad Hossein  
Kianmehr, Seied Reza Hasan-Beigi
- P-1118 WATER ABSORPTION MODELING OF  
HUSK RICE  
**Gabriel Henrique Horta de Oliveira**  
Gabriel Henrique Horta De Oliveira, Paulo  
Cesar Corrêa, Carmen Jarên
- P-1147 EFFECT OF TEMPERATURE ON BIOFILM  
FORMATION CELL OF PSEUDOMONAS  
PUTIDA  
**Kazuya Morimatsu**  
Kazuya Morimatsu, Toshitaka Uchino,  
Fumihiko Tanaka, Daisuke Hamanaka

- P-1204 FUNCTIONAL PROPERTIES OF WHITE SORGHUM ISOLATED BY ALKALI AND ENZYMATIC METHODS  
**Paula Correia Reis**  
Paula Correia, Ana Marques
- P-1278 ANALYSIS OF INPUT USAGE WITH RESPECT TO IMPROVE OF SAFE VEGETABLE PRODUCTION IN GREENHOUSES: THE CASE OF TURKEY  
**Sait Engindeniz**  
Sait Engindeniz, Sait Engindeniz, Gorkem Ozturk Cosar
- P-1316 CONVERSION OF NATIVE CELLULOSE INTO 5- HYDROXYMETHYLFURFURAL (HMF) IN IONIC LIQUIDS WITH CATALYSED MICROWAVE-PROMOTED HYDROLYSIS  
**Luis Manuel Navas Gracia**  
Maria Virginia Ozcariz, Viviane Da Silva, Adriana C. Guimaraes, Salvador Hernandez, Luis Manuel Navas Gracia, Pablo Martin-Ramos, Eduardo Pérez-Lebeña, Jesús Martingil
- P-1360 DOUGH BUOYANCY TO MONITOR BREAD PRODUCTION PROCESS  
**Lorenzo Guerrini**  
Alessandro Parenti, Lorenzo Guerrini, Paolo Spugnoli
- P-1426 ESTABILIDAD DEL HIELO FLUIDO MEDIANTE HIDROCOLOIDES ALFREDO ALVAREZ CARDENAS  
**Alberto Ignacio Guerrero-Vergara,**  
Alfredo Álvarez-Cárdenas, María Eugenia Ramírez Ortiz
- P-1439 OPTIMIZING THE CONTENT OF ESSENTIAL AMINO ACIDS IN EDIBLE FLOURS OBTAINED FROM CEREALS AND LEGUMINOUS GREEN  
**Steluta Radu**  
Steluta Radu
- P-1529 RAPID PROPAGATION OF ROSA HYBRIDA CV. DOLCE-VITA THROUGH TISSUE CULTURE  
**Sajedeh Saeedfar**  
Sajedeh Saeedfar
- P-1560 USE OF EVAPORATED WATER FROM CONCENTRATED ORANGE JUICE FOR HUMAN CONSUMPTION  
**Alba Lucia Coelho Andrade**  
Alba Lucia Andrade Coelho, José Euclides Stipp Pterniani, Luiz Antonio Viotto, Rogerio Perujo Tocchini, Daniel Gonçalves
- P-1564 PREDICTING THE POWER REQUIREMENT OF A SELECTED SPIKE-TOOTH STATIIONARY GRAIN THRESHER USING A MATHEMATICAL MODEL  
**Victor Ifeanyichukwu Obiora Ndirika**
- P-1573 NATURAL VENTILATION IN UNDERGROUND WINECELLARS  
**Jaime Cid Falceto**  
Fernando Ruiz-Mazarrón, César Porras Amores, Jaime Cid Falceto, Ignacio Cañas Guerrero
- P-1631 INFLUENCE OF PULSED ELECTRIC FIELD ON AIR FREEZING OF APPLE TISSUE  
**Dorota Witrowa-Rajchert**  
Artur Wiktor, Dorota Witrowa-Rajchert, Tadeusz Chudoba
- P-1671 DOES MUTAGENESIS CAN IMPROVE INDUSTRIAL STRAIN OF DIETZIA NATRONOLIMNAEA HS-1 FOR PRODUCING CANTHAXANTHIN?  
**Seyed Mohammad Taghi Gharibzahedi**  
Seyed Mohammad Taghi Gharibzahedi, Seyed Hadi Razavi, Seyed Mohammad Mousavi
- P-1726 RESPONSE SURFACE METHODOLOGY TO OPTIMIZE OF NUTRIENT MEDIUM COMPONENTS FOR CANTHAXANTHIN ENHANCEMENT BY A NOVEL MUTANT ISOLATED FROM DIETZIA NATRONOLIMNAEA HS-1  
**Seyed Mohammad Taghi Gharibzahedi**  
Seyed Mohammad Taghi Gharibzahedi, Seyed Hadi Razavi, Seyed Mohammad Mousavi
- P-1801 INFLUENCIA DEL TIPO DE ALGINATO EN LA ELABORACIÓN DE GELES DE DOS FIGURAS DIFERENTES  
**María Eugenia Ramírez Ortiz**  
María Eugenia Ramírez Ortiz, Rothce García Núñez, K. Shantal López García, Omar Flores Olivares, Zaira Berenice Guadarrama Álvarez, Virginia López García, A. Lidia Vizzuet Vega
- P-1818 EVALUACIÓN DE LAS PROPIEDADES FUNCIONALES DE PROTEÍNAS Y POLISACÁRIDOS, COMO AGENTES ESPUMANTES Y ESTABILIZANTES EN UN ALIMENTO TRADICIONAL MEXICANO "TAMAL" REDUCIDO EN GRASA.  
**Zaira Berenice Guadarrama Alvarez**  
Zaira Berenice Guadarrama Álvarez, María Eugenia Ramírez Ortiz, Virginia López García, Adriana Cruz García, Paulina Merida Yañez, Antonio Monroy Victoria, Liliana Ponce Hernandez, Tonantzin Zavala Cruz
- P-1821 EFFECT OF SURFACE ROUGHNESS ON CLEANABILITY OF MILK FOULING DEPOSITS ON INNER STAINLESS STEEL TUBING  
**John Schueller**  
Ikko Ihara, Erina Nakano, Eric McLamore, John Schueller, Kiyohiko Toyoda, Kazutaka Umetsu, Hitomi Yamaguchi

- P-1831 EVALUAR CARACTERÍSTICAS TEXTURALES Y DE ESTABILIDAD EN UN HELADO BAJO EN CALORIAS PARA OPTIMIZAR UNA MEZCLA DE ESTABILIZANTES.  
**Zaira Berenice Guadarrama Alvarez**  
Zaira Berenice Guadarrama Álvarez, Evangelina Hernandez Granada, Virginia López García, Maricela Llanos Martínez, Lizeth Yarazeth Marquez Florez, Mónica Bazan Espinosa, Ninel Flores Saldaña, Andrea Carrillo Matinez
- P-1859 EFFECT OF THE DURATION OF DEASTRINGENCY TREATMENT ON INTERNAL QUALITY OF PERSIMMON  
**Alejandra Salvador**  
Cristina Besada, Alejandra Salvador, Rebeca Gil
- P-1865 EVALUATION OF QUATERNARY AMMONIUM COMPOUNDS RESIDUES IN FOOD PLANTS SURFACES: METHOD VALIDATION AND RESIDUE PERSISTENCE  
**Zeinab Mousavi**  
Zeinab Mousavi, Francis Butler, Martin Danaher
- P-1878 ANTIOXIDANT EFFECT OF STEVIA REBAUDIANA ON INHIBITION OF PEROXIDASE AND POLYPHENOLOXIDASE FROM ORANGE, MANGO AND PAPAYA  
**Clara Miracle Belda Galbis**  
Maria Nieves Criado García, Clara Miracle Belda-Galbis, Dolores Rodrigo, Antonio Martínez
- P-1936 LACTIC ACID FERMENTATION OF MULBERRY LEAVES  
**Serap Durakli-Velioglu**  
Serap Durakli-Velioglu, Gulnaz Celikyurt
- P-1938 INFLUENCE OF THE FAT BLEND, POLYSACCHARIDES AND EMULSIFIERS IN STABILITY OF BASES FOR WHIPPED CREAM  
**María Eugenia Ramirez Ortiz**  
María Eugenia Ramírez Ortiz, Olivia Yanet Rodríguez Carmona, Jesús David Aguirre Ponce, Andre Jiménez Loyda
- P-1946 SOLID-LIQUID EXTRACTION TO OPTIMIZATION OF BIOACTIVE COMPOUNDS RECOVERY FROM GRAPE POMACE.  
**Suely Freitas Pereira**  
Suely Freitas Pereira, Ana Paula Gil Cruz, Alexandre Torres, Flávia Gomes, Lourdes Maria Correa Cabral
- P-1949 HASS AVOCADO OIL: EFFECT OF PROCESSING ON EXTRACTION PARAMETERS  
**Suely Freitas Pereira**  
Isabelle Santana, Lourdes Maria Correa Cabral, Alexandre Guedes Torres, Suely Freitas Pereira
- P-1995 EVALUATION OF POLYPHENOL EXTRACTION METHODS FROM APPLE POMACE  
**Beatrix Szabó-Nótin**  
Beatrix Szabó-Nótin, Réka Juhász, Mónika Stéger-Máté, József Barta, Dalma Radványi
- P-2068 DETERMINATION OF RISKY MICROORGANISMS IN FROZEN READY-TO-EAT SEAFOOD SOLD IN ISTANBUL MARKET  
**Suhendan Mol**  
Suhendan Mol, Didem Uocok Alakavuk
- P-2079 EFFECT OF CITRAL CONCENTRATION AND TEMPERATURE ON ESCHERICHIA COLI K12 GROWTH  
**Clara Miracle Belda Galbis**  
Clara Miracle Belda-Galbis, Antonio Martínez, Dolores Rodrigo
- P-2091 PROTECTIVE EFFECT OF GRAPE SEED EXTRACT TREATMENT BEFORE AND AFTER FREEZING ON LIPIDS OF BONITO  
**Pinar Yerlikaya**  
Pinar Yerlikaya, Nalan Gokoglu
- P-2130 APPLICATION OF A CENTRAL COMPOSITE DESIGN APPROACH TO OPTIMIZE HEAT TREATMENTS FOR THE EXTENSION OF FRESH-CUT PEACH ES QUALITY  
**Maria Luisa Amodio**  
Maria Luisa Amodio, Fedele Colantuono, Giancarlo Colelli
- P-2164 CHEMICAL CHARACTERIZATION OF RHIZOMES AND FLOUR OF ORGANIC SWEETPOTATO (IPOMOEA BATATAS L.).  
**Maria Ivone Barbosa Martins Jacintho**  
Kamila de Oliveira do Nascimento, Daniel Guimarães Corrêa Moreira Rocha, José Lucena Barbosa Júnior, Maria Ivone Martins Jacintho Barbosa
- P-2240 OPTIMIZATION OF THE EXTRACTION SYSTEM AND METHOD OF HYDROLYSIS FOR INDIRECT QUANTIFICATION OF CYANOGENIC GLYCOSIDES IN FLAXSEED MEAL  
**Alaa El-din Bekhit**  
Teguh Jodjaja, Alaa El-din Bekhit, Adnan Bekhit
- P-2257 INVESTIGATION OF OXIDATIVE CHANGES OF EMULSION ENRICHED WITH ANCHOVY OIL AND PLANT EXTRACTS  
**Nalan Gokoglu**  
Nalan Gokoglu, Pinar Yerlikaya
- P-2310 DEVELOPMENT OF A MULTI-PURPOSE OPTICAL INSTRUMENT FOR MEASURING SPECTRAL ABSORPTION AND SCATTERING PROPERTIES OF FOOD AND BIOLOGICAL MATERIALS  
**Renfu Lu**  
Renfu Lu; Haiyan Cen; Diwan Ariana
- P-2341 DEVELOPMENT AND THERMAL CHARACTERIZATION OF A- TOCOFEROL NANOCAPSULES  
**Veronica Santacruz-Vazquez**  
Verónica Santacruz-Vázquez, Claudia Santacruz-Vázquez, Jose Oscar Laguna-Cortés

- P-2363 NUTRITIONAL AND BIOLOGICAL VALUES OF BEE POLLEN AND BEEBREAD HARVESTED FROM ROMANIA  
**Oltica Stanciu**  
Oltica Stanciu, Liviu Al. Marghitas, Daniel Dezmiorean
- P-2367 AN INDIVIDUAL-BASED TWO-LOCUS MODELLING OF PEST CONTROL IN A SPATIALLY HETEROGENEOUS STORAGE FACILITY WITH PEST IMMIGRATION.  
**Mingren Shi**  
Mingren SHI, Michael RENTON
- P-2368 PHOSPHINE MORTALITY ESTIMATION FOR SIMULATION OF CONTROLLING PEST OF STORED GRAIN: LESSER GRAIN BORER (RHYZOPERTHA DOMINICA)  
**Mingren Shi**  
Mingren SHI, Michael RENTON
- P-2369 INFLUENCE OF ADDITIVES ON FUNCTIONAL PROPERTIES OF COMMON CARP SURIMI GEL  
**Ali Jafarpour**  
Ali Jafarpour
- P-2370 FUNCTIONAL PROPERTIES OF FREEZE-DRIED FISH PROTEIN POWDER PREPARED FROM COMMON CARP SURIMI  
**Ali Jafarpour**  
Ali Jafarpour

## 235 SESSION

14:00-14:55  
**(SPC-02) POSTERS SESSION**  
Location: POSTERS ROOM

- P-0647 A CASE STUDY OF AIRFLOW PATTERNS AROUND AN ARCHED TYPE AGRICULTURAL BUILDING: INVESTIGATING MESH CONVERGENCE OF DIFFERENT TURBULENCE MODELS  
**Chao Zong**  
Chao Zong, Wentao Wu, Guoqiang Zhang, Xiong Shen, George Ntinias
- P-0900 A SIMULATION FLOW MODEL IN A WHIRLPOOL TANK WITH DOUBLED FILLING INLETS  
**Marek Jakubowski**  
Marek Jakubowski
- P-0903 MODELING OF SOIL WATER FLOW WITH ROOT WATER UPTAKE AND EVAPORATION IN SURFACE DRIP IRRIGATION  
**Andre Herman Bezerra Freire**  
Andre Herman Bezerra Freire, Sérgio Luiz Levien
- P-0928 THE SIMULATION OF THE MULTIPHASE MIXTURE FLOW IN THE SINGLE TRUCK SMOKING CHAMBER WITH A MODIFIED DISTRIBUTION OF BLOW-OUT SPRAYS  
**Mariusz S. Kubiak**  
Mariusz Kubiak, Marek Jakubowski

- P-1135 WIND PRESSURE COEFFICIENT OF PLASTIC GREENHOUSE BY WIND TUNNEL TEST AND CFD SIMULATION  
**Namkyu Yun**  
Namkyu Yun, Yee Paek, Jongkil Jeon, In-Bok Lee
- P-1192 MODELING OF ISOLATED WETTED SOIL VOLUME UNDER SURFACE DRIP IRRIGATION USING FINITE VOLUME METHOD  
**Sérgio Luiz Aguilar Levien**  
Luiz Ailton de Araújo Souza, Sérgio Luiz Aguilar Levien, Andre Herman Freire Bezerra
- P-1218 MODELING OF WETTED STRIP UNDER SURFACE DRIP IRRIGATION USING FINITE VOLUME METHOD  
**Sérgio Luiz Aguilar Levien**  
Luiz Ailton de Araújo Souza, Sérgio Luiz Aguilar Levien, Andre Herman Freire Bezerra
- P-1653 NUMERICAL SIMULATION OF THE AIR-FLOW AND TEMPERATURE DISTRIBUTION IN A CLOSED VENLO GREENHOUSE UNDER HOT AND ARID CLIMATE  
**Pierre-Emmanuel Bournet**  
Kamel Mesmoudi, Pierre Emmanuel Bournet, Bariza Zitouni, Toufik Outtas
- P-1670 OPTIMIZATION OF AIR FLOW CIRCULATION SYSTEM WITH BRANCHING PERFORATED DUCTS  
**Ryuta Ibuki**  
Ryuta Ibuki, Masud Behnia
- P-2298 CFD MODEL OF THE EFFECT OF CANOPY ON AIR VELOCITY IN AIR-ASSISTED TREATMENTS IN MANDARIN ORCHARDS  
**Ramon Salcedo Cidoncha**  
Ramón Salcedo, Cruz Garcera Figueroa, Rafael Granell, Guillermo Palau, Molto Enrique, Patricia Chueca

## 236 SESSION

14:00-14:55  
**(SE)POSTERS SESSION**  
Location: POSTERS ROOM

- P-0013 AN INVESTIGATION ON THE EFFECTS OF ELEVATED CO2 AND TEMPERATURE ON CHICKPEA YIELD IN ZANJAN DISTINCT, IRAN (USING SSM SIMULATION MODEL)  
**Behnam Kamkar**  
Nasim Meghdadi, A Soltani, Behnam Kamkar
- P-0068 ENGINEERING SOIL AND COAL ASH BASED GROWTH MEDIA FOR CROP PLANTS  
**Jerzy Bilski**  
Jerzy Bilski



- P-0248 IRON OXIDE MAGNETIC NANOPARTICLES WITH BIOCOMPATIBLE COATING FOR POTENTIAL APPLICATION IN AGRICULTURAL AND FOOD INDUSTRY  
**Alla Zablotskaya**  
Alla Zablotskaya, Izolda Segal, Mikhail Maiorov, Vizma Nikolajeva
- P-0293 MARKING THE CONTENT OF PAHS IN SELECTED MEAT PRODUCTS PROCESSED BY INDUSTRIAL SMOKING  
**Mariusz S. Kubiak**  
Mariusz Kubiak
- P-0325 MANUFACTURE AND PROPERTIES OF PARTICLEBOARD MADE FROM MULBERRY PRUNING WASTE  
**Clara Eugenia Ferrández García**  
Clara Eugenia Ferrández García, Teresa García Ortuño, Javier Andreu Rodríguez, Manuel Ferrández-Villena García, María Teresa Ferrández García
- P-0331 RECURSOS PARA SUSTENTAR LA PRESENCIA DE LAS MARIPOHAS (INSECTA: LEPIDOPTERA) EN AGROECOSISTEMAS DEL OCCIDENTE DE CUBA  
**María Cristina Escandón Arbolay**  
María Cristina Escandón Arbolay; María Cristina Escandón Arbolay
- P-0381 EFFECT OF SUBSTRATE ON THE INITIAL DEVELOPMENT OF CEDRELA FISSILIS VELL. (MELIACEAE) SEEDLING  
**Kever Bruno Paradelo Gomes**  
Kever Bruno Paradelo Gomes, Rosana Carvalho Cristos Martins, Maria de Lourdes Gomes Vilarino, Valdevino Pereira Silva, Ana Carolina Ferraro
- P-0420 THERMAL BEHAVIOR OF MATERIALS USED IN ROOF COVERAGE OF HUSBANDRY BUILDINGS  
**Adhemar Pitelli Milani**  
Adhemar Pitelli Milani, Fernando Augusto de Souza, José Eduardo Pitelli Turco, Eduardo Alves de Almeida
- P-0516 DESIGN AND OPTIMIZATION OF A WIND CHANNEL FOR NATURAL VENTILATION STUDY  
**Xiong Shen**  
Xiong Shen, Guoqiang Zhang, Jan Ove Johnsen
- P-0566 PREDICTION OF FOOTINGS SETTLEMENT ON SANDS BY FINITE ELEMENT METHOD  
**José Requena Pérez**  
José Requena Pérez, Jesús Ayuso, José R. Jiménez, Francisco Agrela
- P-0638 RECYCLED CONCRETE BEHAVIOR AS A FUNCTION OF TYPE OF NATURAL AGGREGATES USED IN THE MIXTURE  
**Santiago Laserna Arcas**  
Santiago Laserna Arcas, Jesús Montero Martínez, Rosario Sánchez Gómez, Pablo Galletero Montero
- P-0650 STUDY OF CDW'S PRODUCTION IN CASTILLA-LA MANCHA. ESTIMATION METHOD AND VIABILITY OF THE TREATMENT PLANTS  
**Santiago Laserna Arcas**  
Santiago Laserna Arcas, Rosario Sánchez Gómez, Jesús Montero Martínez
- P-0668 EVALUATION OF THE STRUCTURAL STABILITY OF A 9M-WIDE SINGLE-SPAN GREENHOUSE WITH THE HIGH EAVES  
**Sung-hyun Yum**  
Sung-hyun Yum, Seoung-hee Kim, Sang-bong Lee, Min-young Kim, Jin-oh Kim
- P-0678 DEVELOPMENT OF HYDROLYZED PROTEIN DERIVATIVES FOR BIODEGRADABLE SPRAY MULCHING COATINGS  
**Giuliano Vox**  
Evelia Schettini; Luciana Sartore; Marzia Barbaglio; Giuliano Vox
- P-0715 SYNCHROTRON RADIATION ANALYSIS OF SUGAR CANE ASH AND THEIR CEMENT PASTES BLENDS.  
**Margareth Franco**  
Margareth Franco, Michelle Santos Rodrigues, Sergio Francisco Dos Santos, Antônio Ludovico Beraldo, Heloisa Nunes Bordallo, Laurie Aldridge, Fabiano Yokaichiya
- P-0725 BOUSSINESQ PROBLEM IN A VENLO TYPE GREENHOUSE  
**Abraham Rojano**  
Abraham Rojano, Raquel Salazar, Jorge Flores, Teodoro Espinosa, Waldo Ojeda
- P-0732 STUDY OF VARIOUS POLLUTANTS IN THE PHOSPHATE FERTILIZER INDUSTRY  
**Abbes Mizane**  
Abbes Mizane, Abbes Mizane
- P-0955 PRACTICAL EXPERIENCES WITH 3 FLOATING COVERS FOR SLURRY STORAGE IN SPAIN  
**Maitte Aguilar Ramírez**  
Maitte Aguilar Ramírez, Alberto Abaigar Ancin, Elena Irujo Baigorri, Pilar Merino Pereda, Salvador Calvet Sanz
- P-0977 HYGROTHERMAL MODELING OF LIME HEMP MIXES USED AS BUILDING MATERIALS AND INDOOR CLIMATE REGULATION PERFORMANCE CHARACTERIZATION  
**Samuel Dubois**  
Samuel Dubois, Samuel Dubois, Frédéric Lebeau, Arnaud Evrard
- P-1046 SIZE EFFECT ON THE MECHANICAL PROPERTIES OF COMPRESSED EARTH BLOCK  
**Walid Ahmed Fouad Abd Elhai Edris**  
Walid Ahmed Fouad Abd Elhai Edris; Gonzalo Ruiz López; Zhang Xiao Xin; Ignacio Cañas Guerrero; Mario Desantos

- P-1107 EVALUATION OF THE EFFICIENCY OF HUMIC ACID, FULVIC ACID, HYDROLYZED FISH AND COMPLEX BACTERIAL, APPLIED IN TRANSPLANTATION OF EUCALYPTUS (EUCALYPTUS SPP) SAMPLES TO THE FIELD  
**Luiz Gustavo Fernandes Julião Fernandes Julião**  
Luiz Gustavo Fernandes Julião, Evandro Luiz Correa De Souza, Jose Teixeira Filho, Luiz Lonardoní Foloni
- P-1180 ASSESSMENT OF CLAY SOILS PRESENT IN EARTHEN RESERVOIRS IN JAÉN (SPAIN)  
**Carlos Manuel Ferrer Gisbert**  
Carlos Manuel Ferrer Gisbert, Jose Javier Ferran Gozalvez, Miguel Redon Santafe, Francisco Javier Sanchez Romero, Juan Bautista Torregrosa Soler, Jose Manuel Carrillo Cañizares
- P-1181 FARM WINERIES DESIGN: PRELIMINARY INDICATIONS FOR INTEGRATING ENERGY EFFICIENCY IN BUILDING MODELING  
**Stefano Benni**  
Patrizia Tassinari, Alberto Barbaresi, Stefano Benni, Daniele Torreggiani
- P-1206 VALORIZATION OF PRUNING RESIDUES: THE USE OF PHOENIX CANARIENSIS TO ELABORATE ECO-FRIENDLY PARTICLEBOARDS.  
**Teresa García Ortuño**  
Teresa García Ortuño, María Teresa Ferrández García, Javier Andreu Rodríguez, Clara Eugenia Ferrández García, Manuel Ferrández-Villena García
- P-1262 AN OBJECT ORIENTED FINITE ELEMENT MODEL THROUGH ITERATIVE METHOD SUPPORTING ELEMENT INDEPENDENCY  
**HanKi Lee**  
HanKi Lee
- P-1285 POTENTIAL CONTAMINANTS AGENTS IN FEED MILLS: RISKS TO THE HEALTH OF THE HANDLERS  
**Paulo Carteri Coradi**  
Paulo Carteri Coradi, José Benício Paes Chaves, Adílíio Flauzino Lacerda Filho
- P-1342 DYNAMIC MEASUREMENT OF ODOR ABSORBABILITY IN SOIL FILTER DEODORIZER  
**Seishu Tojo**  
Seishu Tojo, Tadashi Chosa, Toru Nakajima, Takuya Kikuchi, Kai Iwasawa

237  
SESSION

14:00-14:55

(SPC-04) POSTERS SESSION

Location: POSTERS ROOM

- P-1266 LIDAR TECHNOLOGY APPLICATION TO AUTOMATIC DETECTION OF THE OLIVE TREE AND YIELD ESTIMATION  
**Alejandro Sáenz Echeverría**  
Alejandro Sáenz Echeverría, Carmen Marín, Cristina Velilla Lucini
- P-1335 COMPARISON OF LEAVE AREA ESTIMATIONS VIA LASER- SCANNER READINGS AND IMAGE ANALYSIS  
**Jana Käthner**  
Jana Käthner, Uwe Richter, Florian Pforte, Joern Selbeck
- P-1356 RHEA PROJECT ACHIEVEMENT: AN INNOVATIVE SPRAY CONCEPT FOR PESTICIDE APPLICATION TO TREE CROPS EQUIPPING A FLEET OF AUTONOMOUS ROBOTS.  
**Marco Vieri**  
marco vieri, Daniele Sarri, Marco Rime-diotti, Riccardo Lisci, Andrea Peruzzi, Michele Raffaelli, Marco Fontanelli, Christian Frasconi, Luisa Martelloni,
- P-2010 ROUTE PLANNING FOR AUTONOMOUS AND AUTOMATED FIELD MACHINES; AN EVALUATION ON DIFFERENT OPTIMISATION CRITERIA  
**Dionysis Bochtis**
- P-2132 MACHINE LEARNING AND FUZZY COGNITIVE MAP LEARNING APPROACHES FOR YIELD PREDICTION IN APPLES  
**Elpiniki Papageorgiou**  
Elpiniki Papageorgiou, Katerina Aggelopoulou, Nikolaos Liolios, Theofanis Gemtos, George Nanos
- P-2289 HIGH ACCURACY ROBOT TRACTOR NAVIGATION USING LEX SIGNAL OF QZSS  
**Liangliang Yang**  
Liangliang Yang, Noboru Noguchi, Ryo-suke Takai, Ze Zhang
- P-2308 A LASER SCANNER-BASED CROP ROW DETECTION METHOD FOR AUTOMATIC GUIDANCE OF COMBINE HARVESTER  
**Jongmin Choi**  
Jongmin Choi, Noboru Noguchi, Kazunobu Ishii

# 238 SESSION

14:00-14:55  
**(RD) POSTERS SESSION**  
Location: POSTERS ROOM

- P-0117 PERFORMANCE OF NAANDANJAIN 435 SPRINKLER USING THE DEFLECTOR POSITION  
**Ana Paula P. M. Guirra**  
Ana Paula P. M. Guirra, Ana Paula Pires Maciel Guirra, Jose Renato Zanini
- P-0249 SELF-BUILDING SILO FOR AFRICA RURAL VILLAGES  
**Matteo Barbari**  
Matteo Barbari; Massimo Monti; Giuseppe Rossi; Stefano Simonini; Francesco Sorbetti Guerri
- P-0354 BACILLUS THURINGIENSIS-BASED INSECTICIDES RESIDUES IN BROWN FOREST SOILS AND THEIR INFLUENCE ON SOILINHABITING AMMONIFIERS  
**Hasmik Movsesyan**  
Masis Sargsyan, Hasmik Movsesyan, Naira Ghazaryan, Arevik Sargsyan, Hasmik Mesropyan
- P-0416 SAVE AND GROW, A NEW PARADIGM FOR SUSTAINABLE INTENSIFICATION AND ITS IMPLICATIONS FOR AGRICULTURAL MECHANIZATION  
**Josef Kienzle**  
Theodor Friedrich, Josef Kienzle, Amir Kassam
- P-0497 DEVELOPMENT OF GALICIAN POTATO PRODUCTS BEARING PROTECTED GEOGRAPHICAL INDICATION AS AN EXAMPLE OF AN ACTION FOR RURAL DEVELOPMENT  
**Enrique Arbones**  
Enrique Arbones; Manuel Gómez; Ines Piñeiro; Julio Gómez; Ricardo Losada; Florentino Díaz; Jose Chao; Luis Saa
- P-0520 DYNAMICS OF ENVIRONMENTAL DEGRADATION IN THE BASIN OF THE SOLEDADE PB  
**João Miguel Moraes Neto**  
João Miguel Moraes Neto; Miguel José Silva
- P-0644 DEVELOPMENT OF MOTORCYCLE TRANSPORT DEVICE  
**Kayode Simonyan Joshua**  
Simonyan Kayode Joshua, Olabode Abe
- P-0752 SUSTAINABLE DEVELOPMENT PATTEN OF LIVABLE AND HABITABLE RURAL AREAS FOR CHINESE PEARL RIVER DELTA REGION (PRD) BASED ON REGIONAL CHARACTERISTICS  
**Huibin Zhu**  
Huibin Zhu
- P-0757 CHARACTERIZATION OF CARBON DIOXIDE EMISSIONS DURING CONSTRUCTING OF RESERVOIR EMBANKMENT USING LIFE-CYCLE ASSESSMENT METHOD  
**Sookack Noh**  
Sookack Noh, Young-hwan Son, Jaesung Park, Tae-ho Bong, Woo-seok Choi
- P-0759 RESEARCH ON THE TREATMENT AND RECYCLING METHODS OF THE DREDGED MATERIALS FROM SMALL STREAMS AND RESERVOIRS IN RURAL AREA OF SOUTH KOREA  
**Joon Heo**  
Joon Heo, Seong-Pil Kim, SangHoon Lee, Young-Hwan Son, Tae-ho Bong
- P-0772 CONDITIONS AND TECHNOLOGY FOR REINTRODUCTION OF SERICULTURE INDUSTRY INTO THE EASTERN AFGHANISTAN - VIABILITY STUDY  
**Pavel Burian**  
Pavel Burian, Vladimir Krepl, Martin Hejral
- P-0925 THE POTENTIAL FOR INCREASING LOCAL EMPLOYMENT AND LAND OWNERS INCOME FROM WILD HARVESTED NATURAL RESOURCES THROUGH SUSTAINABLE FARMING PRACTICES  
**Charles Laubscher**  
Charles Laubscher, Robin Koehorst
- P-0972 SURVEY THE EFFECT OF ON MEDICINAL PLANTS CULTIVATION ON RURAL ECONOMIC IN IRAN  
**Mohammad Mehdi Amiri khorie**  
Mohammad Ghahderijani, Mohammad Mehdi Amiri khorie, Masoud Neza-moleslami, Farzaneh Azzadeh, Shiva Azadbakht
- P-1040 PLANNING RESEARCH FOR CULTURAL TOURISM ROUTE IN CHUANDIXIA VILLAGE, BEIJING  
**Shan Xu**  
Shan Xu; Huibin Zhu; Xiaoming Liu; Yujun Zhang
- P-1274 PROBABILITY OF MAXIMUM REFERENCE EVAPOTRANSPIRATION IN MOSSORON, BRAZIL, USING THE GUMBEL PROBABILISTIC DISTRIBUTION MODEL  
**Andre Herman Bezerra Freire**  
Andre Herman Bezerra Freire, Sergio Luiz Levien
- P-1329 SURVEY OF AGRICULTURAL MECHANIZATION ECONOMY IN THE STRATEGIC CROPS IN IRAN  
**Mohammad Mehdi Amiri khorie**  
Mohammad Ghahderijani, Hasan Moradi, Babak Beheshti, Mohammad Mehdi Amiri khorie, Mehdi Moghadam kouhi
- P-1432 ASSESSMENT TOOL FOR SOIL CHISELING IN LAYERS SIMULTANEOUSLY  
**José Renê Gassen Freitas**  
José Renê Gassen Freitas, José Renê Gassen Freitas, Airton dos Santos Alonço, Vilney Dias, Ulisses Baumhardt Benedetti

