

KRISTINN ANDERSEN

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EDUCATION

Postgraduate Diploma 30 ECTS: Teaching Studies for Higher Education, University of Iceland	2018
Ph.D., Electrical Engineering, Vanderbilt University, U.S.A. Development of a novel technology for measuring the penetration of arc welding through the detection of wave oscillations in the molten weld pool.	1993
M.S., Electrical Engineering, Vanderbilt University, U.S.A., Simulation models for arc welding – programming, verification and comparison.	1992
Computer Science minor, Vanderbilt University, U.S.A. Courses and projects in graduate studies with emphasis on artificial intelligence (AI), computer vision and software design.	
B.S. with thesis, Electrical Engineering, University of Iceland.	1982
Final Exam, Junior College of Reykjavik (MR).	1978

WORK EXPERIENCE

University of Iceland: Professor of Electrical and Computer Engineering,	From 2014
University of Iceland: Faculty Head, Electrical and Computer Engineering	2014-2018
Marel, Reykjavik: Senior Manager of Research and Technology Development (RTD)	2000-2014
■ Management of research and development projects internal as well as external and multi-national projects.	

- Product management and leading the development of new products and technologies at Marel, including X-ray inspection equipment, computer vision and robotics.
- Participation in the management of patent issues at Marel.

Marel hf., Reykjavik:

Senior Electrical Engineer, Product Development. 1993-2000

- Project management and product development.
- Software development (design, programming, testing).

University of Iceland, Dept. of Engineering, Reykjavik: From 1993
Adjunct position and instructor.

- Management, Electrical Engineering.
- Teaching, Electrical Engineering and Mechanical Engineering.

Mid-South Engineering, Inc., Nashville, TN, U.S.A.: 1985-1992
Chief Engineer.

- Development of sensors, controls and software for arc welding (for the U.S. National Aeronautics and Space Agency – NASA, General Electric and others).
- Development of software for robot control (for NASA).
- General engineering and company management.

Vanderbilt University, Nashville, TN, U.S.A.: 1982-1988
Research and teaching.

- Research and management of Welding Automation Laboratory, supervised by Dr. G.E. Cook, professor and director of the laboratory.
- Teaching Electrical Engineering courses.

Miscellaneous jobs. 1979-1982

- Icelandic Energy Institute, instrument design, summer 1982.
- Landsvirkjun Power Company, engineering training, summer 1981.
- Siemens AG, W-Berlin, engineering training, summer 1980.
- Hedinn - metalworks, engineering training, summer 1979.
- Teaching at the Hamrahlid Junior College, winter 1980-1981.

RECOGNITION AND AWARDS

Several NASA awards for technical innovations in control for welding and robots 1990-1992

Award from the Institute of Electronic and Electrical Engineers (IEEE), with others, for a published paper on arc welding control 1990

Grant from the Scandinavian Thor Thors Fund 1985

NATO research grant 1984

Financial grant from the Icelandic memorial fund of
Mrs. Helga Jonsdottir and Mr. Sigurliði Kristjánsson 1984
Fulbright award for graduate studies in the U.S.A. 1982
Registered professional engineer in Tennessee, U.S.A.

PROFESSIONAL SKILLS

Management:

- Guiding and motivating individuals and teams in creating good work environment and accomplishing productive goals.
- Planning, execution and follow-up of projects.
- Analysis of problems, presentation of practical solutions.
- Financial planning.
- Planning and monitoring project execution.

Software:

- Software design: Unified Modeling Language (UML), Rational Rose, Rational Unified Process, Rational SoDA.
- Metrics and best practices in software development: PSM, GQM and other methods.
- Programming: C, C++, C#/NET, Pascal/Delphi, LISP, Basic. Programmable Logic Controller experience, assembly language, etc.
- General software applications in the MS-Windows environment: Word processing, spreadsheets, graphics, web applications and programming, etc.
- Some experience with programming and work in Unix.

General engineering skills:

- Electrical engineering, statistics, mathematics, etc.
- Specialized experience in control systems, robotics, arc welding and telecommunication engineering.