- P-1592 AN ACTIVATION PLANNING OF THE VILLAGE FESTIVALS WITH THE 24 SEASONAL DIVISIONS OF THE YEAR  
**Yi Song**  
Sinho Rhee, Yi Song
- P-1652 CALCULATION METHOD OF CLIMATIC MODIFICATION AND ITS APPLICATION; THE CASE OF PADDY FIELDS, JAPAN  
**Shin-ichi Takeshita**  
Shin-ichi Takeshita
- P-1689 SITUATION OF PESTICIDES IN SEAFOOD OF TURKEY  
**Safak Ulusoy**  
Safak Ulusoy
- P-1728 MATING SYSTEM OF HANDROANTHUS HEPTAPHYLLUS SUBPOPULATIONS BY MICROSATELLITE MOLECULAR MARKERS  
**Neide Tomita Mori**  
Neide Tomita Mori, Caroline Midori Morita, Mário Luiz Teixeira De Moraes, Edson Seizo Mori
- P-1771 ALLEY CROPPING AS A DURABLE ALTERNATIVE FOR PASTURE LAND DEVELOPMENT IN DROUGHT PRONE MEDITERRANEAN REGION  
**Youssef Chebli**  
Youssef Chebli
- P-1834 CUSTOM HIRING OF FARM MACHINERIES AND EQUIPMENT AS A BUSINESS MODEL  
Praveen C Bargale  
Praveen C Bargale; Radhye Singh
- P-1934 SOLID WASTE MANAGEMENT IN THE RURAL COMMUNITIES LUCAS AND ESTREITO IN THE MUNICIPALITY OF CAMPINA GRANDE / PB.  
**Luiza Eugênia da Mota Rocha Cirne**  
Luiza Eugênia da Mota Rocha Cirne, Marx Prestes Barbosa
- P-2029 EVALUATION AND COMPARISON OF STATUS AND POTENTIALS OF MECHANIZATION IN DEVELOPING COUNTRIES: FOUR CASE STUDIES WITH GIS MAPPING FROM NEPAL, RWANDA, MONGOLIA AND LAO PDR.  
**Hemantha P W Jayasuriya**
- P-2049 FERTILIZATION LEVELS OF COMMON BEAN EUCALYPTUS INTERCROPPED WITH NEWLY PLANTED  
**Abner Carvalho**  
Abner Carvalho, José Eustáquio De Souza Carneiro, Paulo Henrique Barbosa, Marcos Gleidson Santos, Hugo Thiago Amaro, Vanet Souza
- P-2142 MAPPING OF LAND USE CONFLICTS IN AREAS OF PERMANENT PRESERVATION IN THE BARRA BONITA  
**Francienne Oliveira Gois**  
Francienne Oliveira Gois, Odivaldo José Seraphim, Valdemir Antonio Rodrigues
- P-2307 WOMEN AND WATER FOR DEVELOPMENT: A PRACTICAL JOURNEY TO FOOD SECURITY AND POVERTY REDUCTION IN AFRICA
- P-0034 EFFECT OF SQUASH ROOTSTOCKS ON THE YIELD AND SOME YIELD COMPONENTS AND QUALITY OF WATERMELON  
**Hayrettin Kuscü**  
Hayrettin Kuscü, Ahmet Turhan, Nese Ozmen, Vedat Seniz, Sitki Serbeci
- P-0104 A COMPARATIVE STUDY OF OLIVE REMOVAL TECHNIQUES AND THEIR EFFECTS ON HARVEST PRODUCTIVITY  
**Zahra Yousefi**  
Zahra Yousefi; Morteza Almassi; Ali Asgar Zeinanloo; Reza Moghadasi; Ahmad Golian
- P-1064 DEVELOPMENT OF AN INDUSTRY FOCUSED ON THE PRODUCTION OF SPICE SAFFRON  
**Alfonso Dominguez Padilla**  
Francisco Montoya Sevilla, José Arturo De Juan, Horacio López, Alfonso Dominguez
- P-1159 TECHNICAL AND ECONOMIC EFFICIENCY OF ORGANIC AND CONVENTIONAL DRIED APRICOTS PRODUCTION : CASE STUDY OF TURKEY  
**Gamze Saner**  
Gamze Saner, Hakan Adanacioglu
- P-1232 QUANTIFYING SUBJECTIVE RURAL DEVELOPMENT POTENTIAL WITH OBJECTIVE MEASURE; LOCAL INFORMATION CONTENT
- P-1267 ANALYSIS OF THE VALUE CHAIN OF ALPACA FIBER IN AYMARAS COMMUNITIES OF PUNO (PERU)  
**Susana Sastre**  
Susana Sastre, Daniel Hernandez, Xavier Negrillo, Ignacio de los Rios
- P-1324 LANDSCAPE DEVELOPMENT SCENARIO ANALYSIS BY PANDORA MODEL: AN APPLICATION IN UMBRIA REGION (ITALY)  
**Raffaele Pelorosso**  
Raffaele Pelorosso, Federica Gobattoni, Maria Elena Menconi, Marco Vizzari, David Grohmann, Maria Nicolina Ripa, Antonio Leone
- P-1347 IMPROVEMENTS OF STATISTICAL MECHANICS OF MONEY CONSIDERING UNCERTAINTY OF ECONOMIC AGENT  
**Sangkyu Eun**  
Sangkyu Eun, Jeong-jae Lee, Yeonjong Bae
- P-1371 ANALYSIS OF THE MILKING WORK ON SERRANA GOAT FARMS IN NE PORTUGAL, IN ORDER TO IMPROVE GOAT BREEDING AND MILK PRODUCTION, IN THIS REGION  
**José Carlos Barbosa**  
José Carlos Barbosa, Francisco Pereira, Vasco Fitas da Cruz

- P-1841 PRELIMINARY OUTCOMES FOR THE IMPLEMENTATION OF INTEGRATED COMPUTER-BASED INFORMATION SYSTEMS FOR SUPPLY-CHAIN TRACEABILITY OF CERTIFIED PLANTS  
**Giovanni Cascone**  
Simona M. C. Porto, Claudia Arcidiacono, Umberto Anguzza, Giovanni Cascone
- P-2118 BIODIVERSITY SURVEY OF THE RIBEIRÃO LAVAPÉS IN LAGEADO FARM  
**Francienne Oliveira Gois**  
Francienne Oliveira Gois, Odivaldo José Seraphim, Valdemir Antonio Rodrigues, Ana Maria Ruoco, Ligia Linardi, Odemir Freitas Junior, Heloisa Rebello

## 239 SESSION

14:00-14:55

### (SPC-03) POSTERS SESSION

Location: POSTERS ROOM

- P-0334 FUNCTIONALIZATION AND CHARACTERIZATION OF CANTILEVERS AS MICROBIOSENSORES FOR THE DETECTION OF PROBIOTICS MICROORGANISMS BY MEANS OF MICROSCOPY AND SPECTROSCOPY TECHNIQUES  
**José Jorge Chanona Pérez**  
Angélica Gabriela Mendoza-Madrigal, José Jorge Chanona Pérez, Humberto Hernández-Sánchez, Eduardo Palacios González, Vicente Garibay Febles, Georgina Calderón Domínguez, Juan Vicente Méndez Méndez,
- P-1029 APPLICATION OF VIS/NIR SPECTROSCOPY FOR A QUICK QUALITY EVALUATION OF CRAFT BEERS  
**Roberto Beghi**  
Valentina Giovenzana, Roberto Beghi, Riccardo Guidetti
- P-1214 APPLICATION OF HYPERSPECTRAL IMAGING TECHNIQUE FOR NON-DESTRUCTIVE PH PREDICTION IN SALMON FILLETS  
**Di Wu**  
Hong-Ju He, Di Wu, Da-Wen Sun
- P-1269 POTENTIAL APPLICATION OF HYPERSPECTRAL IMAGING FOR DETERMINING OVERRIPE BERRIES OF JAPANESE BLUE HONEYSUCKLE  
**Longsheng Fu**  
Longsheng Fu, Hiroshi Okamoto
- P-1541 AN APPROACH OF LASER-INDUCED BACKSCATTERING IMAGING FOR DETECTING CHILLING INJURY IN BANANAS  
**Manuela Zude**  
Manuela Zude, norhashila hashim, Michael Pflanz, Christian Regen, Rimfiel B. Janius, Russly Abdul Rahman, Azizah Osman, Mahendran Shitan

- P-1747 MEASUREMENT OF THE COLOUR INDEX OF EARLY-SEASON CITRUS FRUITS USING COMPUTER VISION  
**Pau Talens Oliag**  
Anna Vidal, José Blasco Ivars, José Manuel Prats, Sergio Cubero, Nuria Aleixos Borrás, Florentino Juste, Pau Talens
- P-1763 DIRECT QUANTIFICATION OF ENTEROBACTERIACEAE IN CHICKEN FILLETS BY NIR HYPERSPECTRAL IMAGING AND SUPPORT VECTOR REGRESSION  
**Yao-Ze Feng**  
Yao-Ze Feng, Da-Wen Sun, Gamal M. Elmasry, Noha Morcy
- P-1876 HYPERSPECTRAL QUALIFICATION OF AGED BEEF SIRLOIN  
**Ferenc Firtha**  
Ferenc Firtha, Anita Jasper, László Friedrich, József Felföldi
- P-1988 THE POTENTIAL OF NEAR INFRARED SPECTROSCOPY AS A METHOD OF DETERMINATION OF THE FAT CONTENT IN YOGURT  
**Ainara López**  
Carmen Jarén, Ainara López Maestres-las, Meritxell Gago, Silvia Arazuri, Ainara López, Nerea Arias, Paulo César Correa, Ana Cristina Agulheiro
- P-2003 PRELIMINARY APPROACH TO IMAGE STANDARDIZATION FOR THE ELECTRONIC MARKETS ALONG THE FLORICULTURAL PRODUCT CHAIN  
**Paolo Menesatti**  
Paolo Menesatti, Stefano Giorgi, Federico Pallottino, Emiliano Canali, Francesca Antonucci, Corrado Costa
- P-2011 DEVELOPMENT AND VALIDATION OF THE CALIBRATION MODEL FOR VIS-NIR SPECTROMETER USED FOR THE EVALUATION OF THE DON CONTENT IN WHEAT GRAIN DIRECTLY DURING COMBINE HARVEST.  
**Miroslaw Czechlowski**  
Miroslaw Czechlowski, Magdalena Laskowska
- P-2038 EVALUATION OF SPANISH COOKED HAM BY NIR HYPERSPECTRAL IMAGING  
**Douglas Fernandes Barbin**  
Pau Talens, Leticia Mora, Noha Morsy, Douglas Fernandes Barbin, Gamal M. Elmasry, Da-Wen Sun

## 240 SESSION

14:55-16:30

### (PM): DRIF AND PLANT PROTECTION

Moderator: Grzegorz Doruchowski  
Location: AUDITORIO 1

14:55

Introduction

- 15:00 C-1613 STUDY OF A TEST METHODOLOGY TO ASSESS POTENTIAL SPRAY DRIFT GENERATED BY AIR-ASSISTED SPRAYERS FOR ARBOREAL CROPS  
**Paolo Marucco**  
Paolo Marucco, Paolo Balsari, Mario Tamagnone
- 15:15 C-1374 DROPLET CHARACTERISTICS FOR LOW DRIFT NOZZLES: SINGLE AND DOUBLE FLAT FAN NOZZLES.  
**Ariane Vallet**  
Ariane Vallet, Cyril Tinet
- 15:30 C-1991 MEASURED AND PREDICTED DRIFT IN PESTICIDE APPLICATIONS OF CITRUS IN SPAIN  
**Molto Enrique**  
Cruz Garcera Figueroa, João Paulo Cunha, Enrique Moltó, Patricia Chueca
- 15:45 C-0332 IMPROVED CONTROL OF IMMATURE AND ADULT INSECTS BY COMBINED AIR BLOWING AND SUCTION DRAG FORCES  
**Samuel Gan-Mor**  
Samuel Gan-Mor, Rafi Regev, David Ben-Yakir
- 16:00 C-1420 PERFORMANCE OF AN ELECTROSTATIC SPRAYING SYSTEM WITH AIR ASSISTANCE ON SPRAY DRIFT, FUNGICIDE DEPOSITION AND SOYBEAN RUST CONTROL  
**Ulisses Rocha Antuniassi**  
Ulisses Rocha Antuniassi, Maria Aparecida Peres Oliveira, Rone Batista Oliveira, Edivaldo Domingues Velini, Fabiano Victor Siqueri, Cristiano O. Pontelli, Luiz G. F. Beltramello, Samir E. Zaidan

## 241 SESSION

14:55-16:30  
**(SW-SPC01): LAND AND WATER MANAGEMENT**  
Moderator: Gerrit J. Carsjens  
Location: AUDITORIO 2

- 14:55 Introduction
- 15:00 C-0287 A SCENARIO STUDY ON THE INFLUENCE OF LAND USE CHANGE ON SOIL REDISTRIBUTION: A CASE STUDY FOR THE ALORA REGION, SPAIN  
**Gerrit J. Carsjens**  
Sanne Diek, Luc H.M.A. Joosten, Jeroen M. Schoorl, Martha M. Bakker, Gerrit J. Carsjens
- 15:15 C-1149 DETERMINATION OF THE WATER PRODUCTIVITY IN LIVESTOCK OPERATIONS: THE INFLUENCE OF FEEDING STRATEGIES IN DAIRY FARMING  
**Michael Krauß**  
Michael Krauß, Simone Kraatz, Annette Prochnow, Katrin Drastig

- 15:30 C-1815 SOIL MOISTURE CONTENT AND TEMPERATURE AFFECTED BY DIFFERENT MANAGEMENT TECHNIQUES IN SLOPING VINEYARD AND IMPLICATIONS ON RUNOFF  
**Francesca Opsi**  
Francesca Opsi, Marcella Biddoccu, Eugenio Cavallo
- 15:45 C-1740 ENVIRONMENTAL ASSESSMENT OF MANURE SPREADERS: A METHODOLOGY FOR AMMONIA EMISSIONS EVALUATION.  
**Elio Dinuccio**  
Elio Dinuccio, Paolo Balsari
- 16:00 C-1987 CONTROLLED TRAFFIC FARMING IN GERMANY - TECHNICAL AND ORGANISATIONAL REALISATION AND FIRST RESULTS  
**Markus Demmel Richard**  
Markus Demmel, Robert Brandhuber, Hans Kirchmeier, Martin Mueller, Marc Marx

## 242 SESSION

14:55-16:30  
**(SPC-05): ASSESSING THERMAL STATUS & COMFORT**  
Moderator: Daniella Jorge de Moura  
Location: AUDITORIO 3A

- 14:55 Introduction
- 15:00 C-1433 DETERMINING HEAT TOLERANCE OF FINISHING PIGS USING THERMAL IMAGING  
**Tami M. Brown-Brandl**  
Tami Brown-Brandl, Roger A. Eigenberg, Joseph L. Purswell, Gary A. Rohrer
- 15:15 C-0908 THE USE OF THERMAL IMAGES FOR IDENTIFYING STRESS CONDITION IN PIGLETS  
**Alexandra Cordeiro**  
Alexandra Cordeiro, Irenilza De Alencar Naas, Flavia Jacob, Diego Pereira Neves
- 15:30 C-2242 INSTRUMENTATION SYSTEM FOR THERMAL ENVIRONMENT OF SWINE TRANSPORT TRAILERS  
Yijie Xiong; Jingwei Su; Weichao Zheng; Angela R. Green; Richard S. Gates
- 15:45 C-0265 EFFECT OF TEMPERATURE-HUMIDITY INDEX ON LIVE PERFORMANCE IN BROILER CHICKENS GROWN FROM 49 TO 63 DAYS OF AGE  
**Joseph Purswell**  
Joseph L. Purswell, William Dozier III, Hammed A. Olanrewaju, Jeremiah D. Davis, Hongwei Xin, Richard S. Gates
- 16:00 C-0748 CLUSTER INDEX FOR ACCESSING THERMAL COMFORT FOR BROILER BREEDERS  
**Irenilza De Alencar Naas**  
Danilo Pereira, Irenilza De Alencar Naas, Luis Roberto Almeida  
Gabriel Filho, Mario Mollo Neto

- 16:15 C-1253 DATA MINING APPLIED TO HORSE THERMAL COMFORT  
**Ana Paula de Assis Maia**  
 Ana Paula de Assis Maia, Brenda Batista Lemos Medeiros, Rimena do Amaral Vercellino, Juliana Sarubbi, Stanley Robson de Medeiros Oliveira, Paulo Roberto Griska, Daniella Jorge de Moura

## 243 SESSION

14:55-16:30  
**(SPC-05): GREENHOUSE GAS EMISSIONS FROM ANIMAL HOUSING**  
**Moderator: Saqib Mukhtar**  
**Location: AUDITORIO 3B**

- 14:55 Introduction
- 15:00 C-0731 GASEOUS EMISSIONS FROM AVIARIES AND NITROGEN AND PHOSPHORUS LOSSES IN THE OUTDOOR RUN OF ORGANIC LAYING HENS  
**Peter Groot Koerkamp**  
 Sanne Dekker, P.w.g. Groot Koerkamp, André J. A. Aarnink, Imke de Boer
- 15:15 C-1480 AMMONIA, GREENHOUSE GAS, AND PARTICULATE MATTER CONCENTRATIONS AND EMISSIONS OF AVIARY LAYER HOUSES IN  
**Morgan Hayes**  
 Morgan Hayes; Hongwei Xin; Hong Li; Timothy Shepherd; Yongxing Chen; Yang Zhao; John Stinn
- 15:30 C-1134 GREENHOUSE GAS EMISSIONS FROM A LARGE COMMERCIAL U.S. DAIRY FARM  
**Teng Lim**  
 Teng Lim, Yaomin Jin, Ji-Qin Ni, Albert J. Heber, Ruiqiang Liu
- 15:45 C-0432 MEASUREMENT AND ESTIMATION OF GREENHOUSE GAS EMISSION FROM NATURALLY VENTILATED DAIRY CATTLE BUILDINGS  
**Chaoyuan Wang**  
 Chao Yuan Wang, Guoqiang Zhang, Zheng Xiang Shi, Wei Cao, Baoming Li
- 16:00 C-1014 AMMONIA AND GREENHOUSE GAS CONCENTRATIONS AND EMISSIONS OF A SWINE BREEDING-GESTATION-FARROWING FACILITY IN THE MIDWESTERN USA  
**John Stinn**  
 John Stinn, Hongwei Xin, Timothy Shepherd, Hong Li, Robert Burns
- 16:15 C-0902 NITROUS OXIDE EMISSIONS FROM AN EXPERIMENTAL PIG HOUSE WITH STRAW BEDDING  
**Sven Nimmermark**  
 Sven Nimmermark, Knut-Håkan Jeppsson, Ngwa Martin Ngwabie

## 244 SESSION

14:55-16:30  
**(EN): GASEOUS BIOFUELS I**  
**Moderator: Fikret Akinerdem**  
**Location: MULTIPURPOSE IA**

- 14:55 Introduction
- 15:00 C-0880 ORGANIC LOADING RATE EFFECT ON ANAEROBIC DIGESTION: CASE STUDY ON CO-DIGESTION OF LIGNOCELLULOSIC PRETREATED MATERIAL WITH COW MANURE.  
**Maria Magdalena Estevez Rego**  
 Maria Magdalena Estevez Rego, John Morken, Roar Linjordet
- 15:15 C-0894 EFFECT OF DIFFERENT THERMAL PRE-TREATMENT TECHNIQUES ON BIOGAS PRODUCTION FROM LIGNOCELLULOSIC BIOMASS: WHEAT STRAW AND SALIX  
**Zehra Sapci**  
 Zehra Sapci, Maria M. Estevez, Roar Linjordet, John Morken
- 15:30 C-1068 PILOT SCALE TWO-STAGE PLANT FOR BIOHYDROGEN AND BIOMETHANE PRODUCTION FROM THERMOPHILIC CODIGESTION OF WASTES  
**Alberto Tenca**  
 Alberto Tenca, Francesca Perazzolo, Ezio Naldi, Giorgio Provolo, Luigi Bodria, Roberto Oberti
- 15:45 C-1708 ANAEROBIC SLUDGE ADAPTATION TO PIG SLURRY: METHANE YIELD, CHEMICAL COMPOSITION AND SCANNING ELECTRON MICROSCOPY CHARACTERIZATION  
**Veronica Moset**  
 Verónica Moset, Pablo Ferrer, Alba Cerisuelo, Antonio G. Torres, Maria Cambra-López
- 16:00 C-2054 ENHANCEMENT OF BIOHYDROGEN PRODUCTION FROM WASTE SUGAR BY VARIOUS STIRRING SPEEDS  
**Nima Nasirian**  
 Nima Nasirian, Morteza Almassi

## 245 SESSION

14:55-16:30  
**(IT): PRECISION AGRICULTURE I**  
**Moderator: Santiago Planas**  
**Location: MULTIPURPOSE IB**

- 14:55 Introduction
- 15:00 C-0567 MOBILE UNIT FOR WIRELESS SENSOR NETWORKS DESIGNED FOR PRECISION AGRICULTURE  
**Petre Junie**  
 Petre Junie; Octavian Dinu; Risantea Gagescu; Cristian Eremia; Dan Stefanoiu

- 15:15 C-1842 AN INNOVATIVE AUTONOMOUS GROUND MOBILE UNIT FOR THE PRECISION PHYSICAL WEED CONTROL  
**Marco Fontanelli**  
Andrea Peruzzi, Michele Raffaelli, Christian Frasconi, Luisa Martelloni, Marco Fontanelli, Daniele Sarri, Riccardo Lisci, Marco Rimediotti, Marco Vieri
- 15:30 C-2134 SMARTPHONES AND TABLETS INTEGRATION INTO AGRICULTURAL MACHINERIES  
**Lorenzo Fantesini**  
Lorenzo Fantesini, Stefano Marzani, Luca Minin, Alan Pastorelli, Marco Ferretti
- 15:45 C-2171 DEVELOPING A SMALL AUTONOMOUS ROBOT FOR CROP INSPECTION  
**Jesus Conesa Muñoz**  
Jose María Bengochea-Guevara, Jesús Conesa Muñoz, Ángela Ribeiro
- 16:00 C-0098 EVALUATION OF LONG-TERM USE OF PRECISION AGRICULTURE TECHNIQUES IN PERMANENT PASTURES IN ALENTEJO  
**João manuel Serrano**  
João Manuel Serrano, José Peça, Shakib Shahidian, José Marques da Silva
- 16:15 C-0153 IPC MONITORING AND CONTROLLING SYSTEM OF HIGH- QUALITY TEA PRODUCTION LINE  
**Lanfang Zhang**  
Qinghua Han, Shujun Li, Yifan Li, Xiao Li, Jin Wang
- 15:30 C-1367 IMPROVEMENT POSSIBILITIES OF SITE SPECIFIC AGRICULTURAL PRODUCTION WITH HYPERSPECTRAL IMAGING AND REFLECTANCE SPECTROSCOPY  
**Kornel Szalay**  
Kornél D. Szalay, József Deákvári, Ferenc Firtha, Ádám Csorba, Imre Tolner, László Fenyvesi
- 15:45 C-2073 AN EMPIRICAL STUDY ON THE VIABILITY OF THE APPLICATION OF SIFT ALGORITHM TO VIDEO STABILIZATION IN CROP FIELDS  
**Nadir Sainz Costa**  
Nadir Sainz-Costa, Xavier P. Burgos-Artizu, P. Javier Herrera, Angela Ribeiro
- 16:00 C-0390 AN AUTOMATIC AND COST FREE METHOD FOR PADDY AREA CLASSIFICATION BY THE WAVELET ANALYSIS OF NDVI DATA SERIES  
**Ramadhona Saville**  
Ramadhona Saville, Katsumori Hatanaka
- 16:15 C-1306 PREDICTION OF SOIL ORGANIC CARBON AND CALCIUM CARBONATE CONTENT BASED ON REFLECTANCE SPECTROSCOPY AND MULTIVARIATE MODELING METHODS  
**Adam Csorba**  
Ádám Csorba, Vince Láng, Kornél D. Szalay, Erika Michéli, László Fenyvesi

## 246 SESSION

14:55-16:30  
**(IT): SENSORS II**  
Moderator: Enrique Moltó  
Location: MULTIPURPOSE IC

- 14:55 Introduction
- 15:00 C-0408 USE OF ARTIFICIAL NEURAL NETWORK FOR ANALYSIS OF DATA THAT RESULTS OF EXPERIMENTS  
**José Américo Trivellato Messias**  
José Américo Trivellato Messias, Evandro C. Melo, Marcelo L. Silva, José H. Martins, Paulo M. B. Monteiro, Paulo R. Cecon
- 15:15 C-1605 PREDICTION OF SUGAR CONTENT ALONG THE HEIGHT OF SUGARCANE INTERNODES USING SPECTROSCOPIC METHODS  
**Nazmi Mat Nawi**  
Nazmi Mat Nawi, Troy Jensen, Guangnan Chen, Craig Baillie

## 247 SESSION

14:55-16:30  
**(PF): MECHANICAL DAMAGE**  
Moderator: Veronique Bellon  
Location: ROOM 1

- 14:55 Introduction
- 15:00 C-0026 SIMULATION AND MODELLING THE MECHANICAL DAMAGE TO COWPEA SEEDS UNDER IMPACT  
**Feizollah Shahbazi**  
Feizollah Shahbazi, Sassan Valizadeh, Ali Dolatshah
- 15:15 C-1927 INFLUENCE OF SELF-COMPACTION ON AIR-FLOW RESISTANCE OF WOOD CHIP BULKS  
**Joachim Müller**  
Joachim Müller, Shkelqim Karaj, Klaus Meissner
- 15:30 C-0535 TEXTURE OF CANARIUM FRUIT (CANARIUM SCHWEINFURTHII ENGL.) PULP  
**Gilles Bernard Nkouam**  
Gilles Bernard Nkouam, César Kapseu, Michel Dirand, Danielle Barth
- 15:45 C-0273 A STOCHASTIC MODEL FOR FIRMNESS LOSS IN 'BRAEBURN' APPLES DURING CONTROLLED ATMOSPHERE STORAGE  
**Bert Verlinden**  
Jan Van Impe, Annemie Geeraerd, Bart Nicolai, Bert Verlinden, Maarten Hertog, Sunny George Gwanpua Foncham



- 16:00 C-2128 GEOMETRIC VS. AERODYNAMIC DIAMETER FOR MODELING AIRFLOW RESISTANCE OF WOOD CHIP  
**Shkelqim Karaj**  
Shkelqim Karaj, Joachim Müller, Klaus Meissner

## 248 SESSION

14:55-16:30  
**(SPC02): INDOOR AEROLICS II**  
Moderator: Juan Ignacio Montero  
Location: ROOM 2

- 14:55 Introduction
- 15:00 C-1213 ASSESSMENT OF VENTILATION PERFORMANCE IN AGRICULTURAL FACILITIES USING AGE-OF-AIR CONCEPT AND CFD TECHNOLOGY  
**Kyeong-seok Kwon**  
Kyeong-seok Kwon, In-bok Lee
- 15:15 C-0343 A COMPARISON BETWEEN THREE METHODS FOR ESTIMATING VENTILATION RATE OF A GREENHOUSE  
**Meir Teitel**  
Meir Teitel, Erez Wenger
- 15:30 C-1825 PRELIMINARY STUDY OF THE DISTANCE BETWEEN GREENHOUSES AND ITS EFFECT TO WIND DRIVEN VENTILATION  
**Ricardo Suay**  
Gonzalo Gomez-Mataix, Juan Ignacio Montero, Vanessa Raya, Ricardo Suay
- 15:45 C-1023 ANALYSIS OF CLIMATE UNIFORMITY IN A NATURALLY VENTED GREENHOUSE EQUIPPED WITH HIGH PRESSURE FOGGING SYSTEM USING CFD  
**Murat Kacira**  
Ehab Tamimi, Murat Kacira
- 16:00 C-1965 VALIDATION OF CFD SIMULATION OF AIRFLOW FROM AN AIR CIRCULATOR ABOVE CROP CANOPIES  
**Takeshi Kuroyanagi**  
Takeshi Kuroyanagi
- 16:15 C-1351 CFD SIMULATIONS OF THE DISTRIBUTED CLIMATE EVOLUTION INSIDE A GLASSHOUSE AT NIGHT  
**Benjamin Morille**  
Benjamin Morille, Romain Genez, Pierre Emmanuel Bournet, Christophe Migeon, Hacene Bouhoun Ali

## 249 SESSION

14:55-16:30  
**(SE): ANIMAL HOUSING**  
Moderator: Christer Nilson  
Location: ROOM 3

- 14:55 Introduction

- 15:00 C-1855 TECHNOLOGY AND SUSTAINABILITY. A REVIEW  
**Aad Jongebreur**  
Aad Jongebreur

- 15:15 C-1189 CONCEPT OF A LOW-ENERGY DAIRY BARN WITH FORCED VENTILATION  
**Kristina von Bobrutzki**  
Kristina von Bobrutzki, Werner Berg, Jochen Mellmann, Reiner Brunsch

- 15:30 C-1492 BUILDING COSTS FOR DAIRY BARN WITH DIFFERENT HERD SIZE, LAYOUT AND BUILDING CONSTRUCTIONS.  
**Geir Naess**  
Geir Naess, Grete Stokstad

- 15:45 C-1860 INTEGRATED HIGH PRESSURE FOGGING SYSTEM WITH AIR VENTILATION AND CIRCULATION SYSTEMS FOR DAIRY BARN COOLING  
**Avraham Arbel**  
Avraham Arbel

- 16:00 C-0804 NUMERICAL INVESTIGATION ON THE EFFECT OF BAFFLES ON FLOW IN VERTICAL SLOT FISHWAYS  
**Masayuki Fujihara**  
Masayuki Fujihara, Satoshi Yamanaka, Tomoki Izumi, Edward Lapong

- 16:15 C-0032 STUDY OF FEEDER CALVES STRUCTURES FOR MEDIUM FATTENING HERDS UNDER EGYPTIAN CONDITIONS  
**Mohamed Hatem Hashem**  
mohamed hatem hashem

## 250 SESSION

14:55-16:30  
**(SPC04): EU PROJECTS: 3D-MOSAIC AND RHEA PROJECTS**  
Moderator: Manuela Zude  
Location: ROOM 4

- 14:55 Introduction
- 15:00 C-0892 CORRELATION ANALYSES OF HIGH RESOLUTION 3D SOIL ELECTRICAL CONDUCTIVITY AND TIME SERIES OF FRUIT QUALITY FEATURES  
**Jana Käthner**  
Jana Käthner, Paolo Rozzi, Manuela Zude
- 15:15 C-0899 TOWARDS PRECISION MANAGEMENT OF ORCHARDS: USING AUTOMATED MONITORING TO BUILD A GIS-BASED SPATIAL DECISION SUPPORT SYSTEM  
**Amots Hetzroni**  
Amots Hetzroni, Aviva Peeters, Alon Ben-Gal
- 15:30 C-1078 COMPARISON OF RADIO PATH LOSS MODELS FOR WIRELESS SENSOR NETWORKS IN ORCHARD ENVIRONMENTS  
**Manuela Zude**  
Stavros Vougioukas, Hristos Anastasiu, Christian Regen, Manuela Zude