LANGUAGE SKILLS

Icelandic: Very good
English: Very good
Scandinavian: Good
German: Good (reading), adequate (writing and speaking)

PROFESSIONAL ACTIVITIES AND RELATED WORK

Icelandic Technology Transfer Office (Audna TTO) and preparatory association: Chair of the Board	From 2017
Rannis Icelandic Research Fund Expert Panel Chair	From 2018
Rannis Icelandic Research Fund Expert Panel Member	2016-2017
Expert Proposal Evaluator for the EUROSTARS Funding Program	2017
Chair of the Intellectual Property Committee of the University of Iceland and Landspítali University Hospital	From 2014
Expert Proposal Evaluation for the European Commission in the H2020 Programme – on 12 occasions	From 2014
R&D Project Evaluation for the European Commission in the 7 th Framework Programme – on 4 occasions	2012-2013
Chairman of the Association of Icelandic Chartered Engineers (VFI)	2011-2016
Evaluation Panel for the NordForsk Private Public Partnership Ph.D. Programme	2008/2009
Member of the Icelandic Government Advisory Council on Research and Technical Development (VTR)	2006-2009
Member of the European Commission Program Committee on NMP (Nanotechnology, Materials and Production)	2006-2008
Chair of the IEEE Iceland Section	2003-2007
Member of an Expert Advisory Group on Nanotechnology, nominated by the European Commission	2002-2005
Industry relations officer of the IEEE Iceland section	2001-2003
Vice-chairman of the IEEE Iceland section	2000-2003
Vice-chairman of the Association of Icelandic Chartered Engineers (VFI)	2000-2002
Member of the board of the Association of Icelandic Chartered Engineers (VFI)	1999-2003
Chairman of the publishing committee of the Association of Icelandic Chartered Engineers	1998-2003
Nominated by the European Commission on the jury for The European Contest of Young Scientists	1997-2000
Nominated by the Association of Icelandic Chartered Engineers to the jury for the Icelandic Contest of Young Scientists	1995-1997
Various services and cooperation with the Reykjavik University and University of Iceland, including evaluation of applicants for research and teaching positions	From 1994

Senior Member of the IEEE	From 2012
Member of the IEEE (Regular Member, Student Member)	From 1984
Member of the Association of Icelandic Chartered Engineers (VFI)	From 1982

OVERVIEW OF PROJECTS AND PUBLISHING

Initiated and directed major research and development projects funded by the following:

- The U.S. government: 2 projects
- The European Union: 1 project
- Icelandic research funds: 14 projects

Writing and publishing:

- Technical articles and papers in books and journals: over 60
- Major technical reports: over 10
- Other articles and publications on various topics.

Patents:

- Several patents pending, from development work at Marel.

COMMUNITY WORK AND OTHER ACTIVITIES

Elected to the city council of the town of Hafnarfjordur, Iceland	From 2010
Advisory work for the Icelandic Finance Ministry	1999
Various local government advisory For the town of Hafnarfjordur: Chairman/board of various committees and companies	From 1994

PERSONAL INTERESTS

Personal interests include:

- Amateur radio. Passed examinations and obtained a license as a radio amateur in 1976 and been actively involved in radio communications and technology since.
- Music. Passed the 5th stage of classical piano playing from the Music Conservatory of Reykjavik.

PERSONAL

Born in Reykjavik, 7-Sept-1958.

Married, with two sons - born 1988 and 1994.

Publications, projects and related activities

- Kristinn Andersen -

Ph.D. dissertation

K Andersen. Synchronous weld pool oscillation for monitoring and control. Vanderbilt University, 1993.

M.S. thesis

K Andersen. Studies and implementation of stationary models of the gas tungsten arc welding process. Vanderbilt University, 1992.

Publications in international journals, ISI Web of Science (5)

K Andersen, GE Cook, G Karsai, K Ramaswamy. Artificial neural networks applied to arc welding process modeling and control. Industry Applications, IEEE Transactions on 26 (5) 1990, 824-830.

G Karsai, K Andersen, GE Cook, RJ Barnett. Neural network methods for the modeling and control of welding processes. Journal of Intelligent Manufacturing 3 (4) 1992, 229-235.

JB Bjorgvinsson, GE Cook, K Andersen. Microprocessor-based arc voltage control for gas tungsten arc welding using gain scheduling. Industry Applications, IEEE Transactions on 29 (2) 1993, 250-255.

GE Cook, RJ Barnett, K Andersen, AM Strauss. Weld modeling and control using artificial neural networks. Industry Applications, IEEE Transactions on 31 (6) 1995, 1484-1491.