- 15:45 C-1332 NON-DESTRUCTIVE OPTICAL ASSESSMENT OF PHOTON PATH LENGTHS IN FRUIT DURING RIPENING: IMPLICATIONS ON DESIGN OF CONTINUOUS-WAVE SENSORS  
**Alessandro Torricelli**  
Alessandro Torricelli, Lorenzo Spinelli, Jana Kaethner, Joern Selbeck, Alberto Franceschini, Paolo Rozzi, Manuela Zude,
- 16:00 C-1500 NAVIGATION AND TREE MAPPING IN ORCHARDS  
**Hans W. Griepentrog**  
Claes L. Jaeger-Hansen, Hans W. Griepentrog, Jens C. Andersen
- 16:15 C-1663 THE RHEA PROJECT: USING A ROBOT FLEET FOR A HIGHLY EFFECTIVE CROP PROTECTION  
**Pablo Gonzalez-de-Santos**  
Pablo Gonzalez de Santos, Cesar Fernandez-Quintanilla, Angela Ribeiro

## 251 SESSION

14:55-16:30  
**(SPC06): WSN IN ENVIRONMENTAL MONITORING I**  
**Moderator: Victoria Blanes**  
**Location: ROOM 5**

- 14:55 Introduction
- 15:00 C-1286 SITE SPECIFIC AUTOMATED DRIP IRRIGATION FOR PALM TREES USING WIRELESS SENSOR NETWORK  
**Hema N Krishnamurthy**  
Hema N Krishnamurthy, Krishna Kant, Hima Bindu Maringanti
- 15:15 C-1955 A WIRELESS SENSOR NETWORK FOR PRECISE SOIL WATER MANAGEMENT IN AN ORCHARD  
**Takashi Togami**  
Takashi Togami, Kyosuke Yamamoto, Ryoei Ito, Atsushi Hashimoto, Takaharu Kameoka
- 15:30 C-1937 CLIMATIC CHANGES AND EVALUATION OF THEIR EFFECTS ON AGRICULTURE IN ASIAN MONSOON REGION  
**Masaru Mizoguchi**
- 15:45 C-1361 ADAPTIVE RFID SENSING OF RELATIVE TEMPERATURE AND HUMIDITY FOR SMART FARM QUALITY CONTROLLER SYSTEM.  
**Chalitda Madhyamapurush**  
Chalitda Madhyamapurush
- 16:00 C-0551 SMART FUZZY CONTROL OF A SOLAR DRYER THROUGH USING LOW-COST MODEL-BASED SENSORS  
**Heidi Tatiana Jimenez Ariza**  
Alik Abakarov, Heidi Tatiana Jiménez, Eva Cristina Correa Hernando, Belén Diezma, Francisco Javier Arranz, Javier García Hierro, José Ignacio Robla Villalba, Pilar Barreiro Elorza

- 16:15 Round table IV (Vahid Tarokh, Pilar Barreiro, Esmaeil Nadimi)

## 252 SESSION

14:55-16:30  
**(RD): LANDSCAPE 2**  
**Moderator: Daniele Torreggiani**  
**Location: ROOM 6+7**

- 14:55 Introduction
- 15:00 C-1697 TECHNOLOGICAL CHANGE IN PADDY PRODUCTION: A COMPARATIVE ANALYSIS OF TRADITIONAL AND DIRECT SEEDING METHODS OF CULTIVATION  
**Radhey Shyam Singh Radhey R S Singh**  
Shyam Singh Radhey
- 15:15 C-0729 ENGINEERING CONSEQUENCES OF CHANGING TRAFFIC FLOWS ON MINOR RURAL ROADS IN A DEVELOPING MULTIFUNCTIONAL EUROPEAN COUNTRY  
**C.F. (Rinus) Jaarsma**  
C.F. (Rinus) Jaarsma, C.M.L. (Tia) Hermans, W.A. (Willem) Rienks, J.r. De Vries
- 15:30 C-0457 CHARACTERIZING THE SPECIFIC MECHANICAL ENERGY REQUIREMENT (SME) OF EXTRUDATES OF CASSAVA AND CEREALS FROM A LOCALLY DEVELOPED EXTRUDER  
**Folasayo Fayose Titilola**  
Folasayo Fayose Titilola, Leo. Agbetoye
- 15:45 C-2269 MEANS OF SAMPLING IN RURAL LANDSCAPE VALUATION. THE USE OF PHOTOREALISTIC VISUAL PRESENTATION.  
**Maria-Jesus Montero Parejo**  
María Jesús Montero Parejo, Sergio López-Casares, Lorenzo García-Moruno, Julio Hernández Blanco
- 16:00 C-2251 THE VALORISATION AND CHARACTERISATION OF THE AGRARIAN TERRACED LANDSCAPE. A CASE STUDY IN THE COSTA VIOLA AREA (ITALY)  
**Giuseppe Modica**  
Salvatore Di Fazio, Giuseppe Modica
- 16:15 C-1698 IMPACT OF SELF PROPELLED PADDY TRANSPLANTER IN KERALA  
**Radhey Shyam Singh Radhey R S Singh**  
Shyam Singh Radhey, KVR Rao Ankur

## 253 SESSION

14:55-16:30  
**(SPC03): HYPERSPECTRAL IMAGING I**  
**Moderator: Jozsef Felfoldi**  
**Location: ROOM 8+9**

- 14:55 Introduction

- 15:00 C-0221 SELECTION OF OPTIMAL WAVELENGTH FEATURES FOR DECAY DETECTION IN CITRUS FRUIT USING THE ROC CURVE  
**Delia Lorente Garrido**  
Delia Lorente, Juan Gómez-Sanchis, Nuria Aleixos Borrás, Sergio Cubero, Oscar Leonardo García-Navarrete, Antonio Serrano, Emilio Soria, Jose Blasco Ivars
- 15:15 C-0304 HYPERSPECTRAL IMAGING OF INTACT BELL PEPPERS  
**Zeev Schmilovitch**  
Zeev Schmilovitch, Timea Ignat, Victor Alchanatis, Jozsef Felfoldi
- 15:30 C-1200 PREDICTION OF BEEF CHEMICAL COMPOSITION BY NIR HYPERSPECTRAL IMAGING  
**Gamal ElMasry**  
Gamal M. Elmasry, Da-Wen Sun, Paul Allen
- 15:45 C-1636 NIR HYPERSPECTRAL IMAGING FOR FAT QUANTIFICATION IN MINCED PORK  
**Douglas Fernandes Barbin**  
Douglas Fernandes Barbin, Gamal M. Elmasry, Da-Wen Sun, Paul Allen
- 16:00 C-0596 SPATIAL MAPPING OF MOISTURE CONTENT IN TOMATO FRUITS USING HYPERSPECTRAL IMAGING AND ARTIFICIAL NEURAL NETWORKS  
**Kaveh Mollazade**  
Kaveh Mollazade, Mahmoud Omid, Fardin Akhlaghian Tab, Sayed Saeid Mohtasebi, Manuela Zude

## 254 SESSION

14:55-16:30  
**(PM): SPRAYERS AND DOSES**  
Moderator: Samuel Gan Mor  
Location: AUDITORIO 1

- 14:55 Introduction
- 15:00 C-0391 A SPRAYING SYSTEM DEVELOPED FOR VARIABLE PESTICIDE DOSAGE WITHOUT USING PESTICIDE INJECTION METHODS  
**Nils Bjugstad**  
Nils Bjugstad, Tore Ensby, Espen Hugo Holth, Ole Kristian Moen, Henrik F Thorstensen
- 15:15 C-2334 QUALITY OF APRICOT ORCHARD PROTECTION BASED ON THE TYPE OF AIR ASSISTED SPRAYERS AND APPLICATION RATES  
**Aleksandar Sedlar**  
Aleksandar Sedlar, Rajko Bugarin
- 15:30 C-1547 AIR VELOCITY DISTRIBUTIONS FROM A VARIABLE-RATE AIR- ASSISTED SPRAYER FOR TREE APPLICATIONS  
**Heping Zhu**  
Heping Zhu

- 15:45 C-1568 SPRAYING QUALITY ASSESSMENT OF SPRAYERS DEVOTED TO MOSQUITO CONTROL  
**Vincent De Rudnicki**  
Vincent De Rudnicki, Jean Paul Douzals, Michel Tolosa, Nicolas Sidos, Eric Cotteux
- 16:00 C-1614 DEVELOPMENT OF A NEW SPRAYER FOR PPP APPLICATION IN KIWI ORCHARDS ("PERGOLA") TRAINED  
**Paolo Marucco**  
Paolo Balsari, Mario Tamagnone, Gianluca Oggero, Paolo Marucco

## 255 SESSION

16:55-18:30  
**(SW-SPC01): SOIL WATER RELATIONSHIPS**  
Moderator: Nery Zapata  
Location: AUDITORIO 2

- 16:55 Introduction
- 17:00 C-0058 ESTIMATION OF REFERENCE EVAPOTRANSPIRATION FROM CLIMATIC DATA IN KURDISTAN REGION-IRAQ  
**Mohammed Azeez Saeed**  
Mohammed Saeed Azeez
- 17:15 C-2273 EVALUATION OF THE MICRO-SCALE ADVECTION EFFECT ON THE SOIL WATER MOVEMENT IN MICRO- IRRIGATED FIELDS
- 17:30 C-1035 EVALUATION OF SOIL WATER PROFILE SIMULATIONS IN DRIP IRRIGATION BASED ON SOIL HYDRAULIC PROPERTIES WITH EXPERIMENTAL OBSERVATIONS  
**Sina Besharat**  
Sina Besharat, Neda Khanmohammadi, Hossein Rezaie, Javad Behmanesh

## 256 SESSION

16:55-18:30  
**(SPC-05): ENHANCING THERMAL ENVIRONMENT**  
Moderator: Hongwei Xin  
Location: AUDITORIO 3A

- 16:55 Introduction
- 17:00 C-0316 THE USE OF OUTDOOR YARDS BY SHEEP DURING WINTER  
**Grete Helen Jørgensen Meisfjord**  
Grete Helen Jorgensen Meisfjord, Knut Egil Boe
- 17:15 C-1421 EFFECTS OF DIFFERENT PIG HOUSES ON INDOOR ENVIRONMENTAL PARAMETERS AND GROWTH PERFORMANCE OF GROWING AND FINISHING PIGS  
**Anguo Chen**  
Anguo Chen, Xuping Wang, Guoqi Liang, Qihua Hong, Caimei Yang

- 17:30 C-1866 COMPARISON OF DIFFERENT AIR SUPPLY AND COOLING SYSTEMS IN PIG FATTENING HOUSES  
**Joachim Threm**  
Joachim Threm; Eva Gallmann; Wilhelm Pflanz; Thomas Jungbluth
- 17:45 C-1549 COOLING COWS: THE UDDER WAY  
**Kifle Gebremedhin**  
Kifle Gebremedhin, Chin Lee, Jamie Larson, Jeremiah D. Davis
- 18:00 C-1069 DEVELOPMENT OF A SMART PHONE APP FOR HEAT STRESS DETECTION AND MITIGATION IN LIVESTOCK  
**Donald Spiers**  
Donald Spiers, Brad Scharf, Peggy Ann Eichen

## 257 SESSION

16:55-18:30  
**(SPC-05): EMISSIONS ABATEMENT & CONTROL**  
Moderator: Christopher Wathes  
Location: AUDITORIO 3B

- 16:55 Introduction
- 17:00 C-0368 METHODS TO REDUCE AIRBORNE DUST CONCENTRATIONS IN A LOOSE-HOUSING SYSTEM FOR LAYING HENS  
**Gosta Gustafsson**  
Gosta Gustafsson, Eva Von Wachenfelt
- 17:15 C-0833 POSSIBLE MEANS OF REDUCTION OF AIRBORNE POLLUTANTS IN AND FROM POULTRY HOUSES  
**Stefan Linke**  
Stefan Linke, Torsten Hinz, Karl-Heinz Krause, Jochen Hahne, Tatjana Winter
- 17:30 C-0405 REMOVAL EFFICIENCY OF A WIRE-TO-PLATE ELECTROSTATIC PRECIPITATOR FOR ABATEMENT OF PARTICULATE MATTER EMISSIONS FROM POULTRY HOUSES  
**Albert Winkel**  
Albert Winkel, Julio Mosquera, Nico W. M. Ogink
- 17:45 C-1507 USE OF ZINC OXIDE NANOPARTICLES TO CONTROL HYDROGEN SULPHIDE, AMMONIA AND ODOUR EMISSIONS FROM PIG BARNs  
**Bernardo Predicala**  
Bernardo Predicala, Bernardo Predicala, Alvin Alvarado, Daisy Asis
- 18:00 C-1714 QUANTIFICATION OF THE NH<sub>3</sub> ADSORPTION ON DUST AND ITS CONSEQUENCES ON THE DESIGN OF BIOFILTERS FOR THE REMOVAL OF AERIAL POLLUTANTS IN PIGGERIES  
**Lomig Hamon**  
Lomig Hamon, Solène Lagadec, Eric Dumont, Brigitte Landrain, Paul Landrain, Yves André

- 18:15 C-0683 ODOUR AND AMMONIA REDUCTIONS IN VENTILATION AIR FROM A UNIT WITH GROWING-FINISHING PIGS USING A 3-STEP AIR CLEANER  
**Anders Leegaard Riis**  
Anders Leegaard Riis

## 258 SESSION

16:55-18:30  
**(EN): GASEOUS BIOFUELS II**  
Moderator: Zehra Sapci  
Location: MULTIPURPOSE IA

- 16:55 Introduction
- 17:00 C-1298 ANAEROBIC DIGESTION IN NORTHERN ITALY: THE SITUATION IN PIEMONTE REGION  
**Fabrizio Gioelli**  
Fabrizio Gioelli, Paolo Balsari, Elio Dinuccio
- 17:15 C-2157 HOW EFFICIENT ARE AGITATORS IN BIOGAS DIGESTERS? DETERMINATION OF THE EFFICIENCY OF SUBMERSIBLE MOTOR MIXERS AND INCLINE AGITATORS BY MEASURING THE NUTRIENT DISTRIBUTION IN BIOGAS DIGESTERS  
**Hans-Joachim Nägele Naegele**  
Hans-Joachim Nägele Naegele
- 17:30 C-1446 DESIGN AND IMPLEMENTATION OF ON-SITE PILOT SCALE IBR ANAEROBIC DIGESTERS  
**Shaun Dustin**  
Shaun Dustin, Zhongtang Yu, Conly Hansen

## 259 SESSION

16:55-18:30  
**(IT): SENSORS III**  
Moderator: Gilber Grenier  
Location: MULTIPURPOSE IC

- 16:55 Introduction
- 17:00 C-1806 POTENTIAL TECHNOLOGIES TO MEASURE SUGARCANE QUALITY IN THE FIELD  
**Nazmi Mat Nawi**  
Nazmi Mat Nawi, Troy Jensen, Guangnan Chen, Craig Baillie
- 17:15 C-0475 GEOLOCATION AND INFORMATION MANAGEMENT OF FARMS WEB BASED. VISUALNACERT, THE SEEKER OF AGRICULTURE  
**Mercedes Iborra Brosetqa**  
Mercedes Iborra Brosetqa, Elisa Peñalvo

17:30 C-1349 GIS ANALYSIS FOR THE STUDY OF RURAL DEPOPULATION: THE KINGDOM OF VALENCIA (TOMAS LOPEZ 1789)  
**Carlos San-Antonio Gomez**  
Carlos San-Antonio Gomez, Francisco Manzano-Agugliaro, Josefina Martínez-García

17:45 C-2156 WIRELESS SELF-POWERED TRANSPONDERS AND MULTI-SENSING UNIT TO ENABLE ISOBUS IDENTIFICATION OF MECHANICAL IMPLEMENTS  
**Lorenzo Fantesini**  
Gino Mainardi, Marco Ferretti, Stefano Marzani, Stefano Scorcioni, Alessandro Bertacchini, Luca Larcher, Denis Dondi, Lorenzo Fantesini

## 260 SESSION

16:55-18:30  
**(PF): STORAGE TECHNIQUES**  
Moderator: Daniel Valero  
Location: ROOM 1

16:55 Introduction

17:00 C-1355 CAMBIOS DE LA GUANÁBANA (ANNO-NA MURICATA L. CV. ELITA) DURANTE SU VIDA POSTCOSECHA  
**Carlos Julio Márquez Cardozo**  
Carlos Julio Márquez Cardozo

17:15 C-2116 NOVEL PLA EMAP SYSTEM FOR CHERRY TOMATOES AND PEACHES ABLE TO REGULATE THE TARGETED IN-PACKAGE ATMOSPHERE - PART II: EXPERIMENTAL AND NUMERICAL VALIDATION  
**Demetres Briassoulis**  
Demetres Briassoulis; Anastasios Giannoulis; Antonis Mistriotis

17:30 C-2136 STUDIES ON SHELF LIFE OF SOYPANEER AT AMBIENT CONDITION  
**Smita Khodke**  
Smita Khodke, Shradhha Velhal, Shiva lathal

17:45 C-1038 IMPACT OF TEMPERATURE AND RELATIVE HUMIDITY ON THE TRANSPIRATION RATE OF POMEGRANATE ARILS  
**Oluwafemi Caleb**  
Oluwafemi J. Caleb, Oluwafemi J. Caleb, Pramod V. Mahajan, Umezurike Linus Opara

## 261 SESSION

16:55-18:30  
**(SPC02): INDOOR AEROLICS III**  
Moderator: Thomas Banhazi  
Location: ROOM 2

16:55 Introduction

17:00 C-2097 A CFD ANALYSIS OF A FULLY-STOCKED VENTILATED LIVESTOCK VEHICLE DURING DIFFERENT MODES OF TRANSPORTATION  
**Tomas Norton**  
Tomas Norton, Jairo Saraz, Malcolm Mitchell, Peter Kettlewell

17:15 C-2232 NATURAL VENTILATION OF COMMERCIAL DAIRY COW HOUSES: SIMULATING THE EFFECT OF ROOF SHAPE USING CFD  
**Athanasios Sapounas**  
Athanasios Sapounas, Hendrik Jan van Dooren, Michel Smits

17:30 C-0472 CFD ANALYSES OF TEMPERATURE DISTRIBUTION IN A HYBRID VENTILATED PIG UNIT  
**Bjarne Bjerg**  
Bjarne Bjerg, Peter Hansen, Erling Friis Petersen

17:45 C-0474 CFD ANALYSES OF THE INFLUENCE OF AIR INTAKE ON THE EFFECTIVENESS OF A PARTLY PIT EXHAUST SYSTEM  
**Bjarne Bjerg**  
Bjarne Bjerg, Guoqiang Zhang

18:00 C-0874 COMPUTATIONAL MODELLING AND SCALE MODEL VALIDATION OF AIRFLOW PATTERNS IN NATURALLY VENTILATED BARNs  
**Merlijn De Paepe**  
Merlijn De Paepe, Jan G. Pieters, Bart Merci, Wim M. Cornelis, Donald Gabriels, Peter Demeyer

## 262 SESSION

16:55-18:30  
**(SE): RURAL BUILDING AND LANDSCAPE**  
Moderator: Jose Maria Fuentes  
Location: ROOM 3

16:55 Introduction

17:00 C-0916 REUSE OF VACANT AGRO-INDUSTRIAL BUILDINGS. THE CASE OF THE PUBLIC SLAUGHTERHOUSES IN SPAIN  
**José María Fuentes Pardo**  
José María Fuentes, Ana Isabel García, Carlos González-Montellano, Eutiquio Gallego, Francisco Ayuga

17:15 C-1721 SPACE-TIME ANALYSIS OF THE URBAN-RURAL GRADIENT IN THE METROPOLITAN AREA OF MADRID AND ITS SURROUNDINGS (GUADALAJARA AND TOLEDO)  
**Ana Isabel García**  
Susana Díaz-Palacios, Francisco Ayuga, Ana Isabel García

17:30 C-0812 INTEGRATING LANDSCAPE QUALITY IN FARM BUILDING DESIGN: ASSESSMENT OF THE MAIN MORPHOLOGICAL FEATURES OF RURAL BUILDINGS  
**Patrizia Tassinari**  
Stefano Benni, Daniele Torreggiani, Enrica Dall'Ara, Patrizia Tassinari

- 17:45 C-1904 RESEARCH OF DIMENSIONING CRITERIA FOR FARM WINERY DESIGN: ANALYSIS OF SPATIAL LAYOUTS IN A STUDY AREA  
**Stefano Benni**  
Patrizia Tassinari, Daniele Torreggiani, Stefano Benni, Valentina Corzani
- 18:00 C-1675 HYDROSEEDING FOR REVEGETATION IN A SEMIARID MEDITERRANEAN ENVIRONMENT  
**Mariangela Vallone**  
Pietro Catania, Marco Salvia, Mariangela Vallone

## 263 SESSION

16:55-18:30  
**(SPC04): PRECISION AGRICULTURE FOR ORCHARD**  
Moderator: Qim Zhang  
Location: ROOM 4

- 16:55 Introduction
- 17:00 C-0181 DEVELOPMENT OF A PLANT WATER STRESS MODEL, BASED ON INFRARED THERMOGRAPHY, AND THEIR APPLICATION IN AN OLIVE OIL ORCHARD  
**Stanley Best Sepulveda**  
Stanley Best, Lorenzo Leon, Rodrigo Quintana
- 17:15 C-0253 COMPARATIVE STUDY OF ARCHITECTURES FOR AUTOMATIC SENSING OF VINE VIGOR  
**Verónica Sáiz Rubio**  
Veronica Saiz Rubio, Francisco Rovira Más
- 17:30 C-1915 EARLY ESTIMATION OF VINEYARD YIELD: SITE SPECIFIC COUNTING OF BERRIES BY USING A SMARTPHONE  
Gilbert Grenier  
Mathieu Grossetête, Yann Berthoumieu, Jean Pierre Da costa, Christian Germain, Olivier Lavielle, Gilbert Grenier
- 17:45 C-0518 GRASP AFFORDANCE FOR ROBOTIC SELECTIVE HARVESTING BASED ON HUMAN DEMONSTRATIONS  
Maayan Yaacobovich  
Maayan Yaacobovich, Danny Eizicovits, Sigal Berman

## 264 SESSION

16:55-18:30  
**(SPC06): WSN IN ENVIRONMENTAL MONITORING II**  
Moderator: Thomas Toftegaard  
Location: ROOM 5

- 16:55 Introduction

- 17:00 C-1700 SPECTRAL PREDICTION OF APPLE QUALITY FOR TWO DANISH CULTIVARS  
**Mabel Virginia Martinez Vega**  
Mabel Virginia Martinez Vega; Dvoralai Wulfsohn; Torben Toldam-andersen
- 17:15 C-1999 KEY TECHNOLOGICAL FACTORS FOR SUCCESSFUL RFID SYSTEM APPLICATION IN FOOD SUPPLY CHAIN MANAGEMENT  
**Cristina Tortia**  
Cristina Tortia, Paolo Gay, Paolo Barge, Valentina Merlino, Sara Serale, Claudio Gandini
- 17:30 C-2121 POSSIBILITY AND EFFECTIVENESS OF WEB-BASED SENSOR NETWORK SYSTEM TO PERFORM AGRICULTURAL APPLICATIONS USING IMAGE DATA  
**Tokihiro Fukatsu**  
Tokihiro Fukatsu, Masayuki Hirafuji, Takuji Kiura
- 17:45 C-0350 DEVELOPMENT OF LOW COST PHOTOVOLTAIC SENSOR FOR OVER-TREE RADIATION ASSESSMENT  
**Miguel Angel Muñoz-García**  
Miguel Angel Muñoz-garcía, Angela Melado, Pilar Barreiro Elorza, José-lorenzo Balenzategui
- 18:00 C1452 CHILDREN AS FIELD SENSORS - A TRIAL IN VIETNAM  
**Seishi Ninomiya**  
Seishi Ninomiya, Yumi Mori, Toshiya Takasaki, Tranthin Hoa, Y. Okano, Takaharu Kameoka, S. Togami; A. Takezaki, R Ikeda, R. Ishida
- 18:15 Round table V (Vahid Tarokh, Pilar Barreiro, Esmaeil Nadimi, Victoria Blanes Vidal, Thomas Toftegaard)

## 265 SESSION

16:55-18:30  
**(RD):ECONOMIC ASPECTS**  
Moderator: María Jesús Montero  
Location: ROOM 6+7

- 16:55 Introduction
- 17:00 C-1701 INNOVATION AND EMPLOYMENT: THE CASE OF COFFEE PRODUCTION IN BRAZIL  
**Marco Ospina Patino**  
Marco Ospina Patino, Milla Reis de Alcantara, Geraldo Tavares do Nascimento, Marina Falascina
- 17:15 C-0307 ROLE OF PUBLIC-PRIVATE PARTNERSHIPS BY MARKETING OF MOUNTAIN FOOD PRODUCTS  
**Andreja Borec**  
Jernej Prisenk, Andreja Borec, Karmen Pazeč

- 17:30 C-1705 ANALYSIS AND FORECASTING OF SOYBEAN STORAGE NEEDS IN BRAZIL  
**Marco Ospina Patino**  
Marco Ospina Patino, Marina Falascina, Geraldo Tavares do Nascimento, Milla Reis de Alcantara
- 17:45 C-0048 A STUDY OF THE LIVING CONDITIONS OF FARMERS IN IRAN, IMMIGRATION MOTIVES AND AGRICULTURAL METHODS FOR RURAL DEVELOPMENT IN IRAN  
**Seyed Abbas Mirjalili**  
Seyed Abbas Mirjalili, Elahe Poorazizi
- 18:00 C-0379 DIAGNOSIS OF COLOUR COTTON PRODUCTIVE CHAIN AT PARAIBA STATE, BRAZIL  
**Kever Bruno Paradelo Gomes**  
Kever Bruno Paradelo Gomes, Gabriel Henrique Horta De Oliveira, Andreia Maria da Fonseca Boechat
- 17:00 C-0919 DETECTION AND QUANTIFICATION OF FUSARIUM-SPECIFIC DISEASE SYMPTOMS IN MAIZE EARS BY SPECTRAL IMAGING  
**Martin Kraft**  
Martin Kraft, Elisabeth Oldenburg
- 17:15 C-1123 NON-DESTRUCTIVE TEXTURE ANALYSIS OF FARMED SALMON USING HYPERSPECTRAL IMAGING TECHNIQUE  
**Di Wu**  
Di Wu, Hong-Ju He, Da-Wen Sun
- 17:30 C-1198 DEVELOPMENT OF NON-DESTRUCTIVE EVALUATION TECHNIQUE FOR SEED VIABILITY BY USING HYPERSPECTRAL IMAGING TECHNIQUE  
**Ahn chi-kook**  
Chi-Kook Ahn, Byoung-Kwan Cho, Jum-Soon Kang
- 17:45 C-1454 SEGMENTATION OF GREENHOUSE CUCUMBER PLANTS USING MULTI-SPECTRAL IMAGERY  
**Scott Noble**  
Scott Noble, Dali Li

## 266 SESSION

16:55-18:30

### (ES): EVALUATION OF WORK ENVIRONMENT

Moderator: Eugenio Cavallo  
Location: MULTIPURPOSE IB

- 16:55 Introduction
- 17:00 C-0593 QUALITY AND SECURITY WORK ENVIRONMENT. RISK EVALUATION OF A FEEDLOT FARM  
**Antonio Monteiro Cardoso**  
Andreia Graça, Ana Vieira, Paula Correia, Antonio Monteiro Cardoso
- 17:15 C-0791 ANALYSIS OF UV EXPOSURE FOR FARMERS: FIRST EXPERIMENTAL RESULTS  
**Giorgia Nardini**  
Giorgia Nardini, Massimo Paroncini, Daniela Candido, Massimiliano Della Pasqua
- 17:30 C-1683 ERGONOMIC EVALUATION OF LOGGING MACHINE OPERATION  
**Roberto Abrahão Funes**  
Roberto Funes Abrahão, Almeida Simone Formigone, Tereso Mauro José Andrade
- 17:45 C-2081 PEST RISK PERCEPTION ASSESSMENT OF VINEYARD WORKERS  
**Boissonnot Romain**  
Boissonnot Romain, Grimbuhler Soni

## 267 SESSION

16:55-18:30

### (SPC03): HYPERSPECTRAL IMAGING II

Moderator: Victor Alchanatis  
Location: ROOM 8+9

- 16:55 Introduction

# WEDNESDAY, JULY 11

8:00-9:00 Geoffrey C. MREMA. Keynote Speaker General Session AUDITORIO1

## 301 SESSION

08:55 -10:30  
**(PM): FIELD PERFORMANCE**  
Moderator: Emilio Gil  
Location: AUDITORIO 1

- 8:55 Introduction
- 9:00 C-1704 PERFORMANCE CHARACTERISTICS OF A GASOLINE GENERATOR ENGINE USING E10 AND E20 MIXING RATIOS FOR ETHANOL GASOLINE FUEL  
**Babajide Adelekan**  
Babajide Adelekan
- 9:15 C-1768 ENERGY CONSUMPTION OF AGRICULTURAL TRANSPORTS AND INFLUENCING FACTORS  
**Heinz Bernhardt**  
Heinz Bernhardt, Götz Sebastian, Valentin Heizinger, Nina Zimmermann, Dirk Engelhardt
- 9:30 C-1767 IMPROVEMENT OF ORGANIC SPREADER DESIGN: THE USE OF SPREAD PATTERNS MODELLING  
**Jean-Christophe Roux**  
Jean-Christophe Roux, Didier Varion, Denis Miclet, Piron Emmanuel
- 9:45 C-0278 MECHANICAL CONTROL OF PURPLE NUTSEDGE (CYPERUS ROTUNDUS)  
Boaz Zion; Aharon Weissblum; Nachshon Shamir; Evgeni Smirnov;  
Gui Achdary; Joseph Hershenhorn

## 302 SESSION

08:55 -10:30  
**(SW-SPC01): SOIL ATER RELATIONSHIPS**  
Moderator: Samuel Ortega Farias  
Location: AUDITORIO 2

- 8:55 Introduction
- 9:00 C-0646 FEASIBILITY STUDY ON COMBINING FREQUENCY DOMAIN REFLECTOMETRY AND VISIBLE AND NEAR INFRARED SPECTROSCOPY FOR MEASUREMENT OF SOIL COMPACTION  
**Abdul Mounem Mouazen**  
Raed A. Al-Asadi, Abdul Mounem Mouazen
- 9:15 C-0760 REGRESSION ANALYSES AND AMELIORATION PROCEDURES FOR SUSPENDED SEDIMENT LOAD ESTIMATION IN AGRICULTURAL RIVERS  
**Edward Lapong**  
Edward Lapong, Masayuki Fujihara, Tomoki Izumi, Kunihiko Hamagami, Noriyuki Kobayashi, Toshiko Kakihara
- 9:30 C-0349 EXPANDING CALIBRATION OF AN ON-LINE MEASUREMENT SYSTEM OF TOPSOIL COMPACTION TO CLAY SOILS.  
**Mohammed Zakoullah Quraishi**  
Mohammed Zakoullah Quraishi, Kim Blackburn, Abdul Mounem Mouazen
- 9:45 C-2335 THE ROLE OF BIOENGINEERING TECHNOLOGIES FOR SOIL AND WATER CONSERVATION  
**Jose Luis Rubio**  
Jose Luis Rubio; Vicente Andreu

## 303 SESSION

08:55 -10:30  
**(AP): AQUACULTURE PRODUCTION SYSTEMS**  
Moderator: Morris Villarroel  
Location: AUDITORIO 3A

- 8:55 Introduction
- 9:00 C-0229 SENSORS FOR PREDICTING CAVIAR MATURITY IN FARMED STURGEON  
**Michael Delwiche**  
Michael Delwiche, Serge Doroshov, Peter Struffenegger, Joel Van Eenennaam
- 9:15 C-0664 FARMED FISH PRODUCTION COST IN RELATION TO THEIR NEUROENDOCRINOLOGICAL FUNCTIONS: A REVIEW  
**Sofronios Papoutsoglou**  
Sofronios Papoutsoglou
- 9:30 C-1953 HOW DOES FASTING BEFORE LAUGHTER AFFECT TROUT (ONCORYNCHUS MYKISS) WELFARE?  
**Morris Villarroel Robinson**  
Morris Villarroel Robinson, Javier López Luna, Fernando Torrent Bravo, Lucena Vásquez



# 304 SESSION

08:55 - 10:30  
**(AP): MANURE MANAGEMENT SYSTEMS I**  
Moderator: Yanhui Zhang  
Location: AUDITORIO 3B

- 8:55 Introduction
- 9:00 C-1225 ENVIRONMENTAL CHALLENGES IN MANURE MANAGEMENT  
**Vladimir Popov**  
Vladimir Popov, Dmitry Maximov, Alexander Bryukhanov
- 9:15 C-1222 EMISSIONS FROM PIG UNITS - EFFECTS OF THE AGE OF SLURRY  
**Kristoffer E.N. Jonassen**  
Kristoffer E.N. Jonassen
- 9:30 C-2277 EXPERIMENTAL EVALUATION OF MANURE EVAPORATION IN THE PADDOCK FOR A MANAGEMENT ALGORITHM DEVELOPMENT  
**Lorenzo Boccia**  
Stefania Pindozi, Salvatore Faugno, Collins Okello, Lorenzo Boccia
- 9:45 C-1172 STORAGE OF SLURRY IN EARTH-BANKED LINED BASINS IN FINLAND  
**Maarit Hellstedt**  
Maarit Hellstedt; Teemu Ala-kleme
- 10:00 C-1694 INTEGRATING ENVIRONMENT-ENHANCING ENERGY INTO LIVESTOCK PRODUCTION SYSTEM  
**Yuanhui Zhang**  
Yuanhui Zhang, Lance Schideman, Guo Yu, Yan Zhou
- 10:15 C-0557 IMPROVING THE AGRO-ENVIRONMENTAL VALUE OF CATTLE STRAW MANURE  
**Ghulam Abbas Shah**  
Ghulam Abbas Shah, Peter W. G. Groot Koerkamp, Jeroen C.J. Groot, Egbert A. Lantinga

# 305 SESSION

08:55 - 10:30  
**(EN): SOLID BIOMASS**  
Moderator: Joy Agnew  
Location: MULTIPURPOSE IA

- 8:55 Introduction
- 9:00 C-0367 BIOMASS-BASED SYSTEM DESIGN FOR HEATING AND CO<sub>2</sub> STORAGE  
**Jorge Antonio Sánchez Molina**  
Jorge Antonio Sanchez, Francisco Rodríguez, Jose Luis Guzman, Francisco Gabriel Acien, Juan Carlos López

- 9:15 C-0399 INFLUENCE OF AIR MASS FLOW AND FEEDING RATE ON COMBUSTION PERFORMANCE OF JATROPHA CURCAS SEED SHELLS AND PRESS CAKE IN TILTING FURNACE WITH BOWL BURNER  
**Shkelqim Karaj**  
Shkelqim Karaj, Phillip Schneider, Joachim Müller
- 9:30 C-0471 EFFECT OF PLANTING DENSITY ON THE MECHANICAL PROPERTIES OF SUNFLOWER STEM  
**Ryota Murai**  
Ryota Murai, Haruka Tsuchiya, Seishu Tojo, Tadashi Chosa, Hitoshi Kato
- 9:45 C-1646 COMBUSTION OF AGRICULTURAL BIOMASSES: MASS BALANCE OF PRINCIPAL ELEMENTS  
**Stephane Godbout**  
Stephane Godbout, Joahnn H. Palacios, Patrick Brassard, Jean-Pierre Larouche, Frederic Pelletier, Stephane P. Lemay, Denis Bussieres, Matthieu Girard

# 306 SESSION

08:55 - 10:30  
**(IT): QUALITY PRODUCTION I**  
Moderator: Gilber Grenier  
Location: MULTIPURPOSE IC

- 8:55 Introduction
- 9:00 C-0324 BENEFITS OF CONTROLLED TRAFFIC FARMING IN EUROPE  
**Thomas Anken**  
Martin Holpp, Thomas Anken, Monika Sauter, Jan Rek, Rene Reiser, Hans-Rudolf Oberholzer, Peter Weisskopf, Oliver Hensel
- 9:15 C-0910 ICT FOR TRACEABILITY OF SUGAR CANE HARVESTING OPERATION IN SMALL FARMS  
**Jean-Pierre Chanet**  
Dany Deurveilher, Frédéric Chiroleu, Myriam Chanet, Jean-Pierre Chanet, Daniel Boffety
- 9:30 C-0937 EFFECTS OF DIFFERENT SOIL MANAGEMENT PRACTICES ON SOIL MECHANIC RESISTANCE AND SEED DEPTH PLACEMENT IN A MAIZE CROP IN ALENTEJO, PORTUGAL MEDITERRANEAN REGION  
**Luis Conceição Alcino**  
Luis Conceição Alcino, Pilar Barreiro Elorza, Ricardo Freixial, Susana Dias, Garrido Miguel, Valero Constantino
- 9:45 C-0266 USING LEAF NUTRIENTS TO MODEL SUGAR CANE QUALITY PARAMETERS  
**Francelino Rodrigues Jr.**  
Francelino A. Rodrigues Jr., Paulo S. Graziano Magalhães, Henrique C. J. Franco, Domingos G. P. Cerri

10:00 C-1000 PRELIMINARY STUDIES ON SPATIALLY VARIABLE NITROGEN APPLICATION FOR FORAGE MAIZE IN COMMERCIAL FIELDS IN THE UK  
**Evandro Mantovani Chartuni**  
Evandro Chartuni Mantovani, Evandro Chartuni Mantovani, Paula A. Misiewicz, David R. White, Richard John Godwin

## 307 SESSION

08:55 - 10:30  
**(PF): PACKAGING THECHNIQUES I**  
Moderator: Umezuruike Linus Opara  
Location: ROOM 1

8:55 Introduction

9:00 C-0771 EFFECTS OF NANO COMPOSITE COATING ON THE LEMON QUALITY  
**Jafar Hashemi**  
Jafar Hashemi, Ebrahim Taghinezhad, Jafar Hashemi

9:15 C-0781 MODIFIED ATMOSPHERE PACKAGING TO EXTEND COLD STORAGE OF POMEGRANATE CV. 'MOLLAR DE ELCHEV'  
**Maria B. Perez Gago**  
Atef Ibn Laribi, Lluís Palou Valls, Verónica Taberner, Maria B. Pérez-Gago

9:30 C-1967 HERMETIC STORAGE OF ARTIFICIALLY DRIED COCOA BEANS IN HOT-SEALED PLASTIC BAGS  
**Dennis Oke**  
Dennis Oke, Kayode Foluso Omotayo

9:45 C-2314 STUDY ON THE EFFECT OF ACTIVE PACKAGING ON PASSION FRUIT POSTHARVEST QUALITY  
**Phonkrit Maniwara**  
Phonkrit Maniwara, Kazuhiro Nakano, Danai Boonyakiat, Pichaya B.Poonlarp, Juggapong Natwichai, Shintaroh Ohashi

10:00 C-1632 NOVEL PLA EMAP SYSTEM FOR CHERRY TOMATOES AND PEACHES ABLE TO REGULATE THE TARGETED IN-PACKAGE ATMOSPHERE - PART I: ANALYTICAL MODEL  
**Antonis Mistriotis**  
Antonis Mistriotis, Demetres Briassoulis

## 308 SESSION

08:55 - 10:30  
**(PF): DRYING TECHNOLOGY I**  
Moderator: Carolina Maria Sánchez Sáenz  
Location: ROOM 6+7

8:55 Introduction

9:00 C-1493 EFFECT OF ETHYL OLEATE PRE-TREATMENT AND PACKAGING ON RHEOLOGICAL AND SENSORY PROPERTIES OF STORED DRIED MULBERRY  
**Mehdi Ghiafeh Davoodi**  
Mehdi Ghiafeh Davoodi, Shohreh Nikkhab

9:15 C-1094 CHARACTERIZATION OF EDIBLE FILMS OF ZEIN AND CHITOSAN ADDED WITH OILS USING NANOTECHNOLOGY TECHNIQUES.  
**Montserrat Escamilla-García**  
Montserrat Escamilla-García, Georgina Calderón Domínguez, Reynold Ramón Farrera-rebollo, José Jorge Chanona Pérez, Juan Vicente Méndez-Méndez, Adrián Martínez-Rivas

9:30 C-1973 FUNCTIONAL EFFECTS OF DIFFERENT HUMECTANTS ON DOUGH RHEOLOGY AND BARBARI FLAT BREAD QUALITY  
**Bahareh Sahraiyan**  
Fariba Naghipoor, Bahareh Sahraiyan, Mahdi Karimi, Mohammad Bagher Habibi Najafi, Mohammad Hossein Haddad Khodaparast, Zahra Sheikholeslami

9:45 C-1116 STEROID OF SANDFISH POWDER (HOLOTHURIA SCRABA) AS HORMONE REPLACEMENT THERAPY ON MENO-PAUSE  
**Etti Riani**  
Etty Riani, Nastiti Kusumorini, Syarifah Nurjanah, Muhammad Reza Cordova

10:00 C-1086 CHARACTERIZATION OF CARBOHYDRATE-PROTEIN EDIBLE FILMS USING MICRO AND NANO TECHNOLOGY TECHNIQUES  
**Georgina Calderón-Domínguez**  
Montserrat Escamilla-García, Reynold Ramón Farrera-rebollo, Adrián Martínez-Rivas, Georgina Calderón Domínguez

## 309 SESSION

08:55 - 10:30  
**AET: WORKSHOP**  
Location: ROOM 2

8:55 AET: WORKSHOP

## 310 SESSION

08:55 - 10:30  
**(SE): ENVIROMENT IN CROP PRODUCTION**  
Moderator: Fatima Baptista  
Location: ROOM 3

8:55 Introduction

9:00 C-0603 ROOT TEMPERATURE INFLUENCES GROWTH OF BLUEBERRY STEMS  
**Rei Kikuchi**  
Rei Kikuchi, Tadashi Chosa, Seishu Tojo

- 9:15 C-1378 A CLIMATE CONTROL STRATEGY FOR NATURALLY VENTILATED GREENHOUSE WITH VARIABLE HIGH PRESSURE FOGGING: EVALUATING ENERGY AND WATER SAVINGS, CLIMATE UNIFORMITY  
**Murat Kacira**  
Federico Villarreal-Guerrero, Murat Kacira, Efren Fitz-Rodriguez, Gene Giacomelli, Chieri Kubota
- 9:30 C-1816 MATHEMATICAL SIMULATION OF THE DEHUMIDIFIER OF SEAWATER GREENHOUSE  
**Abdulrahim Al-Ismaili**  
Abdulrahim Al-Ismaili, Edward Keith Weatherhead, Hemantha P W Jayasuriya
- 9:45 C-0575 INFLUENCE ON VINE PRODUCTION OF INNOVATIVE COVERING PLASTIC FILMS  
**Evelia Schettini**  
Giuliano Vox, Evelia Schettini, Giacomo Scarascia Mugnozza, Laura De Palma, Luigi Tarricone, Giovanni Gentile

## 311 SESSION

08:55 - 10:30  
**(SPC04): GNSS, SENSORS AND OFF-ROAD VEHICLE ARCHITECTURES**  
**Moderator: John Schueller**  
**Location: ROOM 4**

- 8:55 Introduction
- 9:00 C-0194 GPS-BASED INTRA-ROW WEED CONTROL SYSTEM: PERFORMANCE AND LABOR SAVINGS  
**David Slaughter**  
David C. Slaughter, Manuel Pérez Ruiz, Fadi Fathallah, Shrini Upadhyaya, Chris Gliever, Brandon Miller
- 9:15 C-0105 DEVELOPMENT OF A MODEL BASED APPLICATION CONTROL SYSTEM FOR PESTICIDE SPRAYERS  
**Heike Froeschle**  
Heike Froeschle, Markus Stroebel, Karlheinz Koeller
- 9:30 C-0628 THE QUAD-AV PROJECT: MULTI-SENSORY APPROACH FOR OBSTACLE DETECTION IN AGRICULTURAL AUTONOMOUS ROBOTICS  
**Raphaël Rouveure**  
Raphaël Rouveure, Michael Nielsen, Anders Petersen, Giulio Reina, Mario M. Foglia, Rainer Worst, Sami Seyed-Sadri, Morten Rufus Blas, Patrice Faure, Kasper Lykkegård
- 9:45 C-0113 THE DEVELOPMENT OF A NEAR-REAL TIME VISION BASED VARIABLE RATE APPLICATOR  
**Chee-Wan Chan**  
Chee-Wan Chan, Arina Mohd Noh, Mohd Zamri Khairi Abdullah, Othman Omar, Kasron Ahmad

- 10:00 C-1993 FUSION OF CROP DATA FROM A MULTI-SENSOR PLATFORM  
**Christoph Zecha**  
Christoph Zecha, Johanna Link, Wilhelm Clausein

## 312 SESSION

08:55 - 10:30  
**(SPC08)**  
**Moderator: Chakib Jenane**  
**Location: ROOM 5**

- 8:55 Introduction
- 9:00 C-0084 TESTING AND EVALUATION OF FARM MACHINES: AN ESSENTIAL STEP FOR DEVELOPING MECHANIZATION IN AFRICA  
**Chakib Jenane**  
Chakib Jenane
- 9:15 C-0116 FORMULATION OF A NATIONAL AGRICULTURE MECHANIZATION STRATEGY FOR MOROCCO  
**El Hassane Bourarach**  
El Hassane Bourarach, Si bennasseur Alaoui, Asmaa Hamzaoui, John Ashburner, Josef Kienzle
- 9:30 C-0145 PERSPECTIVES ON THE ROLE OF MECHANICAL TECHNOLOGIES IN GREEN REVOLUTIONS AND THE ATTAINMENT OF FOOD SECURITY  
**Geoffrey C. Mrema**  
Geoffrey C. Mrema
- 9:45 C-0393 AGRICULTURAL MECHANIZATION DEVELOPMENT IN INDIA- LESSONS FOR DEVELOPING COUNTRIES  
**Gajendra Singh**  
Gajendra Singh
- 10:00 C-0573 DEVELOPMENT OF MECHANIZATION OPTIONS FOR SMALLHOLDER FARMERS; EXAMPLES OF LOCAL MANUFACTURING OPPORTUNITIES FOR SUB-SAHARAN AFRICA  
**Brian Sims**  
Brian Sims, Muhammad Akhtar Bhatti, Saidi Mkomwa, Josef Kienzle

## 313 SESSION

08:55 - 10:30  
**(ES): EVALUATION OF ERGONOMICS**  
**Moderator: Stanley Best**  
**Location: MULTIPURPOSE IB**

- 8:55 Introduction
- 9:00 C-0982 OPERATOR-MACHINE INTERACTION: ERGONOMIC EVALUATION OF A VINEYARD TELEOPERATED MACHINE  
**Ester Ferrari**  
Ester Ferrari, Eugenio Cavallo

- 9:15 C-1307 POWER TILLER VIBRATION TRANSMITTED TO HAND AND BODY OF OPERATOR IN TRANSPORTATION MODE ON ASPHALT RURAL ROAD  
**Seyed Reza Hassan-Beygi**  
Seyed Reza Hassan-Beygi, Hossein Ahmadian, Barat Ghobadian
- 9:30 C-1376 COMPARISON OF POSTURAL DISCOMFORT DURING HOEING OPERATION WITH TWO DIFFERENT MACHINERY COMBINATIONS  
**Ugur Yegul**  
M.Baris Eminoglu, Ugur Yegul, Ramazan Ozturk
- 9:45 C-1471 ERGONOMIC EXPOSURE ASSESSMENT OF POSTURE AND MUSCLE ACTIVITY AMONG DAIRY PARLOR WORKERS IN LARGE HERD OPERATIONS  
**John Rosecrance**  
John Rosecrance
- 10:00 C-1505 THE RISK OF CARPAL TUNNEL SYNDROME AMONG MILKING PARLOR WORKERS  
**John Rosecrance**  
John Rosecrance, David Douphrate
- 10:15 C-2098 ERGONOMIC ANALYSIS OF PESTICIDE SPRAYING IN VINEYARDS: REDUCING PHYSICAL AND TEMPORAL CONSTRAINTS, A CHALLENGE FOR REDUCING EXPOSURE.  
**Mandy Lambert**  
Mandy Lambert, James Richardson, Sonia Grimbuhler

## 314 SESSION

08:55 - 10:30  
**(SPC03): AUTOMATIC INSPECTION I**  
**Moderator: Paolo Menesati**  
**Location: ROOM 8+9**

- 8:55 Introduction
- 9:00 C-0160 AUTOMATIC CLASSIFICATION OF CELLS AND INTERCELLULAR SPACES OF APPLE TISSUE  
**Piotr Mariusz Pieczywek**  
Piotr Mariusz Pieczywek, Artur Zdunek
- 9:15 C-0268 VISUAL QUALITY EVALUATION OF MALTING BARLEY WITH USE OF NEURAL IMAGE ANALYSIS  
**Barbara Raba**  
Barbara Raba, Krzysztof Nowakowski, Piotr Boniecki
- 9:30 C-0329 IMAGE PROCESSING FOR QUALITY EVALUATION OF FROZEN FRUIT SLICES  
**Paolo Gay**  
Lorenzo Comba, Paolo Gay, Davide Ricauda

- 9:45 C-0810 CONTACTLESS EVALUATION OF AIR-BUBBLE STRUCTURE IN BREAD BY LASER SCATTERING IMAGING  
**Mizuki Tsuta**  
Mizuki Tsuta, Kaori Fujita, Mario Shibata, Masatoshi Yoshimura, Mito Kokawa, Junichi Sugiyama
- 10:00 C-1693 INTERNAL CHARACTERISTICS VISUALIZATION OF FRESH AGRICULTURAL PRODUCTS USING TRADITIONAL AND ULTRAFAST LIMITED-ANGLE-TYPE X-RAY COMPUTED TOMOGRAPHY (CT) IMAGING  
**Irwin R. Donis-González**  
Irwin R. Donis-González, Daniel E. Guyer, Frank Barthel, Anthony Pease
- 10:15 C-2001 QUANTITATIVE VISUALIZATION OF THE DISTRIBUTION OF GLUTEN AND STARCH IN MODEL DOUGH WITH FLUORESCENCE FINGERPRINT IMAGING  
**Mito Kokawa**  
Mito Kokawa, Mizuki Tsuta, Junichi Sugiyama, Masatoshi Yoshimura, Kaori Fujita, Mario Shibata, Tetsuya Araki, Hiroshi Nabetani

## 315 SESSION

10:55-13:00  
**(PM):HARVESTING**  
**Moderator: Jaime Ortiz-Cañavate**  
**Location: AUDITORIO 1**

- 10:55 Introduction
- 11:00 C-1972 LOAD DISPLACEMENT IN GRAPE HARVESTERS: DISCRETE ELEMENT ANALYSIS  
**Carlos Gonzalez Montellano**  
Carlos Gonzalez Montellano, Eva M. Baguena Isiegas, Álvaro Ramírez Gómez, Pilar Barreiro Elorza
- 11:15 C-2271 TABLE OLIVE FRUIT AND TREE SUITABILITY TO MECHANICAL HARVESTING  
**Sergio Castro-Garcia**  
Sergio Castro-Garcia, Gregorio Lorenzo Blanco Roldán, Francisco Jimenez-Jimenez, Rafael Muñoz-Tejada, Jesus Antonio Gil Ribes
- 11:30 C-0149 SELECTIVE HARVESTING OF FRESH MARKET VALENCIA ORANGES BY MECHANICAL SHAKING  
**Coral Ortiz Sánchez**  
Coral Ortiz, Andrés Cuenca, Bernardo Martín, Antonio Torregrosa Mira
- 11:45 C-0957 KINEMATIC ANALYSIS OF ELECTRO - PNEUMATIC ONION SORTING SIMULATOR  
**Ramazan Ozturk**  
Ramazan Ozturk, Abdullah Beyaz, Caner Koc, Alí Ihsan Acar

- 12:00 C-1959 STUDY OF THE SOUND INSULATION IMPACT ON COMBINE HARVESTER'S CABIN  
**Chiho Kim**  
Chiho Kim, Hyeontae Kim, Myeonghun Kim, Gyeongyun Baek
- 12:15 C-0120 WHEN HANDLING ROUND BALES AFTER STRETCH FILM APPLICATION  
**Torsten Hörndahl**  
Torsten Hörndahl, Rolf Spörndly, Rainer Nylund, Per-Anders Algerbo

## 316 SESSION

10:55-13:00  
**(SW-SPC01): WATER QUALITY AND IRRIGATION**  
**Moderator: Guanhua Huang**  
**Location: AUDITORIO 2**

- 10:55 Introduction
- 11:00 C-2293 OUTBREAK OF FOOT-AND-MOUTH DISEASE TRANSPORTED BY YELLOW SAND AND SPREAD BY LOCAL SURFACE WIND FROM MARCH TO JULY 2010 IN MIYAZAKI, JAPAN  
**Taichi Maki**
- 11:15 C-1404 OBTAINING POTASSIUM TRANSPORT PARAMETERS USING STANMOD MODEL  
**Livia da Silva Previatello**  
Rafaelly S. Santos, Livia da Silva Previatello, Jarbas Honorio De Miranda
- 11:30 C-1326 UNBURNED SUGARCANE IRRIGATED WITH TREATED SEWAGE: EFFECTS ON CARBON AND NITROGEN EXPORTATION AND CROP YIELD  
**Alessandra Monteiro de Paula**  
Alessandra Monteiro de Paula, Sandra Furlan Nogueira, Célia Regina Montes, Adolpho José Melfi
- 11:45 C-0948 LAND USE AND CLIMATE AGGRESSIVENESS (R-USLE) IN THE EVALUATION OF PHOSPHORUS EXPORT FROM NON-POINT SOURCES IN THE LAKE VICO BASIN (CENTRAL ITALY)  
**Fabio Recanatesi**  
Fabio Recanatesi, Maria Nicolina Ripa, Antonio Leone
- 12:00 C-0999 PREDICTION OF NITRATE CONCENTRATION IN GROUNDWATER USING AN ARTIFICIAL NEURAL NETWORK (ANN) APPROACH  
**Maria Laura Foddis**  
Maria Laura Foddis

## 317 SESSION

10:55-13:00  
**(AP): SENSORS AND AUTOMATION IN ANIMAL HOUSES**  
**Moderator: Daniel Berckmans**  
**Location: AUDITORIO 3A**

- 10:55 Introduction

- 11:00 C-0027 THE DEVELOPMENT AND EVALUATION OF A RADIO FREQUENCY IDENTIFICATION(RFID) BASED CATTLE HANDLING SYSTEM  
**Thato Kgaphola**  
Tendai Justin Mutenje, Jeff Smithers, Thato Kgaphola
- 11:15 C-0621 AUTOMATIC MONITORING OF RUMINATION TIME FOR OESTRUS DETECTION IN DAIRY CATTLE  
**Stefanie Reith**  
Stefanie Reith, Steffen Hoy
- 11:30 C-0632 COMPARISON OF RUMINATION ACTIVITY RECORDS OF PRESSURE SENSORS AND ACOUSTIC SENSORS  
**Christian Pahl**  
Angelika Haeussermann, Christian Pahl, Katrin Mahlkow-Nerge, Anne Grothmann, Eberhard Hartung
- 11:45 C-0993 RESEARCH ACTIVITIES USING THE ART-MSR METHOD OF AUTOMATIC MEASUREMENT OF RUMINATION AND FEEDING BEHAVIOR  
**Franz Nydegger**  
Franz Nydegger, Andreas Münger, Hansjörg Frey
- 12:00 C-0940 A NOVEL MOBILE DEVICE FOR ACCURATE ON-FARM CLAW SCORING IN SOWS  
**Miriam M.J. van Riet**  
Miriam M.J. van Riet, Jürgen Vangeyte, Elena Nalon, Frank A.M. Tuytens, Geert P.J. Janssens, Dominiek Maes, Sam Millet,
- 12:15 C-0867 TOWARDS TWO IDENTIFICATION METHODS FOR BREEDING PIGS: POSSIBILITIES OF A COMBINED EAR TAG  
**Kees Lokhorst**  
Kees Lokhorst, Pieter Hogewerf, Anita Hoofs, Rik Verheijen, Bert Ipema

## 318 SESSION

10:55-13:00  
**(AP): MANURE MANAGEMENT SYSTEMS II**  
**Moderator: Henrik Møller**  
**Location: AUDITORIO 3B**

- 10:55 Introduction
- 11:00 C-0724 THE ANAEROBIC SEQUENCING BATCH REACTOR (ASBR), AN ADVANCED ANAEROBIC DIGESTER FOR DILUTE LIVE SWINE PRODUCTION BYPRODUCTS  
**Douglas Hamilton**  
Douglas Hamilton
- 11:15 C-1466 ANALYSIS CHARACTERISTIC OF DIGESTED EFFLUENT FROM FOUR LARGE-MEDIUM SCALE BIOGAS DIGESTER  
**Zhiping Zhu**  
Zhiping Zhu, Hongmin Dong, Bin Shang

- 11:30 C-1577 **RAPSEED MEAL IN GROWING-FINISHING PIG DIETS: EFFECTS ON GROWTH PERFORMANCE, DIGESTIBILITY AND METHANE PRODUCTION FROM FECES.**  
**Alba Cerisuelo**  
Verónica Moset, Pablo Ferrer, Alberto Torres-Pitarch, María Cambra-López, Elisa Adell, Mariam Pascual, Paula Serrano, Alba Cerisuelo
- 11:45 C-0927 **EFFECTS OF ANAEROBICALLY DIGESTED PIG SLURRY ON IN VITRO GROWTH OF CROP PATHOGENIC FUNGI: A LABORATORY STUDY**  
**Xiuping Tao**  
Xiuping Tao, Bin Shang, Hongmin Dong, Yongxing Chen, Hongkun Huang
- 12:00 C-1353 **MICROBIAL COMMUNITY ANALYSIS ON LIQUID SWINE MANURE FROM FOAMING AND NON-FOAMING DEEP-PITS**  
**Laura Pepple**  
Laura Pepple, Richard S. Gates, Ted Funk, Angela Kent
- 12:15 C-0506 **FULL SCALE PRODUCTION OF MINERAL CONCENTRATES FROM PIG SLURRY USING REVERSE OSMOSIS**  
**Paul Hoeksma**  
Paul Hoeksma, Fridtjof de Buissonjé, André J. A. Aarnink
- 12:30 C-1451 **STREAMLINED AMMONIA REMOVAL FROM WASTEWATER USING BIOLOGICAL DEAMMONIFICATION PROCESS**  
**Matias Vanotti**  
Matias Vanotti, Jose Martinez, Albert Magri, Ariel Szogi, Takao Fujii
- 11:30 C-0553 **THE EFFECTIVENESS OF TWO MINERAL ADDITIVES DURING ANAEROBIC FERMENTATION OF TWO MIXTURES OF ENERGY CROPS**  
**Diana Andrade Montealegre**  
Diana Andrade, Florian Eberstedter, Tim Metzner, Andreas Gronauer, Manfred Bischoff, Hauke Heuwinkel
- 11:45 C-0604 **ENERGY SOLUTIONS FOR UNIT PROCESSING MEAT OF CHICKEN WITH THE USE OF BIOGAS**  
**Adriano Henrique Ferrarez**  
Adriano Henrique Ferrarez, Dely Oliveira Filho, Adílio Flauzino de Lacerda Filho, José Márcio Costa, Fabrício Segui Parisi
- 12:00 C-0680 **THERMOPHILIC ANAEROBIC DIGESTION OF THE SOLID FRACTION OF ACIDIFIED DAIRY COW MANURE**  
**Sutaryo Sutaryo**  
Sutaryo Sutaryo, Alastair James Ward, Henrik Bjarne Moller
- 12:15 C-0835 **INFLUENCE OF DIGESTATE RECIRCULATION ON A TWO-PHASE ANAEROBIC DIGESTION OF MAIZE SILAGE**  
**Vasilis Dandikas**  
Vasilis Dandikas, Carmen Marín Pérez, Konrad Koch, Michael Leubhn, Andreas Gronauer
- 12:30 C-0254 **MODEL BASED OPTIMIZATION OF BIOMETHANE PLANTS**  
**Piotr Biernacki**  
Piotr Biernacki, Sven Steinigeweg, Axel Borchert, Eike Siefert, Frank Uhlenhut, Ingo Stein

## 319 SESSION

10:55-13:00  
**(EN): GASEOUS BIOFUELS III**  
Moderator: Marcio Arêdes Martins  
Location: MULTIPURPOSE IA

- 10:55 Introduction
- 11:00 C-0327 **QUANTIFICATION OF METHANE PRODUCTION AND EMISSION FROM ANAEROBIC DIGESTION OF CATTLE MANURE DERIVED FROM DIFFERENT FEEDING**  
**Henrik Bjarne Møller**  
Henrik Bjarne Møller, Shiplu Sarker, Anne Louise Frydendahl Hellwing, Martin Riis Weisbjerg, Alastair James Ward
- 11:15 C-0510 **NEAR INFRARED SPECTROSCOPY CALIBRATIONS FOR THE ESTIMATION OF PROCESS PARAMETERS OF ANAEROBIC DIGESTION OF ENERGY CROPS AND LIVESTOCK RESIDUES**  
**Christian Krapf**  
Christian Krapf, Andreas Gronauer, Urs Schmidhalter, Hauke Heuwinkel

## 320 SESSION

10:55-13:00  
**(IT): IRRIGATION CONTROL**  
Moderator: Ferdo Zazueta  
Location: MULTIPURPOSE IC

- 10:55 Introduction
- 11:00 C-0352 **WIRELESS SENSOR NETWORK FOR PRECISION IRRIGATION CONTROL IN HORTICULTURAL CROPS**  
**Michael Delwiche**  
Robert Coates, Michael Delwiche, Alan Broad, Mark Holler, Richard Evans, Lorence Oki, Linda Dodge,
- 11:15 C-0766 **DEVELOPMENT OF A FULLY CONTROLLED PLANT FACTORY FOR MOSS MAT PRODUCTION - APPLICATION OF INTELLIGENT IRRIGATION SYSTEM, ROBOT TRANSPORTER, AND PRECISION ARTIFICIAL LIGHTING SYSTEM**  
**Yusuf Hendrawan**  
Yusuf Hendrawan, Bambang Dwi Argo, M. Bagus Hermanto, Song Zhang, Haruhiko Murase