K Andersen, GE Cook, RJ Barnett, AM Strauss. Synchronous weld pool oscillation for monitoring and control. IEEE Transactions on Industry Applications 33(2) 1997, pp 464-471.

Publications in peer reviewed conference journals (52)

K Andersen, GE Cook, AM Strauss. A Generic Expert System for Materials Processing in Space. Proceedings Conference on Artificial Intelligence for Space Applications, sponsored by NASA Marshall Space Flight Center and University of Alabama, Huntsville, Huntsville, Alabama, Nov. 13-14, 1986, pp. 227-236.

K Andersen, GE Cook, AM Strauss. A Computer Based Design Methodology. Advances in Design Automation – 1987, vol. 1: Design Methods, Computer Graphics, and Expert Systmes. Ed. SS Rao, 1987 ASME Design Technology Conferences – The Design Automation Conference, Boston, Massachusetts, Sept. 27-30, 1987, pp. 259-262.

GE Cook, K Andersen, KR Fernandez, ME Shepard, AM Wells Jr. Electric arc sensing for robot positioning control. FS (Publications) Ltd., Robotic Welding, 1987, pp. 181-216.

G Karsai, K Andersen, K Ramaswamy, GE Cook. Gas Tungsten Arc Weld Modeling using a Mapping Network. Abstracts of the first INNS Meeting, Boston, Massachusetts, September 6-10, 1988, pp. 341.

K Andersen, GE Cook, K Ramaswamy, G Karsai. Gas Tungsten Arc Weld Modeling using Neural Networks. Proceedings of the ASME Winter Annual Meeting Symposium on Sensors and Controls for Manufacturing. 1988/12, pp. 137-144.

G Karsai, K Andersen, GE Cook, K Ramaswamy. Dynamic modeling and control of nonlinear processes using neural network techniques. Intelligent Control, 1989. Proceedings, IEEE International Symposium on, pp. 280-286.

K Ramaswamy, GE Cook, K Andersen, G Karsai. Neural networks in GTA weld modeling and control. American Control Conference, 1989, pp 62-67.

- GE Cook, K Andersen, S Zein-Sabattou, KR Fernandez. Multiple-robot programming for coordinated motion, end-effector calibration, and part localization. Industry Applications Society Annual Meeting, 1989, Conference Record of the 1989 IEEE, pp. 1669-1674.
- K Ramaswamy, K Andersen, GE Cook. New techniques for modeling and control of GTA welding. Southeastcon '89. Proceedings. Energy and Information Technologies in the Southeast, IEEE. Publication Year: 1989, page(s): 1255 - 1260 vol.3.
- K Andersen, S Zein-Sabattou, GE Cook, K Fernandez. An implementation of a generic algorithm for robotic welding programming. Southeastcon '89. Proceedings. Energy and Information Technologies in the Southeast, IEEE. Publication Year: 1989, page(s): 134 - 139 vol.1.
- GE Cook, K Andersen, RJ Barnett. Feedback and Adaptive Control in Welding. Recent Trends in Welding Science and Technology '89: Proc. 2nd International Conference on Trends in Welding Research, American Society for Metals (ASM) International, pp. 891-903.
- K Andersen, GE Cook, L Yizhang, DS Mathews, MD Randall. Modeling and Control Parameters for GMAW, Short Circuit Transfer. Advances in Manufacturing Systems Integration and Processes. Proceedings 15th Conference on Production Research and Technology. Ed. D.A. Dornfeld, Berkeley, California, January 9-13, 1989, pp. 413-421.
- T Prasad, K Andersen, GE Cook, RJ Barnett, AC Nunes, CS Jones. Computer Implementation and Study of a Weld Model. Proceedings IEEE Southeastcon 89, vol. 2, Columbia, South Carolina, April 9-12, 1989, pp. 517-521.
- K Andersen, GE Cook, KR Fernandez. Programming Methodologies for the Robotic Welding Workcell. Proceedings Robots 13, Society of Manufacturing Engineers (SME), Gaithersburg, Maryland, May 9-12, 1989, pp. 14-13 to 14-26.
- K Andersen, K Ramaswamy, GE Cook, G Karsai. A Novel Approach toward Relationships between Process Variables and Weld Geometry. Recent Trends in Welding Science and Technology '89: Proceedings 2nd International Conference on Trends in Welding Research. Eds. SA David and JM Vitek, American Society for Metals (ASM) International, Gatlinburg, Tennessee, May 14-18, 1989, pp. 891-903.
- K Andersen, GE Cook, RJ Barnett, S Eassa. A Class-H Amplifier Power Source used as a High-Performance Welding Research Tool. Recent Trends in Welding Science and Technology '89: Proceedings 2nd International Conference on Trends in Welding Research. Eds. SA David and JM Vitek, American Society for Metals (ASM) International, Gatlinburg, Tennessee, May 14-18, 1989, pp. 973-978.
- K Ramaswamy, GE Cook, K Andersen, G Karsai. Neural Networks in GTA Weld Modeling and Control. Proceedings American Control Conference, Pittsburgh, Pennsylvania, June 21-23, 1989, pp. 62-67.
- K Andersen, S Zein-Sabattou, GE Cook, G Karsai. Graphic Simulation for Robotic Weld Programming Enhancement. Recent Trends in Welding Science and Technology '89: Proceedings 2nd International Conference on Trends in Welding Research. Eds. SA David and JM Vitek, American Society for Metals (ASM) International, Gatlinburg, Tennessee, May 14-18, 1989, pp. 991-996.
- GE Cook, K Ramaswamy, T Prasad, K Andersen, RJ Barnett. Intelligent Welding Controller. NASA Tech Briefs, Report MFS-27195, Sept. 1989, ISSN 0145-319X, pp. 102.
- JB Bjorgvinsson, YC Yi, GE Cook, K Andersen. Microprocessor Control of Electrical Arc Starting and Adaptive Arc Voltage Control for Gas Tungsten Arc Welding (GTAW). Proceedings IEEE Southeastcon '90, vol. 3, New Orleans, Louisiana, April 1-4, 1990, pp. 792-796.