- 11:30 C-2365 METHODOLOGY TO ASSESS THE MAXIMUM IRRIGATION RATES AT REGIONAL SCALE USING GEOSTATISTICS AND GIS  
**Jose Miguel de Paz Becares**  
J.M De Paz, C Albert, F Visconti, G Jiménez, F Ingelmo, M.J. Molina, Juan Sanchez,
- 11:45 C-0569 EXPERIMENTAL VALIDATION OF A SYSTEM BASED ON PARTICLE TRACKING VELOCIMETRY (PTV)  
**Pablo González-Altozano**  
Federico Ibáñez, Pablo González-Altozano, Maria Gasque, Pau Marti
- 12:00 C-0707 AUTOMATIC SYSTEM FOR MANAGEMENT OF IRRIGATION WITH USING IRRIGÁMETRO MICROCONTROLLERS  
**Paulo Raimundo Pinto**  
Paulo Raimundo Pinto
- 12:15 C-1227 DIFFERENT WATER HEIGHTS INFLUENCE SUBSTRATE SOIL MOISTURE IN SUBIRRIGATION  
**Rhuanito Soranz Ferrarezi**  
Rhuanito Soranz Ferrarezi, Marc W. van Iersel, Roberto Testezlaf
- 12:30 C-2203 USE OF CONTACT MODELS AND VALUE OF PARAMETER IDENTIFICATIONS FOR THE FREE FLOW OF RAPE SEEDS  
**Piotr Frankowski**  
Piotr Frankowski
- 10:55 Introduction
- 11:00 C-0102 OPTIMUM DRYING CONDITION FOR THREE SELECTED VARIETIES OF OSMOTICALLY PRE-TREATED TOMATO (LYCOPERSICON ESCULENTUM) IN THE SOUTH-WESTERN NIGERIA  
**Kehinde Folake Jaiyeoba**  
Kehinde Folake Jaiyeoba -, Abdulganiy Raji O
- 11:15 C-1569 INFLUENCE OF AIR VELOCITY ON DRYING KINETICS AND PRODUCT QUALITY IN DRYING OF APPLES  
**Barbara Sturm**  
Barbara Sturm, Anna Nunez-Vega, Werner Hofacker, Oliver Hensel
- 11:30 C-0175 EFFECT OF HIGH TEMPERATURE AND SHORT TIME PRE- TREATMENTS ON DRYING AND REHYDRATION OF CARROTS SLICES  
**Carolina Maria Sánchez Sáenz**  
Carolina Maria Sánchez Sáenz, Rafael Augustus de Oliveira, Kil Jin Park
- 11:45 C-0773 EFFECTS OF TEMPERATURE AND MOISTURE ADDITION ON THE MASS TRANSFER KINETICS AND EFFECTIVE DIFFUSIVITIES DURING COCOA ROASTING  
**Ching Lik Hii**  
Ching Lik Hii, Youstra Ahmed Baghdadi
- 12:00 C-0422 STUDY OF CHEMICAL AND PHYSICAL PROPERTIES OF APPLES DRIED IN A CONVECTIVE DRIER  
**Raquel Guiné**  
Raquel Guiné, Ana Cruz, João Carlos Gonçalves, Ana Cristina Correia
- 12:15 C-2126 INFORMATION SYSTEM SUPPORTING IDENTIFICATION AND ANALYSIS OF GEOMETRIC, THERMAL AND MECHANICAL PROPERTIES OF AGRO-FOOD PRODUCTS  
**Jerzy Weres**  
Jerzy Weres, Wieslaw Olek, Sebastian Kujawa, Michal Siatkowski
- 12:30 C-1759 AN AUTOMATED SYSTEM FOR THE DETERMINATION OF MOISTURE SORPTION ISOTHERMS  
**Dimitrios Argyropoulos**  
Dimitrios Argyropoulos, Joachim Müller
- 12:45 C-1612 MEDIUM SCALE DIRECT MODE NATURAL CONVECTION SOLAR TOMATO DRYER FOR NIGERIAN FARMERS  
**Akachukwu Eke Ben**  
Akachukwu Eke Ben, Akindele Folarin Alonge

## 321 SESSION

10:55-13:00  
**(PF): PHYSICAL PROPERTIES I**  
Moderator: Pilar Barreiro  
Location: ROOM 1

- 10:55 Introduction
- 11:00 C-1247 DETERMINING THE CUTTING PROPERTIES OF AGRICULTURAL PRODUCTS  
**Andrej Batos**  
Andrej Batos, Andreas Jahr, Alex Pilmann, Sascha Hoppe, Dennis Dieltz
- 11:15 C-1357 NONLINEAR VISCOELASTIC PROPERTIES OF APPLE TISSUE FROM EXPERIMENTAL MEASUREMENT AND CONSTITUTIVE MODELING  
**Wondwosen Abebe Aregawi**  
Wondwosen Abebe Aregawi, Thijs De fraeye, Pieter Verboven, Guido De Roeck, Bart Nicolai
- 11:30 PH03. POSTHARVEST TECHNOLOGY, Working Group

## 322 SESSION

10:55-13:00  
**(PF): DRYING TECHNOLOGY II**  
Moderator: Barbara Sturm  
Location: ROOM 6+7

## 323 SESSION

10:55-13:00  
**AET: WORKSHOP**  
Location: ROOM 2

|       |               |  |   |   |        |  |  |        |  |
|-------|---------------|--|---|---|--------|--|--|--------|--|
| 10:55 | AET: WORKSHOP |  |   | 11:45   | C-1113 | STRATOS: OPEN SYSTEM FOR TRACTOR AUTONOMOUS OPERATIONS<br><b>Cesare Fantuzzi</b><br>Cesare Fantuzzi, P.O. Gutman, I. Kaitovic, L. Larcher, S. Marzani, M. Ruggeri, V. Zagurskis,                                       |  |        |  |
|       |               | <h1 style="font-size: 2em; margin: 0;">324</h1> <p style="margin: 0;">SESSION</p>  | 10:55-13:00<br><b>(SE): WASTE ENGINEERING</b><br><b>Moderator: Demetres Briassoulis</b><br><b>Location: ROOM 3</b>            |   |        |  | 12:00  | C-0789 | PRESERVATION OF STABILITY OF AUTOMATED OFF-ROAD ROBOTS: APPLICATION TO ADAPTIVE AND PREDICTIVE SPEED MANAGEMENT<br><b>Roland Lenain</b><br>Mathieu Richier, Roland Lenain, Benoit Thuilot, Christophe Debain |
| 10:55 | Introduction  |  |   | 11:00   | C-0296 | DESIGN PRINCIPLES OF A EUROPEAN SYSTEM FOR THE MANAGEMENT OF AGROCHEMICALS PLASTIC PACKAGING WASTE<br><b>Demetres Briassoulis</b><br>Demetres Briassoulis, Miltiades Hiskakis, Chris Briassoulis                       |  |        |  |
| 11:15 | C-0023        | CHALLENGES OF CLIMATE CHANGE ON AGRICULTURAL PRODUCTIVITY IN SUB-SAHARAN AFRICA<br><b>Mohammed Abubakar</b><br>Mohammed Abubakar   |   | 11:15   | C-0964 | OBJECT LOCALIZATION ON AGRICULTURAL AREAS USING AN AUTONOMOUS TEAM OF COOPERATING GROUND AND AIR ROBOTS<br><b>Lars Kuhnert</b><br>Lars Kuhnert, Klaus Müller, Markus Ax, Klaus-Dieter Kuhnert                          |  |        |  |
| 11:30 | C-1207        | RECYCLING OF CERAMIC FRACTION OF CONSTRUCTION AND DEMOLITION WASTE AS COARSE AGGREGATE FOR RECYCLED CONCRETE PRODUCTION.<br><b>Desirée Rodríguez Robles</b><br>Desirée Rodríguez Robles, Julia García González, Andrés Juan Valdés, Julia María Morán Del Pozo, Manuel Ignacio Guerra Romero |   | 12:30   | C-2283 | CRAWLER-TYPE ROBOT TRACTOR USING MULTI-GNSS WITH QZSS<br><b>Noboru Noguchi</b><br>Ryosuke Takai, Noboru Noguchi  |  |        |  |
| 11:45 | C-1121        | ECO-FRIENDLY GALLON DESIGN<br><b>Tegar Hastya Prabawa</b><br>Tegar Hastya Prabawa  |   | <h1 style="font-size: 2em; margin: 0;">326</h1> <p style="margin: 0;">SESSION</p> |        |  | 10:55-13:00<br><b>SPC-08</b><br><b>Moderator: Josef Kienzle</b><br><b>Location: ROOM 5</b> |        |  |
|       |               | <h1 style="font-size: 2em; margin: 0;">325</h1> <p style="margin: 0;">SESSION</p>  | 10:55-13:00<br><b>(SPC04): ROBOTIC SOLUTIONS FOR AGRICULTURE</b><br><b>Moderator: John F. Reid</b><br><b>Location: ROOM 4</b> | 10:55   | C-0574 | HEIGHTENED IMPACTS OF AGRICULTURAL ENGINEERING IN RAISING THE PRODUCTIVITY OF NIGERIAN AGRICULTURE.<br><b>Babajide Adelekan</b><br>Babajide Adelekan   |  |        |  |
| 10:55 | Introduction  |  |   | 11:00   | C-1782 | AGRICULTURAL MECHANIZATION INTERVENTIONS TO INCREASE THE PRODUCTIVITY OF SMALLHOLDER IRRIGATION SCHEMES IN ZIMBABWE<br><b>Thubelihle Thebe</b><br>Thubelihle Thebe, Tirivangani Koza                                   |  |        |  |
| 11:00 | C-0778        | MOTION CONTROL OF A HETEROGENEOUS FLEET OF MOBILE ROBOTS: FORMATION CONTROL FOR ACHIEVING AGRICULTURE TASK<br><b>Roland Lenain</b><br>Pierre Cartade, Roland Lenain, Benoit Thuilot, Bernard Benet, Michel Berducat  |   | 11:15   | C-0962 | EFFECT OF GIBBERELIC ACID (GA3) ON THE PHYSICAL AND MECHANICAL PROPERTIES FOR SOME POTATO VARIETIES<br><b>Mohamed Ibrahim Mahmoud</b><br>Mohamed Ibrahim Mahmoud, Mostafa Abdelazeem                                   |  |        |  |
| 11:15 | C-1208        | FROBOMIND, PROPOSING A CONCEPTUAL ARCHITECTURE FOR FIELD ROBOTS<br><b>Kjeld Jensen</b><br>Kjeld Jensen, Soren H. Nielsen, Anders Bogild, Morten Larsen, Ole Green, Rasmus Nyholm Jorgensen   |   | 11:30   | C-1719 | RICE MECHANIZATION IN SUB-SAHARAN AFRICA BY PROMOTING BETTER ENABLING ENVIRONMENTS THROUGH PRIVATE-PUBLIC-PARTNERSHIP<br><b>Kunihiro Tokida</b><br>Kunihiro Tokida, Joseph Rickman, Hiroshi Hiraoka, Kazuyuki Fujiwara |  |        |  |
| 11:30 | C-0075        | THE DESIGN AND APPLICATION STUDY ON KEY ASSEMBLY OF SILOATOR<br><b>Manquan Zhao</b><br>Manquan Zhao  |   | 11:45   | C-1571 | POSTHARVEST LOSSES OF HORTICULTURAL PRODUCTS IN LATIN AMERICA AND THE CARIBBEAN: INTEGRATING ANALYSES WITH SOLUTIONS<br><b>Jorge M Fonseca</b><br>Jorge M Fonseca, Divine N Njie                                       |  |        |  |



# 327

## SESSION

10:55-13:00  
**(ES): INNOVATION IN WORK SCIENCE**  
 Moderator: Hannu E.S. Haapala  
 Location: MULTIPURPOSE IB

- 10:55 Introduction
- 11:00 C-0094 THE POTENTIAL OF USER-CENTERED DESIGN TO MAKE RADICAL AGRICULTURAL INNOVATIONS  
**Hannu Haapala**  
 Hannu Haapala
- 11:15 C-0524 INNOVATIVE TECHNOLOGY IN ORGANIC HORTICULTURE  
**Mauro José Andrade Tereso**  
 Mauro José Andrade Tereso, Roberto Funes Abrahão, Sandra Francisca Bezerra Gemma, Ivan Augusto Vall Ribeiro
- 11:30 C-0550 STUDY OF A DEVICE FOR REDUCING THE DUST CONCENTRATION DURING MECHANIZED HARVESTING OF HAZELNUTS  
**Massimo Cecchini**  
 Massimo Cecchini, Danilo Monarca, Andrea Colantoni, Fulvio Cavariani, Loredana Bedini, De Rossi Marcello, Mauro Pagano, Marco Fedrizzi, Mirko Guerrieri
- 11:45 C-0857 USING A MODELING LANGUAGE FOR A BETTER INTEGRATION OF HUMAN SAFETY AT THE EARLY DESIGN PHASE BASED ON EXPERIENCE FEEDBACK ANALYSIS  
**Ieyla sadeghi**  
 Ieyla sadeghi, luc Mathieu, nicolas Tricot, lama Al Bassit
- 12:00 C-1197 WORKING TIME MEASUREMENT BY A REAL-TIME LOCATION SYSTEM - AUTOMATED DETECTION AND AUTOMATIC TIME MEASUREMENT OF A YARD LOADER'S WORK  
**Stefanie Beyer**  
 Stefanie Beyer, Bernhard Haidn
- 12:15 C-2180 EFFECTIVENESS OF INNOVATIVE MATERIALS FOR THE PROTECTION OF DRIVER OF AGRICULTURAL TRACTORS AGAINST FALLING OBJECTS RISK  
**Eugenio Cavallo**  
 Eugenio Cavallo, Alessio Facello
- 12:30 C-1527 DRIFT RISK DIAGNOSIS (DRD) - A DECISION SUPPORT TOOL TO HELP DIAGNOSE AND MITIGATE SPRAY DRIFT FOR FIELD APPLICATIONS IN PRACTICE  
**Grzegorz Doruchowski**  
 Grzegorz Doruchowski, Manfred Roettele, Andreas Herbst, Paolo Balsari

# 328

## SESSION

10:55-13:00  
**(SPC03): AUTOMATIC INSPECTION II**  
 Moderator: Enrique Moltó  
 Location: ROOM 8+9

- 10:55 Introduction
- 11:00 C-1459 OPTICAL FLOW PROFILING METHODS USED FOR VISUALIZATION AND EVALUATION OF FLOW DISTURBANCES IN AGRICULTURAL PNEUMATIC CONVEYANCE SYSTEMS.  
**Tyrone Keep**  
 Tyrone Keep, Scott Noble
- 11:15 C-0704 DEVELOPMENT OF A COMPACT QUALITY SORTING MACHINE FOR CHERRY TOMATOES BASED ON REAL-TIME COLOR IMAGE PROCESSING  
**Byoung-Kwan Cho**  
 In-Seok Baek, Byoung-Kwan Cho, Young-Sik Kim
- 11:30 C-1994 DEVELOPMENT OF POTATO AND CLOD SEPARATING MECHANISM BASED ON MACHINE VISION  
**Ahmad Al-Mallahi**  
 Ahmad Al-Mallahi, Takashi Kataoka, Hiroshi Okamoto
- 11:45 C-2215 IMAGE PROCESSING BASED METHOD FOR CHARACTERIZATION OF THE FAT/MEAT RATIO AND FAT DISTRIBUTION OF PORK AND BEEF SAMPLES  
**Jozsef Felföldi**  
 Jozsef Felföldi, Laszlo Baranyai, Ferenc Firtha, László Friedrich, Csaba Balla
- 12:00 C-2357 AUTOMATIC VISUAL INSPECTION OF CORN KERNELS USING PRINCIPAL COMPONENT ANALYSIS  
**José Miguel Valiente González**  
 Paulus potter, José Miguel Valiente, Gabriela Andreu-García
- 12:15 CIGR Working Group on Image Analysis for Agricultural Products and Processes

# 329

## SESSION

14:00-14:55  
**(PM) POSTERS SESSION**  
 Location: POSTERS ROOM

- P-0078 INFLUENCING AMPLITUDE AND ACCELERATION OF SHAKEN FRUIT TRESS USING TWO UNBALANCED MASSES  
**Zoltán Láng**  
 Zoltán Láng, László Csorba
- P-0133 EFFECTS OF MECHANIZATION TECHNOLOGY IN SOUTH OF IRAN  
**Syamak Pishbin**

- P-0154 A HAND-HELD MECHANICAL BLOSSOM AND POST-BLOOM THINNING DEVICE FOR PEACH TREES  
**Bernardo Martin-Gorriz**  
Bernardo Martin-Gorriz, Antonio Torregrosa Mira, Jesus Garcia Brunton, Regino Aragon Pallares
- P-0289 DETACHMENT OF CITRUS FRUITS WITH A LOW FREQUENCY AND HIGH AMPLITUDE SHAKER  
**Antonio Torregrosa Mira**  
Antonio Torregrosa Mira, Coral Ortiz Sánchez, Andrés Cuenca
- P-0465 FIELD PERFORMANCE OF A PNEUMATIC ROW CROP PLANTER WITH ACTIVE TOOTHED COULTER FOR DIRECT PLANTING OF CORN IN WHEAT RESIDUE  
**Mohammad Hossein Raoufat**
- P-0468 DESIGN, DEVELOPMENT AND EVALUATION OF A PROTOTYPE CHICKPEA HARVESTER BY USING FEEDER AND CUTTER MECHANISM  
**Saadat Kamgar**  
Saadat Kamgar, Hossein Mostafavand
- P-0622 COMPARISON OF GRAIN-COMBINE AND PICKER-HUSKER HARVESTING SYSTEM IN SEED CORN HARVESTING OPERATION BASED ON THEIR HARVESTING LOSSES  
**Seyyed Hassan Pishgar-komleh**  
Seyyed Hassan Pishgar-komleh; Alireza Keyhani; Mohammad Reza Mostofi-sarkari; Ali Jafari
- P-0631 THE RELATIONSHIP BETWEEN GRAIN-COMBINE TRAVEL AND CYLINDER SPEED IN SEED CORN HARVESTING OPERATION BY APPLYING ARTIFICIAL NEURAL NETWORKS  
**Seyyed Hassan Pishgar-komleh**  
Seyyed Hassan Pishgar-komleh; Alireza Keyhani; Mohammad Reza Mostofi-sarkari; Ali Jafari
- P-0660 DETERMINATION OF THE USAGE COMBINE HARVESTER: A CASE STUDY FOR ANTALYA REGION  
**Deniz Yilmaz**  
Deniz Yilmaz, Murad Canakci, Ibrahim Akinci
- P-0714 SEED COATING EFFECTS ON PERFORMANCE OF PRECISION VACUUM SEEDER  
**Davut Karayel**  
Davut Karayel, Murad Canakci, Fatih Hacıyusufoglu, Ibrahim Akinci, Mehmet Topakci
- P-0722 REGULARITY OF DISTRIBUTION OF SUNFLOWERS SEEDS BY PNEUMATIC SEED METERING  
**Airton dos Santos Alonço**  
Airton dos Santos Alonço, Mateus Potrich Bellé, Otávio Dias da Costa Machado, Kátia Maria Cardinal, Fernando Pissetti Rossato, Hendrigo Alberto Torchelsen da Silveira
- P-1270 MAIZE HYBRIDS FOR SILAGE VS SPEED OF SEEDER  
**Marcelo Boamorte Raveli**  
Marcelo Boamorte Raveli, Carlos Eduardo Angeli Furlani, Rafael Scabello Bertonha, Fábio Alexandre Cavichioli, Carlos Alessandro Chioderoli
- P-1284 LOSSES OF MECHANICAL HARVESTING IN MAIZE ACCORDING TO COVER CROP MANAGEMENT  
**Marcelo Boamorte Raveli**  
Marcelo Boamorte Raveli, Rouverson Pereira da Silva, Ariel Muncio Compagnon, Marcelo Tufaile Cassia, Antônio Maurício Loureiro Júnior
- P-1315 ACCREDITATION OF CRA-ING AGRICULTURAL MACHINERY TEST LABORATORY IN ACCORDANCE WITH EN ISO/IEC 17025:2005  
**Roberto Fanigliulo**  
Roberto Fanigliulo, Daniele Pochi, Renato Grilli, Laura Fornaciari, Gennaro Vassalini
- P-1419 QUALITY SPATIAL VARIABILITY OF ARABICA COFFEE AND ITS RELATIONSHIP WITH BRX DEGREE AND FRUIT REFLECTANCE  
**Daniel Marçal De Queiroz**  
Samuel de Áassis Silva, Daniel Marçal De Queiroz, Francisco De Assis De Carvalho Pinto, Nerilson Terra Santos
- P-1461 ANALYSIS OF COFFEE FRUIT-STEM VIBRATION USING SIMULATION OF FLEXIBLE MULTIBODY SYSTEMS  
**Daniel Queiroz Marçal de**  
Geice Paula Villibor, Daniel Marçal De Queiroz, Fabio Lucio Santos, Joseph Kalil Khoury Junior, Francisco de Assis Carvalho Pinto
- P-1506 DESIGN AND EVALUATION OF MECHANICAL AID HARVESTING TOOLS FOR MANGO FRUITS  
**Youssef Sharobeem**  
Youssef Sharobeem, M Iraqi, S El Khawaga
- P-1533 SPACIAL VARIABILITY IN PEANUT MECHANIZED HARVESTING  
**Rouverson da Silva Pereira**  
Rouverson da Silva Pereira, Rouverson Pereira da Silva, Rogério de Souza Medeiros, Edvaldo Pereira dos Santos
- P-1537 AN ANALYSIS OF WORKING QUALITY OF A SUGAR BEET HARVESTER  
**Natalia Mioduszewska Mioduszewska**  
Natalia Mioduszewska, Jacek Przybyl
- P-1852 USE OF STEAM AND EXO THERMIC COMPOUNDS FOR WEED SEED-BANK CONTROL IN BANDS (BAND-STEAMING)  
**Marco Fontanelli**  
Andrea Peruzzi, Christian Frasconi, Luisa Martelloni, Marco Fontanelli, Michele Raffaelli

- P-1970 CONCEPTION OF A NON-STOP VARIABLE CHAMBER ROUND BALER  
**Mojtaba Ahmadi**  
Mojtaba Ahmadi, Ali Zomorrodian, Hamid Sharifi, Erfan Borazjani, Mohammad Loghavi
- P-2143 INFLUENCE OF SAMPLING AREA IN THE VARIABILITY IN LOSSES AT SOYBEANS MECHANICAL HARVEST  
**Antônio Maurício Loureiro Júnior**  
Rouverson Pereira da Silva, Antônio Maurício Loureiro Júnior, Marcelo Tufaile Cassia, Ariel Muncio Compagnon, Murilo Aparecido Voltarelli
- P-2193 THE DESIGN OF A SOIL BIN USING CAD SOFTWARE  
**Robert Birch**  
Robert Birch, Travis Ramdath
- P-2235 INFLUENCE OF SPEED OF SEEDING IN THE MAIZE SEEDLINGS EMERGENCE IN SOUTHWEST REGION OF SÃO PAULO STATE/BRAZIL  
**Wilson José Oliveira De Souza**  
Wilson José Oliveira De Souza, Elza Alves, Samuel Ferrari, Eduardo Nardini Gomes, César Henrique De Jesus, Tami- res Tangerino
- P-2253 DEVELOPMENT AND EVALUATION OF IMPROVED WINGED SUBSOILER AND MAIZE CROP RESPONSE TO SUBSOILING  
**Arun Kumar**  
Arun Kumar; T C Thakur
- P-0246 BIOLOGICAL NITROGEN FIXATION IN GENOTYPES OF COWPEA UNDER SALT STRESS INCREASING THE STATE OF PARAIBA, BRAZIL  
**Ronaldo Nascimento**  
Ronaldo Nascimento, Jailma Ribeiro De Andrade, Francisco Valfisio da Silva Silva, Aryadne Ellen Vilar De Alencar, Daniele Ferreira Melo, José Wilson Da Silva Barbosa
- P-0269 SALT STRESS ON THE PHOTOSYNTHETIC PIGMENT CONTENT COWPEA INOCULATED WITH RHIZOBIA  
**Ronaldo Nascimento**  
Ronaldo Nascimento, Jailma Ribeiro De Andrade, Francisco Valfisio da Silva Silva, Aryadne Ellen Vilar De Alencar, Bruna Vieira De Freitas, José Wilson Da Silva Barbosa
- P-0410 NUTRIENT RETENTION IN WETLAND USING ORNAMENTAL PLANTS  
**Rojane M. Kletecke**  
Rojane M. Kletecke, Michelle Piccolli, Jose Teixeira Filho
- P-0415 IMPORTANCE OF THE DRY MASS GENERATED BY SUNFLOWER CULTURE INCORPORATED INTO THE SOIL  
**Rosa Helena Aguiar**  
Rosa Helena Aguiar; Durval Rodrigues De Paula Junior; Artur Batista De Oliveira Rocha
- P-0509 PHYSICAL, CHEMICAL AND MICROBIOLOGICAL EFFECTS OF SUSPENDED SHADE CLOTH COVERS ON STORED WATER FOR IRRIGATION  
**Victoriano Martínez-Alvarez**  
Victoriano Martínez-Alvarez, José F. Maestre-Valero, Emilio Nicolas Nicolas
- P-0514 WATER TREATMENT USING POWDER OF MORINGA OLEIFERA SEEDS IN SACHS AS COAGULANT  
**Jose Euclides Paterniani**  
Gabriela Kurokawa Silva, Camila Clementina Arantes, Jose Euclides Paterniani, Ana Moreno de La Fuente
- P-0519 RESEARCH ON METHODS OF GROUND-WATER VULNERABILITY EVALUATION  
**Guanhua Huang Huang**  
Lipeng Yu, Quanzhong Huang, Guanhua Huang
- P-0769 EFFECT OF ANISOTROPY IN SOIL PROPERTIES ON CONTAMINANT TRANSPORT IN MULTILAYER SOILS  
**Hojjat Ahmadi**  
Hojjat Ahmadi, Sina Besharat, Vahid Reza Verdinejad
- P-0792 CHARACTERISTICS OF HEAVY METAL CONTENTS IN MARINE SEDIMENT AND PADDY SOIL OF SOUTH KOREA  
**Jaesung Park**  
Jaesung Park, Young-Hwan Son, Sookack Noh, Tae-ho Bong
- P-0147 THERMOPHYSICS PROPERTIES OF THE OIL EXTRACTED OF THE GENOTYPES OF CASTOR BEAN  
**Juarez Pedroza Paz**  
Kacilanya Meneses De Almeida, Juarez Paz Pedroza
- P-0230 APPLICATION OF FUZZY LOGIC AND PID TECHNIQUES IN WATER SALINITY CONTROL  
**Aljughaiman Sulaiman, Abdullah**
- P-0241 DRYING OF DATES IN OMAN USING A SOLAR TUNNEL DRYER  
**Hamid Alhandhali**  
M. M. Handali, Mohammad Ali Basunia
- P-0243 AGRICULTURE AND WATER SOURCES PROTECTION ZONES  
**Petra Oppeltova**  
Petra Oppeltová

**330**  
SESSION

14:00 - 14:55

**(SW-SPC01): ENVIROWATER,  
POSTER SESSION**

Location: POSTERS ROOM

- P-0803 EMPHASIZING AWARENESS TO MAKE GOOD QUALITY LIFE BY APPLYING SOME METHODS OF WASTE WATER PROCESSING  
**Ikhsan Bani Bukhori Bani**  
Ikhsan Bani Bukhori Cipto
- P-0851 STOCHASTIC MODELLING OF CONTAMINANTS TRANSPORT THROUGH GROUND WATER USING A MOVING LEAST SQUARES RESPONSE SURFACE METHOD WITH HERMITE POLYNOMIAL  
**Taeho Bong**  
Tae-ho Bong, Young-Hwan Son, Sookack Noh, Jaesung Park, Seong-Pil Kim, Joon Heo
- P-0854 CHARACTERISTICS OF VEGETATIONS APPLIED ON VFS (VEGETATED FILTER STRIP) SYSTEMS  
**Kyung-Sook Choi**  
Kyung-Sook Choi, Jeong-Ryeol Jang
- P-0913 RELATIONSHIP BETWEEN COMPACTION, MOISTURE AND PENETRATION RESISTANCE IN HORTICULTURAL SOIL  
**Carlos Gracia López**  
Carlos Gracia, Estela Alemany, Inmaculada Bautista
- P-1041 SIMULATION OF NITROGEN LEACHING WITH THE DSSAT MODEL UNDER DIFFERENT LEVELS OF NITROGEN AND WATER APPLICATION  
**Maliheh Rabie**  
Maliheh Rabie, Mehdi Gheysari, Seyed Majid Mirlatifi, Gerrit Hoogenboom
- P-1070 TREATMENT OF MILKING PARLOR EFFLUENT: STABILIZATION PONDS FOLLOWED BY CONSTRUCTED WETLAND  
**Denis Roston Miguel**  
Denis Roston Miguel, Edu Max da Silva
- P-1155 APPLICATION OF SURFACE COVER AND SOIL AMENDMENT FOR REDUCTION OF SOIL EROSION FROM SLOPING FIELD IN KOREA  
**Suin Lee Soo**  
Suin Lee Soo, Chul-Hee Won, Min-Hwan Shin, Woon Ji Park, Yonghun Choi, Jae-Young Shin, Joongdae Choi
- P-1196 INDIRECT REUSE OF RECLAIMED WASTEWATER FOR AGRICULTURE IN KOREA  
**Hanseok Jeong**  
Hanseok Jeong, Taeil Jang, Choung Hyun Seong, Seung Woo Park
- P-1334 IRRIGATION OF BRACHIARIA BRIZANTHA PASTURE WITH WASTEWATER OF CASSAVA INDUSTRY  
**Altair Bertonha**  
Altair Bertonha, Paulo Sérgio Lourenço De Freitas, Daiane De Cinque Mariano
- P-1427 WASTEWATER IRRIGATION IN URBAN GHANA: BALANCING RISKS AND BENEFITS  
**Razak Seidu**  
Razak Seidu, Amina Abubakar, Hans Overgaard, Robert Abaidoo, Arve Heistad, Thor Axel Stenstrom
- P-1431 EFFECT OF PRODUCTION SYSTEMS ON WATER QUALITY IN WATERSHEDS  
**Rodrigo Brunini**  
Michele Cláudia Silva, Teresa Cristina Tarlé Pissarra, Rodrigo Brunini
- P-1462 MODELING OF WATER QUALITY PARAMETERS OF DISSOLVED OXYGEN AND BIOCHEMICAL OXYGEN DEMAND IN THE SUBBASIN OF POXIM RIVER, BRAZIL  
**Anderson Nascimento do Vasco**  
Anderson Nascimento do Vasco, Antenor Oliveira Aguiar Netto, Marinoé Gonzaga da Silva, Aderson Soares De Andrade Júnior, Neylor Alves Calasans Rego
- P-1465 EFFECT OF RICE STRAW MULCH ON RUNOFF AND NPS POLLUTION DISCHARGES FROM A VEGETABLE FIELD  
**Joongdae Choi**  
Joongdae Choi, Min-Hwan Shin, Ji-Seong Yoon
- P-1519 DESORPTIONS, EXTRACTABLES AND BOUND RESIDUES OF ALACHLOR IN SOIL WITH THE ADDITION OF ORGANIC MATTER FROM SWINE WASTEWATER  
**Silvio Sampaio César**  
Tatiane Cristina Dal Bosco, Silvio Cesar Sampaio, Silvia Renata Machado Coelho, Natássia Jersak Cosmann, Marcos Hiroiqui Kunita, Morgana Suszek Gonçalves
- P-1641 HIDROLOGICAL PROCESS IN DIFERENTS COVERS OF SOIL  
**Valdemir Antonio Rodrigues**  
Valdemir Antonio Rodrigues, Octávio Barbosa Plaster, Thiago Martins, Caio Vinicius Ferreira Marmontel, Larisse Souza de Cicco, Valdemir Antonio Rodrigues Rodrigues, Valdemir Antonio Rodrigues Rodrigues
- P-1658 PEDOGENIC BACKGROUND CONCENTRATION (PBC) OF POTENTIALLY TOXIC ELEMENTS (PTE) IN SOILS TREATED WITH CIVIL/INDUSTRIAL SEWAGE SLUDGE.  
**Ilaria Cinzia Galiano**  
Ilaria Cinzia Galiano, Gian Franco Capra, Sergio Vacca
- P-1690 SURVEY DATA AND CHARACTERISTICS OF PRECIPITATION MORPHOMETRIC WATERSHED MODELING WITH THE USE OF SWAT (SOIL AND WATER ASSESSMENT TOOL)  
**Flavia Mazzer Rodrigues**  
Flavia Mazzer Rodrigues, Teresa Cristina Tarlé Pissarra, Michele Claudia da Silva