S Zein-Sabattou, K Andersen, GE Cook. Component and Instrumentation Failures Detection using Continuous Mapping Neural Network. Proceedings IEEE Southeastcon '90, New Orleans, Louisiana, April 1-4, 1990.

JB Bjorgvinsson, RJ Barnett, GE Cook, K Andersen. Microprocessor control of arc starting for gas tungsten arc welding (GTAW). Southeastcon '90. Proceedings, IEEE, 787-791.

S Zein-Sabattou, K Andersen, G Karsai, FM Wells, GE Cook. Failure Detection and Isolation for Intelligent Control System using Neural Network. Proceedings Fourth IEEE International Symposium on Intelligent Control, Albany, New York, Sept. 25-27, 1989.

K Andersen, GE Cook, RJ Barnett. A Class-H Amplifier used as a Generic Power Source for Arc Welding. Proceedings IEEE Southeastcon '90, vol. 3, New Orleans, Louisiana, April 1-4, 1990, pp. 792-796.

KR Fernandez, GE Cook, K Andersen, RJ Barnett, S Zein-Sabattou. A Generalized method for Multiple Robotic Manipulator Programming applied to Vertical-Up Welding. NASA Technical paper 3136, National Aeronautics and Space Administration, Washington, DC, October 1991.

K Andersen, GE Cook, JF Springfield, RJ Barnett. Applications of Artificial Neural Networks for Arc Welding. Eds. CH Dagli, SRT Kumara, YC Shin. Proceedings of Artificial Neural Networks in Engineering (ANNIE '91), ASME Press Series on International Advances in Design Productivity, St. Louis, Missouri, Nov., 1991, pp. 717-728.

K Andersen, GE Cook, RJ Barnett. Gas Tungsten Arc Welding Process Control using Artificial Neural Networks. Recent trends in Welding Science and Technology '92: Proceedings 3rd International Conference on Trends in Welding Research. Ed. SA David and JM Vitek. Materials Park, Ohio: American Society for Metals (ASM) International, Gatlinburg, Tennessee, 1992.

RJ Barnett, GE Cook, K Andersen. Development of a Multivariable Control System for Gas Tungsten Arc Welding. Recent Trends in Welding Science and Technology '92: Proceedings 3rd International Conference on Trends in Welding Research. Ed. SA David and JM Vitek. Materials Park, Ohio: American Society for Metals (ASM) International, Gatlinburg, Tennessee, 1992.

GE Cook, K Andersen, RJ Barnett. Computer-Based Control System for Gas Tungsten Arc Welding. Proceedings of the Japan-USA Symposium on Flexible Automation, vol. 1, ed. Ming Leu. San Francisco: July 13-15, 1992. Published by ASME, pp. 297-301.

G Karsai, K Andersen, GE Cook, RJ Barnett. Neural Network Methods for the Modeling and Control of Welding Processes. Journal of Intelligent Manufacturing (1992), 3, 229-235.

K Andersen, GE Cook, K Andersen. Weld Penetration Sensing using Synchronized Pool Oscillation. Abstracts of 1993 American Welding Society Convention, Houston, Texas. American Welding Society, pp. 65-66, April, 1993.

RJ Barnett, K Andersen, GE Cook, AM Strauss. Weld Quality Enhancement using Precision Multi-Parameter Control in Gas Tungsten Arc Welding. Chapter in International Trends in Welding Science and Technology. Eds. SA David and JM Vitek, Materials Park, Ohio, ASM International, pp. 981-986, 1993.

KR Fernandez, GE Cook, K Andersen, RJ Barnett, S Zein-Sabattou. Application of a Control Algorithm to Vertical-Up Welding. NASA Tech Briefs, Report MFS-27274, Oct. 1993, ISSN 0145-319X, pp. 121.

GE Cook, RJ Barnett, K Andersen, AM Strauss. Weld Modeling and Control using Artificial Neural Networks. Conference Record of the 1993 IEEE Industry Applications Society Annual Meeting, vol. III of III, IEEE publication 93CH3366-2, pp. 2181-2189, Oct. 1993.

K Andersen, GE Cook, RJ Barnett, AM Strauss. Synchronous Weld Pool Oscillation for Monitoring and Control. Conference Record of the 1994 IEEE Industry Applications Society Annual Meeting, vol. 3 of 3, IEEE publication 94CH34520, pp. 1906-1913, Oct. 1994.

GE Cook, RJ Barnett, K Andersen, JF Springfield, AM Strauss. Automated Visual Inspection and Interpretation System for Weld Quality Evaluation. Proceedings IEEE Industry Applications Society (IAS) 1995 Annual Meeting, vol. 2, Orlando Florida, October 8-12, 1995, pp. 1809-1816.

K Anderson, H Arnarson. Remote Maintenance in the Food Processing Industry. Proceedings of the 24th Annual Conference of the IEEE Industrial Electronics Society, IECON '98, 1998, vol. 4, pp. 209-2102.

K Andersen. Processing Quality Seafood. International Seafood Trade: Challenges and Opportunities. FAO Fisheries and Aquaculture Proceedings. FAO / University of Akureyri Symposium, Akureyri, Iceland, February 2007.

K Andersen. Emerging technologies in fish processing. Keynote presentation at TAFT 2009, the 3rd Joint Trans-Atlantic Fisheries Technology Conference. WEFTA, Copenhagen, 15-18 Sept. 2009.

K Andersen, GE Cook, RJ Barnett. Gas tungsten arc welding process control using artificial neural networks. International Trends in Welding Science and Technology, 877-881.

K Anderson, GE Cook, JF Springfield, RJ Barnett. Applications of artificial neural networks for arc welding. Intelligent Engineering Systems through Artificial Neural Networks, pp. 717-728.

K. Andersen. International Seafood Trade: Challenges and Opportunities FAO / University of Akureyri Symposium 1-2 February 2007 Akureyri, Iceland.

H Thorbergsson, KS Gudmundsson, K Andersen, SE Thorsteinsson. Using FPGAs in Lab Sessions. The 27th European Association for Education in Electrical and Information Engineering (EAEEIE) Annual Conference 7-9 June 2017 Grenoble, France.

KS Gudmundsson, H Thorbergsson, K Andersen, SE Thorsteinsson. Experiment on Student Teamwork. The 27th European Association for Education in Electrical and Information Engineering (EAEEIE) Annual Conference 7-9 June 2017 Grenoble, France.

SE Thorsteinsson, K Andersen, H Thorbergsson, K Gudmundsson. Returning to academia from industry: Four case studies from Iceland. Proceedings of the Professional Communication Conference (ProComm) Madison, Wisconsin, 23-26 July 2017, IEEE International.

K Andersen, SE Thorsteinsson, H Thorbergsson, K Gudmundsson. Developing the academic-industrial partnership through student research and projects: Case studies from Iceland. Proceedings of the Professional Communication Conference (ProComm) Madison, Wisconsin, 23-26 July 2017, IEEE International.