- P-1868 VARIABILITY OF WATER QUALITY IN A LAKE RECEIVING DRAINAGE WATER FROM HETAO IRRIGATION SYSTEM, IN YELLOW RIVER BASIN, CHINA  
**Biao Sun**  
Biao Sun, Changyou Li, Claudia M d S Cordovil, Keli Jia, Sheng Zhang, Amarilis de Varennes, Luis S. Pereira, Paula Paredes, ,
- P-1892 FINDING LOCATION FOR NITRATE SOURCES ALONG KITAKAMI RIVER, JAPAN USING THE NATURAL ABUNDANCE OF NITROGEN ISOTOPE  
**Kosuke Noborio**  
Kosuke Noborio, Chitoshi Mizota, Koji Harashina, Mitsuomi Orisaka
- P-1897 ANTIBIOTIC RESISTANCE MONITORING IN WATER SUPPLY SYSTEMS  
**Paula Amador**  
paula amador pinto, Ruben Fernandes, Isabel Duarte, Luisa Brito, Mário Barreto, Cristina Prudêncio
- P-1964 GIS MAPPING OF SOIL COMPACTION AND MOISTURE DISTRIBUTION FOR TILLAGE AND IRRIGATION MANAGEMENT  
**Seif Salim Al-Adawi**  
Seif Salim Al-Adawi, Hemantha P W Jayasuriya
- P-2045 TRANSNATIONAL AND NATIONAL ASPECTS OF THE ECOLOGICAL CATASTROPHE IN ARAL SEA REGION, ITS CAUSES AND SUGGESTIONS  
**Radek Malis**  
Radek Malis
- P-2075 MODELING SOIL WATER AND SOLUTE DISTRIBUTION UNDER VARIABLY SATURATED CROP ROOTZONE  
**Uday Khodke**  
Uday Khodke, Rabindra Kumar Panda, S. Tripathy
- P-2175 DIMENSIONS AND PERFORMANCE OF THE CYLINDRICAL SPECIMENS USED IN UNIAXIAL CONSOLIDATION TESTS  
**Reginaldo Da Silva Barboza**  
Reginaldo Da Silva Barboza, Piero Iori, Pedro Antonio Martins
- P-2329 POSSIBLE IMPACT OF CLIMATE CHANGE ON SOIL EROSION  
**Ramesh Pall Rudra Ramesh**  
Pall Rudra Ramesh, Trevor Dickinson, Syed Imran Ahmed, Greg Wall
- P-2344 SIMULATION GEOLOGICAL ENVIRONMENTAL SHORTAGE WATER OF GROUNDWATER AND THE POSSIBILITY OF ACTIVITY EARTHQUAKE JAFARAH BASIN NW LIBYA  
**Fathi Elosta Abu - Ehia**  
Elosta Fathi

# 331

## SESSION

14:00 - 14:55

**AP POSTERS SESSION**

Location: POSTERS ROOM

- P-0231 ECONOMIC AND ECOLOGICAL FACTORS OF USING THE NEW PROTEIN CONCENTRATE IN RED DEER FEEDING  
**Liga Proskina**  
Liga Proskina
- P-0404 EFFECT OF VACUUM LEVEL ON MILKING TIMES IN MEDITERRANEAN ITALIAN BUFFALO COW  
**Lelia Murgia**  
Maria Caria, Carlo Boselli, Lelia Murgia, Remo Rosati, Antonio Pazzona
- P-0442 ANALYSIS OF THE SURFACE THE STRAW LITTER PROCESSED MICROWAVE  
**Anatoly Gulyaev**  
Maksim Moskovskiy, Anatoly Gulyaev, Viktor Pakhomov
- P-0580 RESEARCH ON THE BEHAVIOR AND EGG FERTILIZATION RATE OF NONGDA III DWARF LAYERS AND WHITE LEGHORNS CHICKENS FED IN FLOOR-REARING SYSTEM  
**Long Liu**  
Long Liu, Zhonghua Ning
- P-0639 EFFECTS AND EXPENSES OF SPRUCE NEEDLES EXTRACTIVES IN BROILER CHICKEN FEEDING  
**Sallija Cerina**  
Sallija Cerina
- P-0653 MEASURING THE EFFECT OF LAMENESS ON FEED INTAKE AND ACTIVITY IN DAIRY COWS  
**Matti Pastell**  
Johanna Häggman, Heli Simojoki, Marianna Norring, Petro Tamminen, Matti Pastell
- P-0670 EFFECTS OF CELLULOSE DECOMPOSITION MICROBIAL INOCULUM ON PHYSICO-CHEMICAL PROPERTIES OF CATTLE MANURE COMPOST  
**Shuyuan Ji**  
Shuyuan Ji, Yujie Lou, Haizhu Zhou, Yanbo Bao
- P-0687 CONJUGATE CULTIVATION TOWARD SUSTAINABLE AGRICULTURE (PRODUCTION OF FISH IN PADDY FIELD FARMS IN THE NORTH OF IRAN)  
**Nasim Khodakaramian**  
Nasim Khodakaramian, Shiva Mohammad hoseynzadeh, Mohsen Karimi, Sadaf Ghasemi, Elham Norouzian, Mohammad Ghahderijani

- P-0832 THE TRIBOLOGICAL BEHAVIOR OF POULTRY LITTER ON EQUIPMENT WALLS  
**Seyed Reza Hassan-Beygi**  
Seyed Reza Hassan-Beygi, Mohammad Hossein Kianmehr, Iman Valaei, Hadi Rahmanzadeh Bahram
- P-0863 SELECTING THE MOST SUITABLE ELECTROLYTE BALANCE DIET FOR LACTATING SOWS USING MULTICRITERIAL ANALYSIS  
**Eliene Justino**  
Eliene Justino, Diego Pereira Neves, Douglas D'alessandro Salgado, Irenilza De Alencar Naas
- P-0875 RELATIONSHIP BETWEEN OPERATIONAL PARAMETERS OF MILKING MACHINES AND HYGIENIC QUALITY OF MILK IN 632 GALICIAN DAIRY FARMS.  
**José Pereira**  
Antonio Lenza, José Manuel Pereira
- P-0882 ASSESSMENT OF MILKING MACHINES ON GALICIAN DAIRY FARMS AND ITS RELATIONSHIP WITH THE STATE OF ANIMAL SPHINCTER.  
**José Pereira**  
Ines López, Angel Castro, Antonio Lenza, José Manuel Pereira
- P-0883 THE EFFECT OF LIGHTING PROGRAMS ON EGG PRODUCTION AND QUALITY OF BEIJING YOU- CHICKEN  
**Li Shen**  
li shen, Zheng Xiang Shi, Baoming Li, Chao Yuan Wang, he ma
- P-0960 GRAZING EFFECT IN RADIAL PASTURE FROM THE WATERING POINT IN BEEF CATTLE MANAGEMENT OF JAPAN  
**Yoshiharu Hosokawa**  
Yoshiharu Hosokawa
- P-1101 CLUSTER ANALYSIS TO STUDY THE TYPOLOGY AND PRODUCTIVITY IN BROILER FACILITIES.  
**Fernando Augusto Souza**  
Fernando Souza Augusto, Adhemar Pitelli Milani, Renato Luis Furlan, Wedson Carlos Lima Nogueira, Miguel Frederico Fernández-Alarcón, Eduardo Alves Almeida
- P-1368 CLASSIFICATION OF DAIRY FARMS IN GALICIA (SPAIN) BY PRODUCTIVE EFFICIENCY  
**Carlos J. Alvarez**  
Şonia Irimia, Carlos Escudero, Carlos J. Álvarez
- P-1410 SOCIO-ECONOMIC, STRUCTURAL ASPECTS AND MOTIVATIONS IN AUTOMATIC MILKING SYSTEM OF GALICIAN FARMERS  
**Javier Bueno Lema**  
Javier Bueno Lema, Angel Castro, Carlos Amiama, José Manuel Pereira
- P-1435 ACTIVE D3 VITAMIN SUPPLEMENT AND REDUCTION OF CALCIUM AND AVAILABLE PHOSPHORUS FOR BROILERS AT 8 TO 21 DAYS OF AGE  
**Flávio Medeiros Vieites Flávio Vieites**  
Medeiros Flávio Vieites, Christiane Silva Souza, João Garcia Caramori Júnior
- P-1442 CARCASS DRESSING AND NOBLE CUT YIELDS OF MALE BROILERS SUPPLEMENTED WITH 1,25 DIHIDROXICOLECALCIFEROL AND REDUCTION OF CALCIUM AND AVAILABLE PHOSPHOURS IN THE DIETS  
**Flávio Medeiros Vieites Flávio Vieites**  
Medeiros Flávio Vieites, Christiane Silva Souza, Carlos Henrique de Figueiredo Vasconcellos, Cláudio Vieira De Araújo
- P-1525 DENSITY-PRESSURE RELATIONSHIP IN DENSIFICATION OF SWINE SOLID FRACTION  
**Niccolò Pampuro**  
Niccolò Pampuro, Alessio Facello, Eugenio Cavallo
- P-1570 THERMAL MANAGEMENT IN PIG FARMING POTENTIALS OF RENEWABLE ENERGY USE  
**Barbara Sturm**  
Barbara Sturm, Luke Matchett, Sharon Joyce, Anthony P. Roskilly
- P-1664 UREASE ACTIVITY OF DAIRY SLURRY AFTER THE APPLICATION OF ADDITIVES DURING STORAGE  
**Haritz Arriaga Sasieta**  
Haritz Arriaga Sasieta, Maialen Viguria, Fernando Blanco, Pilar Merino Pereda
- P-1733 EFFECTS OF DIETARY SAFFLOWER CAKE SUPPLEMENTATION ON GROWTH PERFORMANCES, CARCASS TRAITS AND MEAT QUALITY OF COMISANA LAMBS  
**Francesco Pinto**  
Francesco Pinto, Maria Selvaggi, Cataldo Dario, Arcangelo Vicenti
- P-1734 DESIGN OF A SOLAR INCUBATOR.PART 1: MONITORING TEMPERATURE AND ENTHALPY GRADIENTS UNDER COMMERCIAL PRODUCTION  
**Javier García-Hierro Navas**  
Javier García-Hierro, José Ignacio Robla Villalba, Pilar Barreiro Elorza, Belén Diezma, Eva Cristina Correa Hernando
- P-1742 A QUANTILE REGRESSION MODEL TO PREDICT THE GROWTH OF GILT HEAD SEA BREAM (SPARUS AURATA), UNDER STANDARD CONDITIONS OF PRODUCTION, IN FISH FARMS.  
**Vicente Domingo Estruch Fuster**  
Vicente Domingo Estruch Fuster, Miguel Jover, Ana Tomás, Pablo Mayer

- P-1844 ANALYSIS OF A SEQUENCE NUCLEOTIDE POLYMORPHISM IN EXON 16 OF THE STAT5A GENE IN PODOLICA CATTLE BREED  
**Cataldo Dario**  
Maria Selvaggi, Antonella Ramta Pesce Delfino, Vincenzo Tufarelli, Arcangelo Vicenti, Cataldo Dario
- P-1849 PRELIMINARY STUDY ON THE RELATIONSHIP BETWEEN A SNP IN EXON 16 OF THE STAT5A GENE AND SOME MILK COMPOSITION TRAITS IN JERSEY COWS  
**Antonella Ramta Pesce Delfino**  
Maria Selvaggi, Antonella Ramta Pesce Delfino, Vincenzo Tufarelli, Francesco Pinto, Cataldo Dario
- P-1886 EFFECT OF GENOTYPE AND SLAUGHTER AGE ON THE FATTY ACID COMPOSITION OF LIGHT LAMBS MEAT  
**Giovanni Martemucci**  
Angela Gabriella D'alessandro, Giuseppe Marsico, Donato Casamassima, Kostantinos Petrotos, Giovanni Martemucci
- P-1889 ADDING BACILLUS SUBTILLIS AND EXOGENOUS ENZYMES IN BROILER DIET: EFFECT ON RESIDUE PRODUCTION AND BIOGAS POTENTIAL PER BIRD  
**Maria Fernanda Praes Ferreira Menegucci**  
Maria Fernanda Praes Ferreira Menegucci, Maria Fernanda Ferreira Menegucci Praes, Jorge de Lucas Junior, João Batista Matos Júnior, Sarah Sgavioli, Natalia de Paula Ramos, Airon Magno Aires
- P-2086 TERRITORIAL APPROACH OF THE DEVELOPMENT OF THE LIVESTOCK PRODUCTIONS IN ALGERIA  
**khaled abbas**  
khaled abbas, khaled abbas
- P-2102 AMMONIA EMISSION AFTER ON-FARM AEROBIC TREATMENT IN PIG SLURRY LAGOON  
**Maialen Viguria**  
Maialen Viguria, Haritz Arriaga Sasieta, Pilar Merino Pereda
- P-2162 STUDY OF TWO ENERGY SAVING TECHNIQUES IN A BROILER FARM IN SPAIN. PRELIMINARY RESULTS  
**Maite Aguilar Ramirez**  
Maite Aguilar Ramirez, Alberto Abaigar Ancín, Pilar Merino Pereda, Fernando Estellés Barber, Salvador Calvet Sanz
- P-2230 EVALUATING FUNCTION OF CUBICLES FOR CATTLE BY A PHOTOMETRIC METHOD ? DESCRIPTION OF A METHOD  
**Anders Herlin**  
Anders Herlin
- P-2260 INVESTIGATION OF THE EFFECT OF TOMATO POWDERS AS A DIETARY SUPPLEMENT ON SKIN PIGMENTATION OF GOLDFISH  
**Mehmet Gokoglu**  
Mehmet Gokoglu, Halil Colak
- P-0337 AUTOMATIC FEEDING SYSTEMS (AFS) IN DAIRY CATTLE - SEASONAL INFLUENCES ON MAXIMUM STORAGE TIME OF MAIZE SILAGE IN FILLING DEVICES  
**Anne Grothmann**  
Anne Grothmann; Franz Nydegger; Andrea Wagner

332  
SESSION

14:00 - 14:55

(EN) POSTERS SESSION

Location: POSTERS ROOM

- P-0015 BEACON: BIOREFINING IN WALES  
**Elaine F. Jensen**  
Mike S. Morris; Joe A. Gallagher; Elaine F. Jensen; Adam Charlton; Steven Fish
- P-0022 GRASSHOL - USE OF HIGH SUGAR RYEGRASS FOR THE PRODUCTION OF LIQUID BIOFUELS  
**Elaine F. Jensen**  
Michael S. Morris; David N. Bryant; Elaine F. Jensen; David S. Thomas; Steven Fish; Joe A. Gallagher
- P-0073 APPLICATION OF BAGASSE BOTTOM ASH ACTIVATED CARBON FOR DECOLORIZATION OF BLEACHING PROCESS IN VEGETABLE OIL INDUSTRY  
**Parinda Suksabye**
- P-0250 A STUDY ON FLUE GAS EMISSIONS OF DIFFERENT REED PLANTS AS BRIQUETTED FUELWOOD  
**Sefai Bilgin**  
Sefai Bilgin, Can Ertekin, Ahmet Kürklü
- P-0533 THE IMPRESS OF SUITABLE MANAGEMENT ON DECREASE OF AGRICULTURAL AND PROCESSING INDUSTRIES WASTES IN IRAN  
**zahra kalabi**  
Zahra Kalabi Gharelar, Mohammad Emami, Hadi Tajeddin khoozani, Mohamm Gahderijani, Shiva Mohammad hoseynzadeh, Nasim Khodakaramian
- P-0649 INVESTIGATING THE CUMULATIVE AND RESIDUAL EFFECTS OF MUNICIPAL SOLID WASTE ON THE UPTAKE OF N, P AND K BY KERNEL WHEAT  
**Mehdi Ghajar Sepanlou**  
Mehdi Ghajar Sepanlou, Akram Ahmadpoor, Mohammad Ali Bahmanyar
- P-0869 ENERGY GENERATION BY UTILIZATION OF BY-PRODUCT FOR SUSTAINABILITY AND ECO-FRIENDLY OF PALM OIL INDUSTRY IN INDONESIA  
**Soni Sisbudi Harsono**  
Soni Sisbudi Harsono; Philipp Grundmann; Anja Hansen

- P-0933 INFLUENCE OF DIFFERENT PRE-TREATMENT METHODS ON DEGRADATION OF WHEAT STRAW  
**Marti Tutt**  
Marti Tutt, Timo Kikas, Jüri Olt
- P-1013 REVIEW AND ANALYSIS OF THE REGULATIONS OF THE EUROPEAN UNION AND COLOMBIA OF PERSISTENT ORGANIC POLLUTANTS IN THE COMPOST AND ITS IMPACT  
**Esperanza Ayuga-Téllez**  
Diana Ortiz-Moncada, Esperanza Ayuga-Téllez, Rocío Ortiz-Moncada
- P-1280 SOCIO-ECONOMIC ASPECTS INFLUENCING THE ADOPTION OF ENERGY CROPS BY EU FARMERS  
**Rita Robles**  
Rita Robles, Piedad Campelo, J. Ramiro González
- P-1301 A MACHINE PROTOTYPE FOR HARVESTING AND CHIPPING OF PRUNING RESIDUES: FIRST TEST ON HAZELNUT PLANTATION (CORYLUS AVELLANA L)  
**Marco Fedrizzi**  
Marco Fedrizzi, Marco Fedrizzi, Giulio Sperandio, Mauro Pagano, Daniele Pochi, Roberto Fanigliulo, Piero Recchi
- P-1579 DETERMINATION OF OPTIMUM MOISTURE OF COMPOST FOR PRODUCE FERTILIZER PELLET BY USING OF EXTRUDER DEVICE  
**heman amiri**  
heman amiri, akbar Arabhosseini, Mohammad Hossein Kianmehr, Nabi Allah Keshvari
- P-1584 AN ADVANCED CONTROL SYSTEM FOR MICROALGAE GROWING IN PHOTOBIO-REACTORS  
**Luis Manuel Navas Gracia**  
Jorge Miñón Martínez, Víctor Martínez Martínez, Gonzalo Ruiz Ruiz, Luis Manuel Navas Gracia, José María Durán Altisent
- P-1655 THE GIS APPROCH FOR THE MANAGEMENT OF THE PHOENICICOLE BIOMASS POTENTIEL IN THA MZAB OASIS  
**Khalida Bousdira**  
Khalida Bousdira, Khaled Ziani, Dina Bousdira
- P-1680 CROP RESIDUES: SEPARATION OF BIOMASS AND PLASTICS.  
**Inmaculada Navarro**  
M<sup>a</sup> Carmen Galera, Inmaculada Navarro, Guadalupe López, Félix Nieto
- P-1786 INVESTIGATION OF THE DRYING PROCEDURE OF WOOD-CHIP PILE  
**Péter Tóvári**  
Péter Tóvári, Mihály Herdovics, Tibor Vojtela, István Szabó, László Fenyvesi
- P-1857 THE EFFECT OF CELLULOLYTIC MICROORGANISMS ON THE DEGRADATION OF THE SOLID RESIDUAL FRACTION OF STRAW AND HAY  
**Carmen Marin Perez**  
Carmen Marin Perez, Vasilis Dandikas, Michael Lebuhn, Konrad Koch, Andreas Gronauer
- P-1872 EVALUATION OF BIOMASS SEPARATION PROCESS OF CHLORELLA SP. IN THE MEDIUM GROWING WITH LOW NITROGEN CONTENT  
**Lucas de Paula Corrêdo**  
Lucas De Paula Corredo, Márcio Arêdes Martins, Lidiane Covell, Rosana Mendonça Peixoto, Emanuele Graciosa Pereira, Michel Oliveira Santos
- P-2028 SOYBEAN GROWTH IRRIGATED WITH SWINE WASTEWATER  
**Eliane Hermes**  
Eliane Hermes, Elisandro Pires Frigo, Silvio Cesar Sampaio, Michelle Sato Frigo, Jonathan Dieter
- P-2035 "SOLAR DRAFT TOWER" A LOOK AHEAD INTO DEVELOPING NON-CONVENTIONAL AND RENEWABLE SOURCE OF POWER GENERATION  
**Mahendra Singh Dulawat**  
Mahendra Singh Dulawat, Nikhilesh Kumar
- P-2084 ENVIRONMENTAL AND ECONOMIC IMPLICATIONS OF RENEWABLE FUEL STANDARD IN SOUTH KOREA  
**Taegon Kim**  
Taegon Kim; Kyo Suh; Jeong-jae Lee
- P-2178 FLOCCULATION PERFORMANCE IN THE HARVEST OF CHLORELLA VULGARIS BIOMASS CULTIVATED IN LOW NITROGEN MEDIUM  
**Lucas de Paula Corrêdo**  
Lucas De Paula Corredo, Márcio Aredes Martins, Rafael Lira, Rosana Mendonça Peixoto, Ian Colten, Emanuele Graciosa Pereira, Michel de Oliveira Santos
- P-2185 EFFECT OF SUPPLEMENTATION WITH FLUE GAS FROM WASTE INCINERATORS ON BIOMASS AND LIPID PRODUCTION OF CHLORELLA VULGARIS IN PHOTOBIO-REACTORS  
**Rosana Mendonça Peixoto**  
Rosana Mendonça Peixoto, Lucas De Paula Corredo, Lidiane Covell, Danielle Bijajolli Vieira, Michel Oliveira dos Santos, Marcelo Pereira Coelho, Marcio Arêdes Martins,
- P-2264 MANURE COMPOSTING OF BEEF CATTLE  
**Juliana Bega Junqueira**  
Juliana Bega Junqueira, Jorge e Lucas Junior



# 333 SESSION

14:00 -14:55

**(IT) POSTERS SESSION**

Location: POSTERS ROOM

- P-1662 EFFECT OF EMI SENSOR ORIENTATION CHANGES ON ECA MEASUREMENTS  
**Manuel Perez-Ruiz**  
Manuel Pérez Ruiz, Alberto Jardúo, Karl Vanderlinden, Juan Agüera-Vega
- P-0339 PROCESS CONTROL OF HEAT RECUPERATION FROM COMPOST HEAP WITH THE MEASUREMENT OF PROCESS PARAMETERS WITH LABVIEW APPLICATION  
**Maciej Neugebauer**  
Maciej Neugebauer, Piotr Solowiej, Janusz Piechocki
- P-0434 ADAPTATION OF THE VEGETATION RIPÁRIA AREAS CILIARY FUNCTION OF THE DRAINAGE NET OF THE STREAM COMUR WATERSHED - BOTUCATU (SP) - BRAZIL  
**Sergio Campos**  
Sergio Campos
- P-0576 HYDRODYNAMIC PERFORMANCE ANALYSIS OF A GATE-VALVE USING PARTICLE TRACKING VELOCIMETRY (PTV)  
**Pablo González-Altozano**  
Federico Ibáñez, Pablo González-Altozano, María Gasque, Pau Martí
- P-0592 LEAF NITROGEN CONTENT DISCRIMINATION USING COMBINATION OF VEGETATION INDICES  
**Francisco de Assis Carvalho Pinto Carvalho**  
Selma Alves Abrahão, Francisco de Assis de Carvalho Pinto, Daniel Marçal De Queiroz, Nerilson Terra Santos, José Eustáquio De Souza Carneiro
- P-0669 LANDSCAPE ASSESSMENT THROUGH GIS  
**Cruz Calleja Perucho**  
Ana Pou Merina, Carmen Marín Ferrer, Cruz Calleja Perucho, Alejandro Saéz Echevarría, Fernando Ruiz Mazarrón, Cristina Velilla Lucini
- P-1137 MONITORING AND ESTIMATION OF TOBACCO DRYING VARIABLES FOR PROCESS MODELING  
**Gonzalo Ruiz Ruiz**  
Victor Martínez Martínez, Gonzalo Ruiz Ruiz, Luis Manuel Navas Gracia, Jaime Gómez Gil, Jorge Miñón Martínez, Inocencio Blanco

- P-1377 ANALYSIS OF ERRORS IN THE APPLICATION OF DOSES OF SUPPLIES THE FIXED AND VARIABLE RATES ELECTRONIC GOVERNMENT  
**Raniére Vieira Rodrigues**  
Raniére Rodrigues Vieira, Casimiro Dias Gadanha Junior, Mateus Marrafon Nicolosi, Edmar Casarin Zambianco, Frans Arthur Pavlu
- P-1532 SIMULTANEOUS ANALYSIS OF HYDROPONIC MACRONUTRIENTS USING ION-SELECTIVE ELECTRODES  
**Hak-Jin Kim**  
Hak-Jin Kim, Won-Kyung Kim, Mi-Young Roh, Kyeong-Rok Yoon
- P-1803 ONTOLOGY-BASED FOR MEDICINE HISTORY SEARCH AND ALERT SYSTEM IN DEPARTMENT OF NUCLEAR MEDICINE  
**Jui-Jen Chen**  
Jui-Jen Chen, Hung-Chi Yen, Pei-Wen Wang
- P-2006 UTILIZATION OF INFORMATION ABOUT LOCAL VARIABLE ENVIRONMENTAL CONDITIONS TO PREDICT THE QUALITY OF WHEAT GRAIN DURING THE HARVEST  
**Miroslaw Czechlowski**  
Miroslaw Czechlowski, Tomasz Wojciechowski
- P-0236 IVIA'S KNOWLEDGE TRANSFER BY INFORMATION TECHNOLOGY METHODS  
**Vicent Cebolla**  
M<sup>a</sup> Soledad Rodenas; M<sup>a</sup> Pilar Sánchez; Vicent Cebolla

# 334 SESSION

14:00 -14:55

**(PF) POSTERS SESSION**

Location: POSTERS ROOM

- P-0060 DETERMINATION OF THE VOLUMETRIC SHRINKAGE IN JATROPHA SEEDS DURING DRYING  
**Oswaldo Resende**  
Oswaldo Resende, Valdiney Cambuy Siqueira, Tarcisio Honorio Chaves
- P-0063 FORM AND SIZE OF THE JATROPHA (JATROPHA CURCAS L.) BEANS DURING DRYING AT SEVERAL TEMPERATURES  
**Oswaldo Resende**  
Oswaldo Resende, Valdiney Cambuy Siqueira, Tarcisio Honorio Chaves
- P-0086 EFFECT OF DIFFERENT PLANT ESSENCES ON VASE LIFE OF GLADIOLUS  
**Mansoor Shamili Hormozgan University**  
Mansoor Shamili, Khairieh samadizad

- P-0106 KINETICS AND CONVECTION DRYING MODELS OF PINEAPPLE SLICES BOTH IN NATURA AND PRE-OSMODEHYDRATED IN INVERTED SUGAR  
**Pedro Amorim-Berbert**  
Pedro Amorim-Berbert, Pedro Amorim-Berbert, Rafael Gomes-Dionello, Marília Berbert-Molina, Ana Paula Martinazzo
- P-0119 OPTIMIZATION OF SOYBEAN (GLYCINE MAX MERR.) SEED DRYING CONDITIONS WITH RESPONSE SURFACE METHODOLOGY IN A CONSTANT-BED DRYER USING TWO CULTIVARS  
**Reza Tavakkol Afshari**  
Ali Abbasi Surki; Reza Tavakkol Afshari
- P-0124 EFFECT OF EDIBLE COATING ON THE QUALITY OF MINIMALLY PROCESSED GARLIC  
**Rungsinee Sothornvit**  
Rungsinee Sothornvit, Pondput Tangworakit
- P-0170 EFFECT OF MOISTURE CONTENT ON SOME FRICTIONAL PROPERTIES OF BUSH MANGO (IRVINGIA GABONENSIS) NUT  
**Akindele Folarin Alonge**
- P-0173 SOME PARAMETERS AFFECTING THE CRACKING OF BUSH MANGO (IRVINGIA GABONENSIS) SEED  
**Akindele Folarin Alonge**  
Akindele Folarin Alonge; Theresa Ezike
- P-0227 EFFECT OF ANTIMICROBIAL SUBSTANCES FROM GARLIC EXTRACT ON FOOD-BORNE MICROORGANISMS IN SOFT SHELL CRAB STORED IN ICE  
**Dusadee Tunhun**  
Dusadee Tunhun, Nongnuch Raksa-kulthai, Mayuree Chaiyawatt
- P-0267 DRYING KINETICS OF LEAVES AND FLOWER-HEADS OF PECTIS BREVIPE-DUNCULATA  
**Pedro Amorim-Berbert**  
Pedro Amorim-Berbert, Marcia Terezinha Ramos Oliveira, Marília Amorim Berbert Molina, Ana Paula Martinazzo
- P-0309 REACTION KINETICS OF OZONE GAS IN THE WHEAT GRAIN MASS  
**Leda Rita Antonino Faroni**  
Lêda Rita DAntonino Faroni, Tales Afonso da Silva, Juliana Lobo Paes, Mônica Ribeiro Pirozi, Alisson Santos Lopes da Silva
- P-0310 INACTIVATION OF AFLATOXIGENIC FUNGI BY TREATMENT WITH OZONE IN PEANUTS  
**Leda Rita Antonino Faroni**  
Ernandes Rodrigues de Alencar, Lêda Rita DAntonino Faroni, Nilida de Fátima Ferreira Soares, Washington Azevedo da Silva, André Rodrigues da Costa
- P-0355 EXPERIMENTAL STUDY ON MECHANICAL PROPERTIES OF PUMPKIN TISSUE  
**Maryam Shirmohammadi**  
Maryam Shirmohammadi, Prasad Yarlaggada, Yuantong Gu, Vladis Kosse
- P-0357 STORAGE EFFECTS ON ELECTRICAL CONDUCTIVITY AND FATTY ACID COMPOSITION OF CARTHAMUS TINCTORIUS SEED  
**Reza Tavakkol Afshari**  
Ramin Alivand, Reza Tavakkol Afshari, Farzad Sharif Zadeh
- P-0419 STUDY OF THE DRYING KINETIS FOR APPLES IN A CONVECTIVE DRIER  
**Raquel Guiné**  
Raquel Guiné, Ana Cruz, João Carlos Gonçalves, Ana Cristina Correia
- P-0455 UV-C IRRADIATION REDUCES MICROBIAL POPULATIONS AND MAINTAINS QUALITY OF FRESH-CUT PAPAYA  
**Rivia Darla Amaral Alvares**  
Mara Lúgia Biazotto Bachelli, Rivia Darla Alvares Amaral, Benedito Carlos Benedetti
- P-0548 WATER VAPOUR SORPTION ISOTHERMS OF CANARIUM PULP (CANARIUM SCHWEINFURTHII ENGL.)  
**Gilles Bernard Nkouam**  
Gilles Bernard Nkouam, Laurent Perrin, César Kapseu, Danielle Barth, Michel Dirand
- P-0585 INFLUENCE OF E-BEAM IRRADIATION PROCESSING ON CHESTNUTS COLOR AND TEXTURE  
**Amilcar L. Antonio**  
Amilcar L. Antonio, Elsa Ramalhosa, Iwona Kaluska, Begoña Quintana, M. João Trigo, Armando Ferreira, Albino Bento,
- P-0659 MYCOTOXINS INCIDENCE IN MAIZE STORED IN FAMILY FARMS OF THE SOUTH AND THE TRIANGLE REGIONS OF THE STATE OF MINAS GERAIS, BRAZIL  
**Valéria Vieira Queiroz**  
Valéria Aparecida Vieira Queiroz, Renata Regina Pereira da Conceição, Priscuila Ferreira, Simone Martins Mendes, Rodrigo Véras da Costa, Luciano Rodrigues Queiroz
- P-0674 POSHARVEST AND ANTIOXIDANT ACTIVITY IN AVOCADO 'HASS' SUBJECTED TO GAMMA RADIATION  
**Rogério Vieites Lopes**  
Rogério Vieites Lopes, Érica Regina Daiuto
- P-0738 INFLUENCE OF PRE-DRYING ON VACUUM DRYING KINETICS OF CARROTS SLICES  
**Carolina Maria Sánchez Sáenz**  
Carolina Maria Sánchez Sáenz, Rafael Augustus de Oliveira, Kil Jin Park

- P-0741 POSTHARVEST TREATMENTS ON QUALITY AND SHELF LIFE OF PERA RIO ORANGE FRUITS.  
**Maria Amalia Brunini**  
Maria Amalia Brunini, Archimedes Chiarelli Nishida, Lidiane Aparecida Kanesiro, Janaína Cristina Kanesiro, Vinicius Antonio Maciel junior
- P-0744 EFFECT OF POST HARVEST TREATMENTS ON THE QUALITY OF PALUMA GUAVA FRUITS MINIMALLY PROCESSED DURING STORAGE AT LOW TEMPERATURE.  
**Maria Amalia Brunini**  
Maria Amalia Brunini, Ronaldo Campos Pereira, Antonio Luis de Oliveira, Lidiane Aparecida Kanesiro, Janaína Cristina Kanesiro
- P-0847 ACTION OF ULTRAVIOLET RADIATION ON IN VITRO DEVELOPMENT OF RHIZOCTONIA SOLANI  
**Francile Barbosa**  
Francile Barbosa, Artur Batista de Oliveira Rocha, Sylvio Luis Honório, Claudio Luiz Messias
- P-0862 MATHEMATICAL MODELING AND SIMULATION OF AN AUTOMATICALLY CONTROLLED CORN BATCH DRYER WITH EXHAUST HEAT RE-CIRCULATION  
**Saeid Minaei**  
Mohammad Tabasizadeh; Saeid Minaei; Dariush Zare; Mohammad Hadi Khoshghazza
- P-0898 USAGE OF SOLAR-SPOUTED BED DRIER IN THE DRYING OF PARBOILED WHEAT  
**Serpil Sahin**  
Serpil Sahin, Gulum Sumnu, Ferihan Tunaboyu
- P-0917 DEVELOPMENT OF INTELLIGENT PACKAGING WITH SENSOR OF CHITOSAN-ACETATE, POLYVINYL ALCOHOL, AND INDICATORS BROMTHYMOL BLUE AS SPOILAGE FISH FILLETS DETECTOR  
**Taufik Hidayat**  
Riyan Adi Priyanto; Riyan Adi Priyanto; Aninta Saraswati; Taufik Hidayat; Niswani Seknun
- P-0926 EFFECT OF SOME ADDITIVES ON THE SHELF LIFE OF DRIED PAPAYA (VARIETY FORMOSA) OBTAINED BY OSMOTIC DEHYDRATION COMBINED TO CONVENTIONAL AIR DRYING  
**Silvia Germer**  
Silvia Germer, Julia Lancha, Cristhiane Ferrari, Cristiane Ruffi, Sandra Carmello-Guerreiro
- P-0973 EFFECT OF ULTRASOUND IRRADIATION ON THE MICROSTRUCTURE AND ICE CRYSTAL SIZE DISTRIBUTION OF FROZEN AGAR GEL SAMPLES  
**Hossein Kiani**  
Hossein Kiani, Da-Wen Sun, Zhihang Zhang
- P-1002 BABASSU COCONUT MILK MICROENCAPSULATED BY SPRAY DRYING  
**Audirene Santana Amorim**  
Audirene Santana Amorim, Gustavo Kazuo Fugita, Louise Emy Kurozawa, Rafael Augustus De Oliveira, Kil Jin Park
- P-1004 MODIFIED ATMOSPHERE PACKAGING WITH ESSENTIAL OILS BLACK AMBER. EFFECT ON ORGANOLEPTIC QUALITY  
**Salvador Castillo Garcia**  
Salvador Castillo Garcia, H.M. Díaz-Mula, D. Martínez-Romero, M. Serrano, D. Valero
- P-1021 SPRAY DRYING OF PEQUI PULP: INFLUENCE OF THE CONCENTRATION OF CARRIER AND SURFACTANT AGENTS  
**Audirene Santana Amorim**  
Audirene Santana Amorim, Gustavo Kazuo Fugita, Louise Emy Kurozawa, Rafael Augustus De Oliveira, Kil Jin Park
- P-1022 CONVECTIVE DRYING OF PINEAPPLE AFTER OSMOTIC DEHYDRATION  
**Rosa Helena Aguiar**  
Audirene Amorim Santana, Gabriel Pereira Martin Luiz, Rosa Helena Aguiar, Rafael Augustus de Oliveira, Kil Jin Park
- P-1051 DRYING OF HUSK RICE GRAIN: MODELING AND THERMODYNAMIC PROPERTIES  
**Gabriel Henrique Horta de Oliveira**  
Gabriel Oliveira, Paulo Cesar Corrêa, Carmen Jarén
- P-1056 SHRINKAGE OF PEAR FRUIT CUBES DURING DRYING IN A CABINET DRYER  
**Seyed Mehdi Nassiri**  
Seyed Mehdi Nassiri, Mehdi Heydari
- P-1282 COMBINED EFFECT OF HIGH PRESSURE AND MODERATE TEMPERATURE ON THE INACTIVATION OF BACILLUS COAGULANS IN TOMATO PULP  
**Morgana Zimmermann**  
Morgana Zimmermann, Donald Schaffner, Gláucia Maria Falcão de Aragão
- P-1290 MONTE CARLO DOSE IRRADIATION PLANNING FOR COMPLEX SHAPED FOODS TREATMENT  
**Belen Juste**  
Belen Juste, Rafael Miró, Gumersindo Verdú, Juan Manuel Campayo, Sergio Díez
- P-1296 MODELING OF DRYING PROCESS OF CORNSTARCH GRANULES IN A FLUIDIZED BED DRYER  
**Lan Chen**  
Lan Chen; Yunhui Xie; Chunhua Lin; Song Du

- P-1386 PHYSICAL PROPERTIES OF BIO-BASED POLYETHYLENE PLASTIC AS FOOD PACKAGING MATERIAL  
**Tatuya Nobuhara**  
Tatuya Nobuhara, Y. Hasegawa, K. Konno, H. Kani, T. Endo, T. Kimura
- P-1393 POSSIBILITIES IN STORING BOILED WHOLE EGGS  
**Csaba Németh**  
Csaba Németh, Csaba Balla, László Friedrich, István Dalmadi
- P-1411 EFFECT OF HHP TREATMENT ON LIQUID WHOLE EGG  
**Csaba Németh**  
Csaba Németh, Csaba Balla, Klára Pásztor-Huszár, Ildikó Zeke
- P-1640 DEVELOPMENT OF GRAIN STORAGE TECHNOLOGIES USING OZONE TREATMENT  
**Erno Gyimes**  
Erno Gyimes, Balazs Szabo P., József Deakvari, Mihaly Herdovics, Laszlo Lörincz, Antal Véha
- P-1686 KINETICS OF MICROWAVE-CONVECTIVE DRYING OF SOME HERBS  
**Dorota Witrowa-Rajchert**  
Magdalena Sledz, Dorota Witrowa-Rajchert
- P-1765 DRYING KINETICS OF POMEGRANATE (PUNICA GRANATUM) PEELS  
**Regina Isabel Nogueira**  
Regina Isabel Nogueira, Diego Renan Sobreiro Falcão Paim, Felix Emilio Prado Cornejo, Eduardo dos Santos Mariano, Alaíde de Sá Barreto, Suely Pereira Freitas
- P-1773 COMPARATIVE STUDY OF THE QUALITY OF THE PRODUCTS OBTAINED BY SPRAY DRYING ON A LABORATORY AND PILOT SCALE  
**Regina Isabel Nogueira**  
Monica M. Paganí, Maria Helena M. Rocha-Leão, Sérgio Macedo Pontes, Flávia dos Santos Gomes, Regina Isabel Nogueira, Renata V. Tonon, Lourdes Maria Correa Cabral,
- P-1820 MATHEMATICAL MODELING OF SAFFRON DRYING USING A HEAT PUMP ASSISTED HYBRID PV-T SOLAR DRYER  
**Hamid Mortezapour**  
Hamid Mortezapour; Barat Ghobadian; Mohammad Hadi Khoshtaghaza; Saeid Minaei
- P-1867 INFLUENCE OF UV-C IRRADIATION IN MINIMALLY PROCESSED PÉROLA PINEAPPLE STORED UNDER REFRIGERATION  
**Rivia Darla Amaral Alvares**  
Mara Lígia Biazotto Bachelli, Rivia Darla Alvares Amaral, Benedito Carlos Benedetti
- P-1885 AN INNOVATIVE APPLICATION OF PASSIVE REFRIGERATION SYSTEM TO PRESERVE FRESH-CUT FLOWERS  
**Paolo Menesatti**  
Paolo Menesatti, Stefano Giorgi, Gianluca Burchi, Domenico Prisa, Emiliano Canali, Federico Pallottino, Francesca Antonucci, Corrado Costa
- P-1958 INVESTIGATION OF ELECTRICAL FIELD EFFECT ON DRYING RATE AND PERCENT GERMINATION OF BARLEY  
**Jalil Razavi**  
Moein Kamali, Jalil Razavi, Morteza Sadeghi
- P-1983 EFFECT OF STORAGE CONDITIONS ON THE QUALITY OF RASPBERRY CONCENTRATES  
**Reka Juhasz**  
Reka Juhasz, Monika Steger-Mate, Beatrix Szabó-Nótin, Jozsef Barta
- P-1992 THE SHAPE IMPORTANCE IN THE AGRIFOOD FRAMEWORK P-2036 ATOMIZATION OF CHICORY ROOTS EXTRACT ON A SPRAY DRYER  
**Corrado Costa**  
Francesca Antonucci, Federico Pallottino; Paolo Menesatti, Corrado Costa
- P-2036 ATOMIZATION OF CHICORY ROOTS EXTRACT ON A SPRAY DRYER  
**Rafael Augustus De Oliveira**  
Rafael Augustus De Oliveira; Aline Muta Vivas; Kil Jin Park
- P-2066 ASCORBIC ACID COMPORTAMENT IN LETTUCE VARIETY MIMOSA DURING COOLING STORAGE SUBJECTED AT TWO RAPID COOLING TREATMENTS.  
**Rodolpho Cesar dos Reis Tinini**  
Rodolpho Cesar dos Reis Tinini, Barbara Janet Teruel Mederos
- P-2082 DESIGN, DEVELOPMENT AND EVALUATION OF A VARIABLE RATE SPRINKLER BASED ON SENSOR FOR SOLID SET IRRIGATION SYSTEM  
**Jalil Razavi**  
Jalil Razavi; Ali Rezaee Shahraki; Mehdi Gheysari
- P-2083 INFLUENCE OF DRYING METHOD ON THE SORPTION CHARACTERISTICS OF DATE POWDER  
**Morteza Sadeghi**  
Morteza Sadeghi, Esmaeil Arrargate, Jalil Razavi, Khaled Gomar
- P-2176 INFLUENCE OF OSMOTIC DEHYDRATION AND DRYING THUNDERSTORM ORGANIC ORANGE SWEET POTATO  
**Maria Ivone Barbosa Martins Jacintho**  
Kamila de Oliveira do Nascimento, José Lucena Barbosa Júnior, Maria Ivone Barbosa Martins Jacintho

- P-2247 OXYGEN PERMEABILITY MEASUREMENT IN BIAXIALLY- ORIENTED POLYESTER AND CO-EXTRUDED POLYPROPYLENE FILMS  
**Umezuruike Linus Opara**  
Oluwafemi J. Caleb; Umezuruike Linus Opara; Pramod V. Mahajan
- P-2252 INVESTIGATION IN THE EFFECT OF DIFFERENT PACKAGING FILM ON EXTENSION OF BREAD SHELF LIFE  
**Mahdi Karimi**  
Mahdi Karimi, Zahra Sheikholeslami, Mehdi Ghiafeh Davoodi, Fariba Naghipoor, Bahareh Sahraiyan
- P-2272 MEASUREMENT OF STRUCTURAL CHANGES TO A FOOD MATERIAL DURING DEHYDRATION  
**Wijitha Senadeera**
- P-2339 OSMOTIC DEHYDRATION AND CONVECTIVE DRYING OF FIG FRUITS (FICUS CARICA)  
**Claudia Santacruz-Vazquez**  
Claudia Santacruz-Vázquez, Verónica Santacruz-Vázquez
- P-2340 EFFECTS OF OZONATED WATER ON SHELF LIFE AND QUALITY CHARACTERISTICS OF FRESH PAPALO (POROPHYLLUM RUDERALE)  
**Claudia Santacruz-Vazquez**  
Claudia Santacruz-Vázquez, Santacruz-Vázquez Verónica
- P-2342 SHELF LIFE OF COATED PRICKLY PEARS (OPUNTIA FICUS VAR. INDICA)  
**Veronica Santacruz-Vazquez**  
Verónica Santacruz-Vázquez, Claudia Santacruz-Vázquez, Victor Manuel Huerta-Espinosa
- P-1246 MFS BASED STRUCTURAL TOPOLOGY OPTIMIZATION  
**Sungyong Lee**  
Sungyong Lee; Taegon Kim; Jeong-jae Lee
- P-1402 STRUCTURAL MODEL OF PARTICLE BOARD AND WOOD FOR USE IN CATTLE HANDLING FACILITIES  
**Diogo Sartori de Lucca**  
Diogo de Lucca Sartori, Juliano Fiorelli, Holmer Savastano Junior, Julio Cesar Cravo, Nubia Garzon Barrero
- P-1413 MODELS VALIDATION TO ESTIMATE POTASSIUM'S CONCENTRATION USING TDR ON UNSATURATED SOIL COLUMN  
**Isaac Ponciano De Matos**  
Isaac Ponciano De Matos; Jarbas Honorio De Miranda; Alisson Jadavi Pereira Da Silva; Eugênio Ferreira Coelho; Gabriel Gomes Porto
- P-1463 THE PHYSICAL AND GEOMETRICAL CHARACTERISTICS OF CERAMIC BRICKS WITH EIGHT HOLES.  
**Fernando Augusto Souza**  
Fernando Souza Augusto, Adhemar Pitelli Milani, Renato Luis Furlan, Raquel Lunedo, Paulo Roberto de Oliveira Carneiro, Paula Toro-Velasquez
- P-1467 POTENTIAL APPLICATION OF SILICATE MATERIALS FOR SOIL AND WATER QUALITY IN AGRICULTURE  
**Emelie Ablaza Casayuran**  
Emelie Ablaza, Katsumi Ishikawa, Midori Hikashi, Daisuke Yasutake
- P-1469 VISCOSITY AND ION CONCENTRATION ON WATER STRUCTURE FOR HIGH QUALITY VEGETABLE PRODUCTION IN HYDROPONICS  
**Midori Hikashi**  
Midori Hikashi, Katsumi Ishikawa, Yasuomi Hamazu, Emelie Ablaza, Makito Mori
- P-1470 EFFECTS OF SEDIMENTARY ROCK IN IMPROVING YIELD AND QUALITY OF WHEAT VARIETIES FOR LATE SUMMER CULTIVATION  
**Emelie Ablaza Casayuran**  
Emelie Ablaza, Katsumi Ishikawa, Hikashi Midori, Makito Mori
- P-1473 THE STRUCTURAL CONTROL OF WATER AND NUTRIENT SOLUTION BY ELECTROKINETIC TREATMENT WITH SILICATE MINERAL CERAMICS FOR GREENHOUSE SYSTEMS  
**Midori Hikashi**  
Katsumi Ishikawa, Midori Hikashi, Emelie Ablaza, Daisuke Yasutake
- P-1552 ENERGY SAVING STRATEGIES IN RIOJA WINE INDUSTRY  
**Javier Gómez Garrido**  
Javier Gómez Garrido; Alberto Tascón
- P-0014 USING SSM SIMULATION MODEL TO ASSESS THE EFFECTS OF VARYING TEMPERATURE AND REDUCED PRECIPITATION ON CHICKPEA YIELD (A CASE STUDY IN ZANJAN DISTINCT, IRAN)  
**Nasim Meghdadi**  
Nasim Meghdadi, A Soltani, Behnam Kamkar
- P-0114 EFFECT OF ETHEPHON ON TIME OF OLIVE OIL (ZARD CULTIVAR) HARVESTING  
**Zahra Yousefi**  
Morteza Almassi, Zahra Yousefi, Ali Asgar Zeinanloo, Reza Moghadasi, Ahmad Golian

**335**  
SESSION

14:00 -14:55  
**(SE) POSTERS SESSION**  
Location: POSTERS ROOM

- P-1667 DETERMINATION OF SOME RHEOLOGICAL PARAMETERS OF MUNICIPAL COMPOST WASTE FOR EXTRUSION PROCESSING  
**Nabi Allah Keshvari**  
Nabi Allah Keshvari; Mohammad Hossein Kianmehr; Akbar Arab Mohammad Hosseini; Heman Amiri
- P-1753 BULK SOLIDS PROPERTIES AND FLOW PATTERN INVESTIGATIONS  
**José Wallace Barbosa Nascimento**  
José Pinheiro Lopes Neto; José Wallace Barbosa Nascimento
- P-1760 APPROXIMATION TO EARTH MATERIAL FROM INTERNATIONAL NORMATIVE  
**Jaime Cid Falceto**  
Jaime Cid Falceto, Pablo Mosquera Arancibia, Francisco Marcos, Cruz Calleja Perucho, Ignacio Cañas Guerrero
- P-1761 VERIFICATION MEASUREMENT PROCEDURE IN THERMOGRAPHIC INFRARED CAMERAS  
**César Porras Amores**  
César Porras Amores; Fernando Ruiz Mazarrón; Jose Luis Benito Roldan; Ignacio Cañas Guerrero
- P-1774 STATIONARY VERSUS MOBILE RECYCLING PLANTS: CHARACTERIZATION OF MIXED RECYCLED AGGREGATE FOLLOWING STRUCTURAL CONCRETE SPANISH STANDARD EHE-08  
**Julia García González**  
Julia García González, Desirée Rodríguez Robles, Andrés Juan Valdés, Julia María Morán Del Pozo, Manuel Ignacio Guerra Romero
- P-1845 TOMATO SEEDLINGS PROTECTED CULTIVATION IN DIFFERENT TRAYS AND GENOTYPES  
**Cristiane Guiselini**  
Cristiane Guiselini, Sávio Duarte Lopes Cavalcanti, Dimas Menezes, Héilton Pandorf, Ricardo Brauer Vigoderis, Roberto de A. Melo
- P-1924 IMPROVED VERSATILE HIGH-POWER SOLID-STATE LIGHTING EQUIPMENT FOR PLANT GROWING IN PHYTOTRON  
**Algirdas Novickovas**  
Algirdas Novickovas, Ausra Brazaityte, Giedre Samuoliene, Ramunas Sirtautas, Laurynas Dabasinckas, Pavelas Duchovskis
- P-1928 HEMP AS IMPROVEMENT ELEMENT FOR EARTH CONSTRUCTION  
**Ignacio Cañas Guerrero**  
Jaime Cid Falceto, Ignacio Cañas Guerrero, Monika Brümmer, Pablo Mosquera Arancibia
- P-1939 PHYSICOMECHANICAL EVALUATION OF CEMENTITIOUS MATRICES WITH PORTLAND CEMENT REPLACEMENT BY RICE HUSK ASH  
**Michelle Rodrigues Santos**  
Michelle Rodrigues Santos, Gisleiva Ferreira, Leandro Shiroma, Antonio Ludovico Beraldo, Hernandes de Leon Bento
- P-1976 EFFECTS OF STABILIZATION METHOD ON PHYTOAVAILABILITY OF HEAVY METALS IN MINING IMPACTED FARMLAND AND THEIR ACCUMULATION IN CROP PLANTS AS EVALUATED BY A FIELD EXPERIMENT  
**Sung-Wook Yun**  
Sung-Wook Yun, Ha-Jin Kim, Chan Yu
- P-2087 TREATMENT EFFECTS OF LIMESTONE AND STEEL REFINING SLAG FOR STABILIZATION OF ARSENIC AND HEAVY METAL IN THE FARMLAND SOILS NEAR-BY ABANDONED METAL MINE  
**Sung-Wook Yun**  
Sung-Wook Yun, Ha-Jin Kim, Chan Yu
- P-2227 TAILINGS IN THE MELIORATION OF RESIDUAL KAOLIN AS POZZOLANIC MATERIAL IN DRY CONCRETES.  
**Maria Luiza Souza Rezende**  
Maria Luiza Souza Rezende, José Wallace Barbosa do Nascimento, Gelmires Araújo Neves
- P-2228 FACILITIES OF POULTRY MANURE PROCESSING AND UTILIZATION WITH ENVIRONMENTAL TECHNOLOGIES  
**Anita Csiba**  
Anita Csiba
- P-2259 PERFORMANCE EVALUATION OF GIANT REED PANELS IN SUSTAINABLE AGRICULTURAL BUILDINGS  
**Carmelo Riccardo Fichera**  
Carmelo Riccardo Fichera, Francesco Barreca
- P-2280 USE OF POLYETHYLENE FILMS WITH HIGH REFLECTION TO NIR AND LOW TRANSMISSION TO IR IN GREENHOUSES: EFFECTS ON MICROCLIMATE, ENERGY SAVING AND CROP PRODUCTION  
**Evangelini Kitta**  
Nikos Katsoulas, Thomas Bartzanas, Christos Nikolaou, Dimitrios Anagnostopoulos, Constantinos Kittas
- P-2348 RETROSPECTIVE ANALYSIS AND PERFORMANCE EVALUATION OF HISTORIC OIL MILLS IN A MEDITERRANEAN REGION IN VIEW OF SUSTAINABLE MANAGEMENT AND DESIGN  
**Salvatore Di Fazio**  
Salvatore Di Fazio, Luigi Lamberto

# 336 SESSION

14:00 -14:55  
**(SPC-08) POSTERS SESSION**  
Location: POSTERS ROOM

- P-0054 AGRICULTURE-INDUSTRY LINKAGE AND INEQUILITIES IN INDIA  
**Shailendra Kumar Singh Bablu Thakur**  
Shailendra Kumar Singh Bablu Thakur
- P-0396 FOOD LOSS REDUCTION AND VALUE ADDITION THROUGH PROMOTING AGRO-INDUSTRIES DEVELOPMENT IN DEVELOPING COUNTRIES  
**Divine Nganje Njie**
- P-0397 FAO'S INFORMATION NETWORK ON POST-HARVEST OPERATIONS (INPHO) PORTAL  
**Divine Nganje Njie**  
Divine Nganje Njie, Danilo Mejia, Jorge Fonseca
- P-1273 INVESTIGATION OF EFFECTIVE PARAMETERS ON MECHANIZATION COOPERATIVE SUCCESSFUL TOWARD SUSTAINABLE AGRICULTURE IN IRAN  
**Mohammad Ghahderijani**  
Mohammad Ghahderijani; Babak Beheshti; Mehdi Moghadam Kouhi; Rauf Hazinia; Mahboob Behzad
- P-1565 THE SEARCH FOR HIGHLY QUALITY AND AFFORDABLE FISH FEED IN NIGERIA  
**Folasayo Fayose Titilola**  
Folasayo Fayose Titilola
- P-1837 THERMAL PROCESSING USING MICROWAVE AND EXTRUSION FOR SOYFLOUR  
**Ramabhau Patil**  
Praveen C Bargale, Ramabhau Patil, Punit Chandra
- P-2005 EFFECT OF IMPACT ON SOME PHYSICAL PROPERTIES OF ORANGE FRUIT  
**Babak Beheshti**

# 337 SESSION

14:00 -14:55  
**(ES) POSTERS SESSION**  
Location: POSTERS ROOM

- P-0041 RESPONSE OF YIELD AND YIELD COMPONENTS OF THREE RED BEAN (*PHASEOLUS VULGARIS* L.) GENOTYPES TO COINOCULATION BY OF *GLOMUS INTRARADICES* AND *RHIZOBIUM PHASEOLI*  
**Milad Safapour**  
Milad Safapour, Mohammadreza Ardakani, Shahab Khaghani, Maryam Teymouri

- P-0207 ANALYSIS OF ERGONOMIC ASPECTS DURING PRODUCTION OF CUTTINGS EUCALYPTUS  
**Danilo Simões**  
Danilo Simões, Magali Ribeiro da Silva, Juliana Asenjo Rosa, Paulo Torres Fenner
- P-0208 CHARACTERIZATION OF THE OCCUPATIONAL VIBRATION LEVEL UNDER REAL CONDITIONS OF SEMI-MECHANIZED FOREST HARVESTING IN BRAZIL  
**Danilo Simões**  
Danilo Simões, Paulo Torres Fenner, Magali Ribeiro da Silva
- P-0417 ERGONOMICS CONTRIBUTIONS ON WORK OF ORGANIC SMALL-SCALE FARMERS  
**Sandra Gemma Francisca Bezerra**  
Sandra Francisca Bezerra Gemma, Mauro José Andrade Tereso, Roberto Funes Abrahão
- P-0487 A NEW APPROACH TO ASSESS LABOUR TIME REQUIREMENT, WORK SAFETY, WORK LOAD AND JOB SATISFACTION ON FLEMISH DAIRY FARMS  
**Robin De Sutter**  
Robin De Sutter
- P-0544 ANALYSE THE PULVERIZATION EQUIPMENTS MAINTENANCE AMONG SMALL AND MEDIUM PRODUCERS IN ARARAS, SP,SOUTHEAST REGION OF BRAZIL.  
**Patricia Monquero Andrea**  
Patricia Monquero Andrea
- P-0552 A STUDY ON RESPONSE OF SOME BIO-MECHANICAL MODELS OF SEAT-DRIVER BODY EXPOSED TO VERTICAL VIBRATION USING FINITE ELEMENT METHOD  
**Ali Maleki**  
Ali Maleki; Hamed Shahmirzaei
- P-0663 MORTALITY ANALYSIS IN GALICIAN AGRICULTURAL SECTOR FROM 2004 TO 2010  
**Martin Barrasa Rioja**  
Martin Barrasa Rioja, Santiago Lamosa Quinteiro, José Manuel Pererira Gonzalez, Jesús Maciñeiras Abelleira
- P-0666 STUDY OF THE WORK ACCIDENTS IN THE AGRARIAN GALICIAN SECTOR. SEVERITY AND INJURIES  
**Martin Barrasa Rioja**  
Martin Barrasa Rioja, Santiago Lamosa Quinteiro, Jesús Maciñeiras Abelleira
- P-0692 DECREMENT OF SOUND LEVELS BY RESONATORS  
**Ali Maleki**  
Ali Maleki, Meysam Rezvani, Mohammad Moradi
- P-0702 THE EFFECT OF ENGINE R.P.M AND TRANSMISSION GEAR RATIOS ON SOUND LEVEL OF JOHN DEER HARVESTING COMBINE  
**Fariba Manuchehri**  
Ali Maleki, Fariba Manuchehri, Davood Ghanbarian

- P-0705 ACOUSTICAL STUDY OF TWO COMMON USED TRACTORS IN IRAN WHILE TRAVELLING IN RURAL ROADS  
**Fariba Manuchehri**  
Ali Maleki, Fariba Manuchehri, Davood Ghanbarian
- P-0706 BIOMECHANICAL MODELS OF DRIVER KNEE (REVIEW)  
**Seyed Mohammad Abdollahi**  
Ali Maleki, Seyed Mohammad Abdollahi
- P-0716 DEVELOPMENT OF TOOL TO AID THE ERGONOMIC DESIGN OF SELF-PROPELLED SPRAY CABINS  
**Ulisses Benedetti Baumhardt**  
Ulisses Baumhardt Benedetti, Airton dos Santos Alonço, Rafael Martins Alves, Rodrigo Martins Alves, Mateus Cereza Brandão, Paulo Roberto Bedin
- P-0896 JD 3140 TRACTOR NOISE POLLUTION DURING TRANSPORT IN RURAL  
**Safoura Sepehri**  
Ali Maleki; Safoura Sepehri
- P-1174 FACTORS INFLUENCING THE OCCURRENCE OF AGRICULTURAL MACHINERY ACCIDENT  
**Byounggap Kim**  
Byounggap Kim, Seung-yeoub Shin, Yuyong Kim, Hyeong-kwon Kim
- P-1202 INHALABLE DUST EMISSION IN THE MECHANICAL HARVESTING OF HAZELNUTS: FIRST COMPARATIVE TEST  
**Marco Fedrizzi**  
Marco Fedrizzi, Marco Fedrizzi, Mauro Pagano, Cinzia Perrino, Massimo Cecchini, Mirko Guerrieri, Pietro Gallo, Marcello Biocca
- P-1314 MODELLING WORKING TIME REQUIREMENT AND WORK PERFORMANCE ON THE EXAMPLE OF MOWING  
**Andrea Wagner**  
Andrea Wagner; Beyer Stefanie; Matthias Schick
- P-1325 LEVELS OF NOISE AND VIBRATIONS TRANSMITTED TO THE DRIVER OF A MEDIUM-HIGH POWER AGRICULTURAL TRACTOR, UNDER OPERATIVE CONDITIONS  
**Roberto Fanigliulo**  
Daniele Pochi, Laura Fornaciari, Gennaro Vassalini, Cesare Cervellini, Gino Brannetti, Roberto Fanigliulo
- P-1497 SAFETY FUNCTIONAL REQUIREMENTS FOR ROBOT FLEETS FOR HIGHLY EFFECTIVE AGRICULTURE AND FORESTRY MANAGEMENT (RHEA)  
**Miguel Garrido Izard**  
Miguel Garrido Izard; Angela Ribeiro; Pilar Barreiro Elorza; Benoit Debilde; Patrick Balmer; Jacob Carballido Del Rey; Adolfo Moya Gonzalez; Constantino Valero; Nicola Tomatis; Bart Missotten
- P-1557 ANALYSIS OF ACCIDENTS WITH CIRCULAR SAWS OF EMPLOYEES IN AGRICULTURE  
**Kössler Katharina**  
Kössler Katharina; Elisabeth Quendler; Josef Boxberger
- P-1607 LABOUR INPUT ON BAVARIAN DAIRY FARMS WITH CONVENTIONAL OR AUTOMATIC MILKING.  
**Juliana Macuhova**  
Juliana Macuhova, Bernhard Haidn
- P-1625 REDUCTION OF THE RISKS RELATED TO FALLING FROM HEIGHTS IN PROCESSES OF GREENHOUSES ROOF MAINTENANCE  
**Angel Carreño Ortega**  
Angel Carreño Ortega, Javier Vazquez Cabrera, Maria Del Carmen Galera Quiles, Guadalupe Lopez Diaz
- P-1649 CHARACTERIZATION AND FUNCTIONALIZATION OF MULTIWALL CARBON NANOTUBES AS NANOBIOSENSORS IN FOODS  
**Hilda María Hernández Hernández**  
Leonor Guadarrama Fernández, Hilda María Hernández Hernández, José Jorge Chanona Pérez, Adrián Martínez Rivas, Jaime Ortiz López, Vicente Garibay Feblés, Georgina Calderón Domínguez
- P-1899 PROTECTION GLOVES EVALUATION FOR PRUNING WITH PNEUMATIC AND ELECTRIC SHEARS  
**Carmen Jaren**  
Carmen Jaren, Pedro Arnal, Jesus Mangado, Ainara López, Silvia Arazuri
- P-2044 PHYSICAL LOAD OF THE WORKERS IN SHEDS BROILER BREEDERS  
**Cinara Carvalho da Cunha Siqueira**  
Cinara Carvalho da Cunha Siqueira, Ilda de Fátima Ferreira Tinôco, Irene Menegalli, Maria de Fátima Vieira
- P-2052 DESIGN AND VALIDATION OF AN ACTIVE WARNING DEVICE FOR THE AGRICULTURAL TRACTOR ROLLOVER.  
**Juan Luis Gamarra Diezma**  
Gregorio Lorenzo Blanco Roldán, Juan Luis Gamarra Diezma, Jesus Antonio Gil Ribes
- P-2153 EVALUATION OF THE NOISE LEVELS OF AGRICULTURAL MACHINES DURING MAINTENANCE WORKS ON THE CAMPUS OF FCA/UNESP  
**Octávio Plaster Barbosa**  
Octávio Barbosa Plaster, Paulo Torres Fenner, Julian Haas
- P-2199 THE HEALTH RISK OF THE AGRICULTURAL PRODUCTS GROWN IN POTENTIALLY CONTAMINATED SITES: PROPOSAL OF THE ENVIRONMENTAL-HEALTH RISK ANALYSIS  
**Giuseppe Verdiani**  
Giovanni Russo, Giuseppe Verdiani



- P-2200 A SYSTEM FOR DETECTING HAND-ARM VIBRATION IN THE USE OF PORTABLE SHAKERS FOR OLIVES HARVESTING  
**Pietro Catania**  
 Giuseppe Aiello, Pietro Catania, Giada La Scalia, Mariangela Vallone