K Andersen, G Geirsdottir, SE Thorsteinsson, H Thorbergsson, K Gudmundsson. Engineering Education Case Studies: Engaging Students in Blended Learning. Proceedings of the Professional Communication Conference (ProComm) Toronto, Canada, 22-25 July 2018, IEEE International.

SE Thorsteinsson, G Geirsdottir, K Andersen, H Thorbergsson, K Gudmundsson. Trial with a Remote Laboratory in Telecommunications Engineering. Proceedings of the Professional Communication Conference (ProComm) Toronto, Canada, 22-25 July 2018, IEEE International.

K Andersen, SE Thorsteinsson, H Thorbergsson, K Gudmundsson. The Process of Improving the Quality of Teaching – A Case Study. The 28th European Association for Education in Electrical and Information Engineering (EAEEIE) Annual Conference 26-28 September 2018 Reykjavik, Iceland.

SE Thorsteinsson, K Andersen, G Geirsdottir, H Thorbergsson, K Gudmundsson. Blended Learning and Remote Laboratories. The 28th European Association for Education in Electrical and Information Engineering (EAEIE) Annual Conference 26-28 September 2018 Reykjavik, Iceland.

H Thorbergsson, K Gudmundsson, K Andersen, SE Thorsteinsson. Report on a Project in a Computer Design Course. The 28th European Association for Education in Electrical and Information Engineering (EAEIE) Annual Conference 26-28 September 2018 Reykjavik, Iceland.

K Gudmundsson, H Thorbergsson, K Andersen, SE Thorsteinsson. Using Embedded Systems Projects to Revisit Theoretical Subjects. The 28th European Association for Education in Electrical and Information Engineering (EAEIE) Annual Conference 26-28 September 2018 Reykjavik, Iceland.

K Andersen, SE Thorsteinsson, H Thorbergsson, KS Gudmundsson. Communications for a University Department Self-Assessment – A Case Study. Proceedings of the Professional Communication Conference (ProComm) Aachen, Germany, 23-26 July 2019, IEEE International, pp. 185-188.

K Andersen, SE Thorsteinsson, H Thorbergsson, KS Gudmundsson. Evaluating Learning Outcomes in Online Exams through Alternative Assessments. The 29th European Association for Education in Electrical and Information Engineering (EAEIE) Annual Conference 4-6 September 2019 Ruse, Bulgaria.

K Gudmundsson, H Thorbergsson, K Andersen, SE Thorsteinsson. Curriculum Development for Adult Students. The 29th European Association for Education in Electrical and Information Engineering (EAEIE) Annual Conference 4-6 September 2019 Ruse, Bulgaria.

SE Thorsteinsson, G Geirsdottir, K Andersen, H Thorbergsson, KS Gudmundsson. Unconventional Student Project Deliverables. The 29th European Association for Education in Electrical and Information Engineering (EAEIE) Annual Conference 4-6 September 2019 Ruse, Bulgaria.

K Andersen, SE Thorsteinsson, H Thorbergsson, KS Gudmundsson. Using MOOCs to Supplement Reading Courses: An Instructors' View. IEEE Learning With MOOCs Conference (LWMOOCs) 2019, 23-25 October 2019, Milwaukee, Wisconsin, USA.

B Baldursson, B Rasti, K Gudmundsson, D Cojocar, K Andersen, SE Thorsteinsson. Gesture Interpretation Control System Using Convolutional Neural Networks. International Conference on Biomedical Innovations and Applications, 8-9 November 2019, IEEE Section Bulgaria and IEEE Bulgarian CAS/SSC Joint Chapter, Varna, Bulgaria.

K Andersen, SE Thorsteinsson, H Thorbergsson, KS Gudmundsson. Adapting Engineering Examinations from Paper to Online. EDUCON 2020 – IEEE Global Engineering Education Conference, 28-30 April 2020. Organized by the University of Coimbra, University of Porto and Polytechnic of Porto, Portugal. Conducted online due to the Covid-19 outbreak.

K Andersen, H Thorbergsson, SE Thorsteinsson, KS Gudmundsson. The Small Languages in the Large World of Technology. Proceedings of the IEEE Professional Communication Conference, 19-22 July 2020. Organized by the University of Kennesaw, Georgia, USA. Conducted online due to the Covid-19 outbreak.