# 338 SESSION

14:00 - 14:55  
**(SPC-03) POSTERS SESSION**  
 Location: POSTERS ROOM

- P-0735 EVALUATION OF SPATIAL AND TEMPORAL VARIABILITY OF THE PHYSICAL CHARACTERISTICS OF BERRIES OF OLIVES (OLEA EUROPAEA L.), ARBEQUINA, USING IMAGE PROCESSING TECHNOLOGY  
**Fabiola Flores Pacheco**  
 Fabiola Flores Pacheco, Stanley Best
- P-0774 ESTIMATION OF SUSHI SHRIMP WEIGHT USING IMAGE ANALYSIS TECHNIQUE AND NON-LINEAR REGRESSION MODELS  
**Poonpat Poonnoy**  
 Poonpat Poonnoy, Thinnapop Chum-in
- P-1630 EVALUATION OF INSECT DAMAGE ON BEANS USING IMAGE PROCESSING TECHNOLOGY  
**Hasan Murat Velioglu**  
 Hasan Murat Velioglu, Ozgur Saglam
- P-1735 AUTOMATIC ESTIMATION OF THE SIZE AND WEIGHT OF GRAPEVINE BERRIES BY IMAGE ANALYSIS  
**Nuria Aleixos**  
 Javier Tardaguila, Mari Paz Diago, José Blasco Ivars, Borja Millán, Sergio Cubero, Leonardo Oscar, Nuria Aleixos Borrás,
- P-1907 SORTING FIGS BASED ON MORPHOLOGICAL PROPERTIES AND NEURAL NETWORK  
**Ahmad Banakar**  
 Ahmad Banakar, Naser Behrouzi Khazei, Jalal Khodaei
- P-1941 DESCRIPTION OF MATURITY STAGES OF MANGO (MANGIFERA INDICA L.) "MANILA" BY IMAGE ANALYSIS AND RIPENING INDEX  
**Jose Blasco**  
 Nayeli Vélez Rivera, José Jorge Chanona Pérez, Reynold Ramón Farrera-rebollo, José Blasco Ivars, Georgina Calderón Domínguez, María De Jesús Perea Flores, Israel Arzate Vázquez

- P-2101 INVESTIGATION OF ANTHRACNOSE INFECTION IN MANGO FRUITS USING UV-LIGHT FOR COMPUTER VISION-BASED SORTING APPLICATIONS  
**Marcus Nagle**  
 Marcus Nagle, Giuseppe Romano, Kiatkamjon Intani, Busarakorn Mahayothee, Vicha Sardsud, Hans-joachim Müller
- P-2127 EVALUATION OF INSECT DAMAGE ON WHEAT USING IMAGE PROCESSING TECHNOLOGY  
**Hasan Murat Velioglu**  
 Ozgur Saglam, Hasan Murat Velioglu
- P-2356 IN-LINE INSPECTION OF THE SHAPE OF POTATOES BY COMPUTER-INTEGRATED MACHINE VISION  
**Nuria Aleixos**  
 Gamal M. Elmasry, Sherief Radwan, Nuria Aleixos Borrás, Pau Talens, Enrique Moltó, José Blasco Ivars

# 339 SESSION

14:55-16:30  
**(PM): AGRICULTURAL MACHINERY**  
 Moderator: Joachim Sauter  
 Location: AUDITORIO 1

- 14:55 Introduction
- 15:00 C-0861 SIMULATION OF GRAIN-STRAW SEPARATION BY A DISCRETE ELEMENT APPROACH WITH BENDABLE STRAW PARTICLES  
**Bart Lenaerts**  
 Bart Lenaerts, Engelbert Tijksens, Josse De Baerdemaeker, Wouter Saey
- 15:15 C-0938 THE DETERMINATION OF STRAIGHT EDGE BLADES SHARPNESS CHANGE OF AGRICULTURAL MACHINE BLADES AT AGRICULTURAL WORKS BY USING IMAGE ANALYSIS TECHNIQUE  
**Abdullah Beyaz**  
 Abdullah Beyaz
- 15:30 C-1968 RELATING THE POWER USED BY THE HARRINGTON SEED DESTRUCTOR'S (CAGE MILL) TO THE GRAIN AND CHAFF THROUGHPUT  
**Nicholas Berry**  
 Nicholas Berry, Chris Saunders, John Fielke
- 15:45 C-0295 MECHANICAL WEEDING OF RUMEX OBTUSIFOLIUS IN PERMANENT GRASSLAND BY REMOVAL OF ROOTS VIA A MACHINERY PROCESS  
**Joachim Sauter**  
 Joachim Sauter, Roy Latsch, Monika Sauter, Walter Odermatt

## 340 SESSION

14:55–16:30  
**(SW-SPC01): WATER AND  
SOIL POLLUTION**  
Moderator: Jose M. Goncalves  
Location: AUDITORIO 2

- 14:55 Introduction
- 15:00 C-0657 RISK-BASED CHARACTERISATION OF HYDROCARBON CONTAMINATION IN SOILS WITH VISIBLE AND NEAR-INFRARED DIFFUSE REFLECTANCE SPECTROSCOPY  
**Abdul Mounem Mouazen**  
Reuben N. Okparanma, Abdul Mounem Mouazen
- 15:15 C-0761 THE VALUE OF WASTEWATER IN A WATER-STRESSED SUB-CATCHMENT OF ZIMBABWE  
**Thubelihle Thebe**  
Thubelihle Thebe
- 15:30 C-1139 DETERMINATION OF HEAVY METALS CONTENT IN SOIL AND RICE PLANT AFTER THREE YEARS APPLICATION OF MUNICIPAL SOLID WASTE COMPOST (MSWC)  
**Mohammad Ali Bahmanyar**  
Mohammad Ali Bahmanyar, Elahe Hasan-zade, Arezoo Mohammadi

## 341 SESSION

14:55–16:30  
**(AP): DAIRY CATTLE MA-  
NAGEMENT AND MILKING  
SYSTEMS**  
Moderator: Jan Harms  
Location: AUDITORIO 3A

- 14:55 Introduction
- 15:00 C-0563 NEW SOFTWARE FOR CALCULATING AND TESTING MILKING MACHINE INSTALLATIONS FOR DAIRY COWS ACCORDING TO ISO STANDARDS  
**Enrique Arbones**  
Enrique Arbones, Francisco González
- 15:15 C-0690 EFFECT OF SINGLE TUBE GUIDING MILKING SYSTEM AND PERIODIC AIR INLET ON THE CONCENTRATION OF FREE FATTY ACIDS IN CONVENTIONAL MILKING PARLOUR  
**Sandra Rose-Meierhoefer**  
Sandra Rose-meierhoefer, Susanne Demba, Hülya Öz, Ulrich Ströbel, Gundula Hoffmann, Reiner Brunsch
- 15:30 C-0967 EVALUATION OF THE TEAT-END VACUUM BEHAVIOUR IN DIFFERENT AUTOMATIC MILKING SYSTEMS  
**Ulrich Ströbel**  
Ulrich Ströbel, Sandra Rose-meierhoefer, Hülya Öz, Ann-Christin Entorf, Ludwig Popp, Reiner Brunsch

- 15:45 C-1491 HOW DO BARN LAYOUT AND MECHANIZATION LEVEL INFLUENCE ON LABOUR INPUT IN DAIRY BARN?  
**Geir Naess**  
Geir Naess, Knut Egil Bøe
- 16:00 C-1827 ANALYSIS AND SIMULATION OF DRIVING TIMES FOR LARGE DAIRY BARN  
**Heinz Bernhardt**  
Heinz Bernhardt, Claudia Leicher, Martin Hanauer, Jochen Simon

## 342 SESSION

14:55–16:30  
**(AP): NOVEL ANIMAL HOU-  
SING SYSTEMS**  
Moderator: Peter Groot Koerkamp  
Location: AUDITORIO 3B

- 14:55 Introduction
- 15:00 C-0975 NEW DESIGNS TO FACILITATE A TRANSITION TOWARDS SUSTAINABLE EGG PRODUCTION  
**Ellen van Weeghel**  
Ellen van Weeghel, P.w.g. Groot Koerkamp, Jessica Cornelissen
- 15:15 C-0979 AUTOMATIC VS. CONVENTIONAL FEEDING SYSTEMS IN ROBOTIC MILKING DAIRY FARMS: A SURVEY IN THE NETHERLANDS  
**Carlo Bisaglia**  
Carlo Bisaglia, Zacharie Belle, Gijsbert Van Den Berg, Johanna (J.C.A.M.) Pompe
- 15:30 C-0521 A MODEL DAIRY FARM INTEGRATED SYSTEM: MORE THAN A FARM  
**Vanessa Guillamón Enguidanos**  
Vanessa Guillamón Enguidanos
- 15:45 C-1503 A GREEN BARN DESIGN TO REDUCE THE ENVIRONMENTAL FOOTPRINT OF PORK PRODUCTION IN THE MIDWESTERN U.S.  
**Larry Jacobson**  
Larry Jacobson

## 343 SESSION

14:55–16:30  
**(EN): BIOENERGY POLICY**  
Moderator: Borja Velázquez-Martí  
Location: MULTIPURPOSE IA

- 14:55 Introduction
- 15:00 C-0848 BIOENERGY INDUSTRY DEVELOPMENT IN UKRAINE  
**Valeriy Dubrovin**  
Valeriy Dubrovin, Maksym Melnychuk
- 15:15 C-2361 ESTIMATE OF THE SORTS AND QUANTITY OF BIOMASS FOR PRODUCTION ENERGY IN SERBIA  
**Miladin Brkic**  
Miladin Brkic, Todor Janic

- 15:30 C-1141 EFFECT OF DIFFERENT MUNICIPAL WASTE COMPOST APPLICATIONS ON YIELD AND COMPONENT YIELD OF SOYBEAN (GLYCINE MAX L.)  
**Hemmatollah Pirdashti**  
Sedigheh Vafaiie Rostami, Hemmatollah Pirdashti, Mohammad Ali Bahmanyar, Alaleh Motaghian
- 15:45 C-1211 ASSESSMENT OF PALM OIL BIO-WASTE WITH COWDUNG FOR COMPOST PRODUCTION  
**Abu Ahmed Mokammel Haque**  
Mohammadtaghi Vakili, Abu Ahmed Mokammel Haque
- 16:00 C-2285 THE BIOENERGY FARM PROJECT: WEB APPLICATIONS TO ASSESS THE FEASIBILITY OF BIOENERGY EXPLOITATION AT FARM LEVEL  
**Remigio Berruto**  
Remigio Berruto, Patrizia Busato

## 344 SESSION

14:55–16:30  
**(IT): QUALITY DETECTION**  
**Moderator: Zeev Schmilovitch**  
**Location: MULTIPURPOSE IC**

- 14:55 Introduction
- 15:00 C-2255 ADVANCES IN DEVELOPING WEB-BASED DSS ARCHITECTURE FOR DESIGNING AND MANAGING CEREAL GRAIN DRYING AND STORAGE  
**Jerzy Weres**  
Tomasz Kluza, Przemyslaw Jan Nowak, Jerzy Weres
- 15:15 C-2268 TREE-SCANNER SYSTEM WITH RTK-GPS, LIDAR DATA AND IMU  
**Alexandre Escolà**  
Ignacio Del-Moral-Marínez, Joan R. Rosell-Polo, Alexandre Escolà, Joan Masip-Vilalta, Ricardo Sanz-Cortiella, Jaume Arnó-Satorra
- 15:30 C-1096 THERMAL EVALUATION OF CAUTERIZED PRICKE PEARS BY AN INDUSTRIAL MACHINE  
**Fedeico Hahn Schlam**  
Federico Hahn, Nahela Salvador Eugenio, Juan Arce, Juan Arce
- 15:45 C-1287 A FIRST STEP TOWARDS A REAL-TIME PREDICTIVE SUPPORT SYSTEM OF WHEAT YIELD  
**Benjamin Dumont**  
Benjamin Dumont, Vincent Leemans, Salvador Ferrandis, Françoise Vancutsem, Benoit Seutin, Bernard Bodson, Jean-Pierre Destain, Marie-France Destain
- 16:00 C-2062 FORAGE QUALITY ASSESSMENT IN BALERS  
**Karl Wild**  
Karl Wild, Veit Walther, Karoline Heinrich

## 345 SESSION

14:55–16:30  
**(PF): FOOD MANAGEMENT**  
**Moderator: Veerle Van linden**  
**Location: ROOM 1**

- 14:55 Introduction
- 15:00 C-0453 MOISTURE SORPTION ISOTHERMS OF ROSEMARY (ROSMARINUS OFFICINALIS L.) FLOWERS AT THREE TEMPERATURES  
**Hossein Ahmadichenarbon**  
Hossein Ahmadichenarbon, Sara Movahed, Seyedeh Masoomeh Hashemina
- 15:15 C-0444 OPTIMAL WORK METHOD IN A FLOWERS' DISTRIBUTION CENTER TO ACHIEVE ON TIME DELIVERY  
**Gad Vitner**  
Gad Vitner, Avital Bechar
- 15:30 C-1203 FOOD LOSSES IN PRIMARY PRODUCTION: THE CASE OF FLANDERS  
**Jürgen Vangeyte**  
Kris Roels, Jürgen Vangeyte, Veerle Van Linden, Dirk Van Gijsegem
- 15:45 C-1240 ECONOMICAL EVALUATION OF THE PRODUCTS PHYSICAL LOSSES IN FEED MILLS DURING THE PROCESSING  
**Paulo Carteri Coradi**  
Paulo Carteri Coradi, Adílio Flauzino Lacerda Filho, José Benício Paes Chaves
- 16:00 C-1986 PRODUCTION OF EGGLESS CAKE  
**Fariba Naghipoor**  
Bahareh Sahraiyán, Fariba Naghipoor, Mohammad Bagher Habibi Najafi, Mahdi Karimi, Mehdi Ghiafeh Davoodi, Mohammad Hossein Haddad Khodaparast

## 346 SESSION

14:55–16:30  
**(PF): DRYING TECHNOLOGY III**  
**Moderator: Raquel Guiné**  
**Location: ROOM 6+7**

- 14:55 Introduction
- 15:00 C-2364 CONVECTIVE AND MICROWAVE DRYING CHARACTERISTICS OF GARDEN CRESS LEAVES (LEPIDIUM SATIVUM L.)  
**Turhan Koyuncu**  
Turhan Koyuncu, Fuat Lule, Kaan E. Engin
- 15:15 C-2194 THIN LAYER DRYING KINETICS AND QUALITY OF AFRICAN BAOBAB LEAF (ADANSONIA DIGITATA)  
**AbdulGaniy RAJI O**  
Abdulganiy Raji O, Abigael ADEYEMI

- 15:30 C-0347 DRYING OF CHAMOMILE USING A DEVELOPED HYBRID SOLAR DRYER  
**Baher Amer**  
Baher Amer, Klaus Gottschlak
- 15:45 C-0807 DEVELOPMENT AND EVALUATION OF SMALL SCALE DIRECT MODE PASSIVE SOLAR TOMATO DRYERS  
**Akachukwu Eke Ben**  
Akachukwu Eke Ben, Kayode Simonyan
- 16:00 C-1100 STUDY OF DRYING KINETICS OF QUINCE  
**Maria João Barroca**  
Maria João Barroca, Raquel Guiné
- 16:15 C-1874 DESIGN, DEVELOPMENT AND TESTING OF A CHOPPING- EXPRESSION DEVICE FOR PINEAPPLE JUICE EXTRACTION  
**Adesoji Matthew Olaniyan**  
Adesoji Matthew Olaniyan, Damola Emmanuel Adeyemi, Felix Olufemi Ajala

## 347 SESSION

14:55–16:30  
**AET: WORKSHOP**  
Location: ROOM 2

- 14:55 AET: WORKSHOP

## 348 SESSION

14:55–16:30  
**(SE): ENERGY FOR BUILDING**  
Moderator: Chrysovalantou Lamnatou  
Location: ROOM 3

- 14:55 Introduction
- 15:00 C-2195 FRESNEL SOLAR CONCENTRATORS FOR AGRICULTURE APPLICATIONS  
**Chrysovalantou Lamnatou**  
Chrysovalantou Lamnatou, Daniel Chemisana, Yiannis Tripanagnostopoulos
- 15:15 C-1556 FLAT SOLAR CONCENTRATORS FOR PHOTOVOLTAIC SYSTEMS  
**Vania Reis De Souza Sant'anna**  
Vania Reis De Souza Sant'anna, Delly Oliveira Filho, Adílio Flauzino Lacerda Filho, Aristides Ribeiro, Augusto César Fonseca Ferreira
- 15:30 C-1264 ASSESSMENT OF INFRARED HEATING BENEFITS IN A PRODUCTION GREENHOUSE  
**Angeliki Kavga**  
Angeliki Kavga, Ioannis Konstas, George Alexopoulos, Thrassos Panidis

## 349 SESSION

14:55–16:30  
**(SPC04): ROBOTIC SOLUTIONS FOR HARVESTING CROPS**  
Moderator: Noboru Noguchi  
Location: ROOM 4

- 14:55 Introduction
- 15:00 C-2274 ROBOT FARMING SYSTEM IN JAPAN AGRICULTURE  
**Noboru Noguchi**  
Noboru Noguchi
- 15:15 C-1809 OPTIMIZING FORAGE HARVESTING PROCESS WITH AN INTELLIGENT CONTROL SYSTEM  
**Antti Suokannas**  
Antti Suokannas, Antti Kunnas, Matts Nysand, Raimo Linkolehto, Liisa Pesonen, Juha Backman
- 15:30 C-1661 APPLE YIELD ESTIMATION DURING THE GROWTH SEASON USING IMAGE ANALYSIS  
**Barna Keresztes**  
Barna Keresztes, Olivier Lavielle, Gilbert Grenier, Pierre Vaysse
- 15:45 C-0258 DEVELOPMENT OF A MOVABLE STRAWBERRY-HARVESTING ROBOT USING A TRAVELLING PLATFORM  
**Shigehiko Hayashi**  
Shigehiko Hayashi, Satoshi Yamamoto, Sadafumi Saito, Yoshiji, Ochiai, Yasushi Kohno, Kazuhiro Yamamoto, Junzo Kamata, Mitsutaka Kurita

## 350 SESSION

14:55–16:30  
**(SPC08)**  
Moderator: Antonio Torregrosa  
Location: ROOM 5

- 14:55 Introduction
- 15:00 C-1105 THE CURRENT SITUATION OF THE INTERVENTION OF PRIVATE SECTOR IN AGRICULTURAL MECHANIZATION DEVELOPMENT IN AFRICAN COUNTRIES  
**Karim Houmy**  
Karim Houmy, Josef Kienzle, John Ashburner
- 15:15 C-0313 DEVELOPMENT OF A MANUALLY OPERATED DISC-TYPE CORN SEEDER  
**Rolando Javellonar Rolly**  
Rolando Javellonar Rolly
- 15:30 C-0901 A LOW COST PRECISION PNEUMATIC PLANTER FOR VEGETABLES - STUDIES AND DEVELOPMENT  
**Pradeep Rajan**  
Pradeep Rajan, Nps Sirohi

15:45 C-2313 DEVELOPMENT OF A PRIMARY TILLAGE IMPLEMENT USING SMALL PRIME MOVER  
**Chandra Shekhar Sahay**  
 Chandra Shekhar Sahay, E. V. Thomas, K. K. Satapathy

## 351 SESSION

14:55–16:30  
**(ES): ASSESSMENT OF SAFETY AND RISKS**

**Moderator: Roberto Funes Abrahao**  
**Location: MULTIPURPOSE IB**

14:55 Introduction

15:00 C-1389 ROPS DESIGN EVOLUTION WITH RESPECT TO THE REQUIREMENTS OF THE STRENGTH TEST PROCEDURES  
**Valda Rondelli**  
 Valda Rondelli, Enrico Capacci, Bruno Franceschetti, Adriano Guarnieri

15:15 C-0698 HEAVY METALS ACCUMULATION AND MALFORMATION OF GREEN MUSSEL (PERNA VIRIDIS) IN JAKARTA BAY  
**Muhammad Reza Cordova**  
 Muhammad Reza Cordova, Neviaty Putri Zamani, Fredinan Yulianda

15:30 C-0726 AGRICULTURAL VEHICLES AND RURAL ROAD SAFETY: AN ENGINEERING CHALLENGE!  
**C.F. (Rinus) Jaarsma**  
 C.F. (Rinus) Jaarsma, J.r. De Vries

15:45 C-1150 OUTDOOR SYSTEM FOR BEEF PRODUCTION - IDENTIFICATION OF WORK INJURY RISK DURING COLD SEASON  
**Qiu Qing Geng**  
 Qiu Qing Geng, Eva Salomon, William E. Field

16:00 C-2300 INTEGRATED PRODUCTION AND SAFETY RISK MANAGEMENT ON FARMS  
**Jarkko Leppälä**  
 Jarkko Leppälä

15:15 C-0565 AUTOMATIC COW'S BODY CONDITION SCORING  
**Amos Bercovich**  
 Amos Bercovich, Yael Edan, Victor Alchanatis, Uzi Moallem, Yisrael Parmet, Hen Honig, Ephraim Maltz, Aharon Antler, Ilan Halachmi,

15:30 C-0737 DETERMINATION OF CARCASS COMPOSITION OF GOATS BY VIDEO IMAGE ANALYSIS  
**Antonio Monteiro Cardoso**  
 Antonio Monteiro Cardoso, Alfredo Teixeira, Jorge Azevedo, Severiano Silva

15:45 C-1034 CAPTURING 2D AND 3D BIOMETRIC DATA OF FARM ANIMALS UNDER REAL-LIFE BARN CONDITIONS  
**Henry Stahl**  
 Henry Stahl, Kristina Schädler, Eberhard Hartung

16:00 CLAUSURE SPC-03

## 352 SESSION

14:55–16:30  
**(SPC03): ANIMAL INSPECTION**

**Moderator: Jorge Chanona**  
**Location: ROOM 8+9**

14:55 Introduction

15:00 C-0555 MACHINE VISION GUIDED CLEANING FOR AUTONOMOUS PIG STY CLEANING  
**Michael Nielsen**  
 Michael Nielsen, Andersen Petersen, Kurt Nielsen

# GUEST PROGRAM

VALENCIA CITY AND ALBUFERA LAKE TOUR  
Date: Monday 9th July 9:00 - 16:00  
Departure: Valencia Conference Center (VCC)  
Only for accompanying persons

# SOCIAL AND HOSTED RECEPTIONS

## SUNDAY

### Welcome coffee

Date: Sunday 8th July 13:00 - 14:00  
Venue: ETSIAMN Hall's - UPV (Edificio 3P)

### CIGR-AgEng 2012 Welcome Reception

Date: Sunday 8th July 19:00 - 21:00  
Venue: Paraninfo (UPV) (Edificio 3A)

## MONDAY

### Coffee EurAgEng- Eastern European countries

Date: Monday 9th July 19:30 - 20:30  
Venue: Valencia Conference Center (VCC)  
Location: Room 4

## TUESDAY

### Breakfast EurAgEng ASABE

Date: Tuesday 10th July 7:00 - 8:00  
Venue: Hotel Sorolla

### Award Ceremony

Date: Tuesday 10th July 18:30 - 20:30  
Venue: Valencia Conference Centre (VCC)  
Location: Auditorio 1

### Conference Dinner

Date: Tuesday 10th July 20:30 - 23:30  
Venue: Hotel Sorolla

## WEDNESDAY

### Closing Ceremony

Date: Wednesday 11th July 16:30 - 17:30  
Venue: Valencia Conference Centre (VCC)  
Location: Auditorio 1

### Spanish Wine for Closing Ceremony

Date: Wednesday 11th July 17:30 - 18:00  
Venue: Valencia Conference Center (VCC)

# POST CONFERENCE TOURS

## THURSDAY

All visits start in the Valencia Conference Center at 8:00 am. They meet in IVIA at 14:00 for lunch and all tours end in the Valencia Conference Center at 16:30. THE AVAILABLE VACANCIES WILL BE FILLED ACCORDING TO REGISTRATION ORDER.

Each tour includes: Bus, technical visit and lunch.

### PT#1 Winery: VICENTE GANDÍA

Description: Technical visit to a wine producer Vicente Gandía Valencia Winery. Visit to Hoya de Cadenas Estate (<http://www.hoyadecadenas.es>): wine-making room and cask room with information about wine-making and ageing. Will be also visited the vineyards, with special emphasis in grape varieties and local soil and climate conditions, and irrigation system. The visit will end in the old cellars with a wine tasting.

CONTACT PERSON: Ricardo Suay

**PT#2 Dairy Farm: GRANJA SAN RAMÓN**

Description: A model dairy cattle farm in Valencia, with 2000 animal heads, Granja San Ramon <http://www.gruposanramon.es>. Highlights of the visit include modern installations for dairy cattle accounting for improved animal welfare systems, open naturally-ventilated housing systems, fully-automation of processes in milking and identification, and on-farm biomethanisation plant.

CONTACT PERSON: María Cambra López

**PT#3 Fresh-cut: VERDIFRESH**

Description: Technical tour to Verdifresh S.L. The company was established in 2000 and now is leader in the Spanish market of fresh-cut vegetables, with the distribution of more than 45% of the sales. The group has 4 production sites distributed in Spain to cover all the geography, a production area of about 25.000 m<sup>2</sup>, and more than 500 employees. Their facilities present the latest technologies in the area. The company produces a wide range of Roomds and ready to cook vegetables. <http://www.verdifresh.com>

CONTACT PERSON: María Bernardita Pérez

**PT#4 Packinghouse: FONTESTAD**

Description: Technical tour to a citrus orchard and packing-house of FONTESTAD in Musuro (Valencia). Fontestad is a family company for citrus fruit handling and distribution since 1950s. The packing house of FONTESTAD occupying premises measuring 100.000 m<sup>2</sup> and is one of the most prestigious Packinghouses in Valencia. <http://www.fontestad.es>

CONTACT PERSON: José Blasco

**PT#5 Silos and Granular Materials: ILPERSA**

Description: Visit to Ilpersa facilities: metallic Silos, bucket elevators, machines of selection by colour and cold storage of the grains. This company was founded in 1918 and was initially dedicated to the aspiration and filtering market. From 1987 the company expanded its products to cereal market.

Nowadays, Ilpersa is leader in the rice market. They process until the 90% of Spanish production of cereals. <http://www.ilpersa.com>

CONTACT PERSON: Miguel Redón

**PT#6 Energy: BIOMASS GASIFICATION PLANT**

Description: During this tour you will visit a biomass gasification plant placed in Játiva that produces 13.000 MWh/year of electric energy. Nowadays, the plant used around 10.000 Tn/year of residual forest biomass but other ligneous biomass like energy crops or residual agricultural biomass could be used.

CONTACT PERSON: Borja Velázquez-Martí

**PT#7 GOLF TOURNAMENT**

The Organizing Committee offers the possibility of participating in a golf tournament that will be celebrated on Thursday 12th July in The Parador El Saler Golf Course.

The Parador El Saler (Valencia) Golf course is considered by professionals, amateurs, institutions and the specialized press alike to have one of the best course layouts in the world.

Built in 1968 by the internationally recognized "architect of Spanish golf" Javier Arana, the course is located in the El Saler Nature Reserve, on the shores of the Mediterranean sea in the Autonomous Community of Valencia. This Community considers this course a source of pride.

The Parador El Saler Golf Course requires the affiliation of the players as well as clothing and footwear suitable for a Golf course.

To that end, the Golf Course shop offers you the possibility to acquire proper clothing and to rent the bag of golf clubs and the buggy.

At the end of the golf tournament the participants will enjoy of a great meal in the Valencia Institute of Agricultural Research (IVIA).

[www.elparador.es](http://www.elparador.es)

Schedule: 7:00 to 13h.

**CANCELED**

# GENERAL INFORMATION

## VENUES

### **SATURDAY**

Hotel Melia Valencia  
Avenida Cortes Valencianas, 52  
Valencia 46015

### **SUNDAY**

Polytechnic University of Valencia (UPV)  
Camino de Vera, s/n  
46022 Valencia

Bus available from Conference Centre to UPV on Sunday  
at 9:00 a.m.

### **MONDAY TO WEDNESDAY**

Valencia Conference Centre (Palacio de Congresos)  
Avenida de las Cortes Valencianas, 60  
46015 Valencia, Spain

## REGISTRATION DESK OPENING HOURS

Sunday 8th of July: from 14.00h to 18.30h  
Monday 9th of July: from 7.30h to 18.30h  
Tuesday 10th of July: from 7.30h to 18.30h  
Wednesday 11th of July: from 7.30h to 16.30h

## NAME BADGES

We invite you to wear your name badge at all times so that we know you are a conference attendee. It will allow you access into meetings, the congress palace hall meals and functions.

## PREVIEW ROOM OPENING HOURS

All speakers should check and deliver their PowerPoint presentations to the Preview Room at least 4 hours before the start of the session or the day before for early morning sessions.

Sunday 8th of July: from 14.00h to 18.30h  
Monday 9th of July: from 7.30h to 18.30h  
Tuesday 10th of July: from 7.30h to 18.30h  
Wednesday 11th of July: from 7.30h to 16.30h

## ELECTRONIC DEVICES:

As a courtesy to your colleagues, we invite you to turn off or silence all electronic devices during sessions, workshops or plenary addresses.

## BUSINESS CENTRE

A Business Centre with computer facilities is available at the desk of the Auditorium 1.

## WIFI

Internet access is available through WIFI connection in the Business Centre and in the cafeteria area situated on the ground floor.

## LUGGAGE DEPOSIT

Luggage can be left during congress hours at the luggage deposit located besides Business Centre Desk. The Organizing Secretariat and the Conference Centre are not responsible for any item left beyond duty hours.

## CATERING FACILITIES

Lunches will be served in the exhibitor area located on the ground floor, at the time specified in the programme. Coffee breaks will be also provided during the Congress.



# REGISTRATION:

If you have any questions during the conference the staff at our registration desk will be glad to help you. The registration desk is located on the hall of the Valencia Conference Center.

| Registration Fees                                       | Early rate Closes April 30, 2012 | Regular rate Closes July 1, 2012 | Desk Rate <sup>1</sup> |
|---|----------------------------------|----------------------------------|------------------------|
| Members<br>EurAgEng, CIGR, ASABE, ISHS                  | 480€*                            | 530€*                            | 580€*                  |
| Non Members   | 530€*                            | 580€*                            | 630€*                  |
| Student   | 300€*                            | 350€*                            | 400€*                  |
| Low income and low-middle income countries <sup>2</sup> | 400€*                            | 450€*                            | 500€*                  |
| Accompanying person                                     | 110€*                            | 120€*                            | 130€*                  |
| One-day admission <sup>3</sup>                          |                                  |                                  | 300€*                  |
| Conference Dinner                                       | 30€*                             | 30€*                             | 40€*                   |

\*VAT included

<sup>1</sup> The latest day for on-line registration is July 1, 2012. Registrations received after this date will not be considered on-line and will have to be resubmitted at the Conference registration desk, from July 8, 2012.

<sup>2</sup> The list of low income and low-middle income countries is taken from The World Bank.

<sup>3</sup> One-day admissions will only be sold the same day at the registration desk.

## THE REGISTRATION FEE FOR PARTICIPANTS INCLUDES

- Welcome Reception on July 8, 2012
- Attendance to all Scientific Sessions and Conference Documentation
- Coffee-breaks.
- Lunches on Monday, Tuesday and Wednesday
- Certificate of attendance

## THE REGISTRATION FEE DOES NOT INCLUDE

Conference Dinner on Tuesday

## THE REGISTRATION FEE FOR ACCOMPANYING PERSON(S) INCLUDES

- Welcome Reception on July 8, 2012
- Half-Day Valencia City Tour on July 9, 2012

## THE REGISTRATION FEE FOR ACCOMPANYING PERSON(S) DOES NOT INCLUDE

Conference Dinner on Tuesday

Please note that only fully registered participants will be admitted to the scientific sessions!

## THE REGISTRATION FEE FOR STUDENTS

Student registrations are only accepted with a copy of a student card. Students' registration fees includes all benefits granted to regular participants.

## ONE-DAY ADMISSIONS

One-day admissions will only be sold the same day at the Conference registration desk.

Participants will benefit from all Conference activities taking place at the registered day. One-day participants will receive the complete Conference documentation.

# PAYMENT

Registrations will not be processed without payment. Full payment in Euros should be received before the corresponding deadline; otherwise, the preferential rate will not be granted.

# CANCELLATIONS

Cancellations of confirmed registrations will result in a 100 € cancellation fee per participant as long as it is received by June 1, 2012. Refunds by credit card or bank transfer will be made after the conference.

For cancellations received after June 1, 2012, no refunds will be made.

# LIABILITY AND INSURANCE

Participants are advised to make their own personal travel and health insurance arrangements. Neither the Local Organizing Committee nor the Congress Organizers assume any responsibility for damage or injury to persons or property during the congress.

# CHANGES

The Local Organizing Committee reserves the right to make changes to the program as deemed necessary.

# CONTACT INFORMATION

## ORGANIZING SECRETARIAT:

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