Book chapters (8)

JF Springfield, GE Cook, K Andersen, KR Fernandez. ROBOSIM: A Simulation Package for Robots. Proceedings University Programs in Computer Aided Engineering, Design and Manufacturing (UPCAEDM), 1989, University of Wyoming, Laramie, Wyoming, July 23-26, 1989. American Society of Civil Engineers, 1989, pp. 239-246.

GE Cook, K Andersen, RJ Barnett, JF Springfield. Intelligent Gas Tungsten Arc Welding Control. Fourth International Conference on Automated Welding Systems in Manufacturing. Ed. John Weston, Nov. 17-19, Gateshead, North East, UK. The Welding Institute, Cambridge, UK, 1991.

GE Cook, K Andersen, RJ Barnett. Welding and bonding. The Electrical Engineering Handbook, CRC Press, Inc, 1993, pp. 2223-2237.

K Anderson, GE Cook, S Zein-Sabattou, RJ Barnett, K Fernandez. A Programming Methodology for Robotic Arc Welding. Progress in Robotics and Intelligent Systems, Ablex Publishing Corp. 1996, pp. 253-292.

Wallace AK, Barnett RJ, Cook E, Andersen K, Spée R, Sznaier M. Industrial Systems. In: The electrical engineering handbook 2nd ed. CRC Press 1997.

K Andersen. X-ray techniques for quality assessment. Quality management and measurement in the fish industry. Eds. JB Luten, J Oehlenschlaeger, G Olafsdottir. Elsevier, 1997 pp. 283-286.

K Andersen. X-ray techniques for quality assessment. Quality of Fish from Catch to Consumer—Labelling, Monitoring and Traceability. Wageningen Academic Publishers, Wageningen, The Netherlands. pp 283-286.

K. Andersen, H. Magnusson. The Icelandic Way Towards Automation in Fish Processing. Seafoods: Quality, Technology and Nutraceutical Applications. Eds. C. Alasalvar, T. Taylor. Springer, 2013.

Other publications and presentations

K Andersen. Novel methods for sensing in arc welding (*Nýstárlegar aðferðir til mælinga í rafsuðu*). Journal of the Association of Chartered Engineers in Iceland – 80 years anniversary issue (*Tímarit Verkefrafðingafélags Íslands, 80 ára afmælisrit*), 1992.

K. Andersen. Resonance oscillations used for sensing in arc welding (*Eiginsveiflur notaðar til mælinga í rafsuðu*). *Vélabrögð*, Journal of mechanical engineering students at University of Iceland, 1993.

Kristinn Andersen, Marel – leading and growing (*Marel – í fremstu röð og vaxandi*), Annual Journal of the Engineering Associations in Iceland (*Árbók VFÍ/TFÍ*) 2009, pp. 203-209.

Kristinn Andersen, Development of X-ray equipment for quality inspection in food processing (*Dróun röntgenbúnaðar til gæðaskoðunar í matvælavinnslu*), Annual Journal of the Engineering Associations in Iceland (*Árbók VFÍ/TFÍ*) 2010, pp. 214-218.

Kristinn Andersen, Exporting electronics (*Rafvæðing í útrás*), Annual Journal of the Engineering Associations in Iceland (*Árbók VFÍ/TFÍ*) 2011, pp. 227-231.

Kristinn Andersen, Cognitive Robots (*Skýnnugir róbótar*), Presentation at the Annual Meeting of the University of Iceland Engineering Research Institute, Nov-2014.

Kristinn Andersen, Robotics, Artificial Intelligence and Automation, Inauguration Ceremony at the University of Iceland School of Engineering and Natural Sciences, 12-Feb-2015.

Kristinn Andersen, Robotics and the 4th Industrial Revolution (*Eru róbótarnir að taka yfir?*). Invited presentation at *Iðan* Education Centre, Reykjavik, 12-Oct-2017.

Kristinn Andersen, Student Projects in Collaboration with Industry – A View from Both Perspectives (*Nemendaverkefni í samstarfi við atvinnulíf – sýn frá báðum sjónarhornum*). Presentation at University of Iceland Education Development Conference (*Kennsluþróunarráðstefna HÍ*), Reykjavik, 13-Oct-2017.

Kristinn Andersen, Blended Learning in Engineering with Active Engagement of Students (*Blönduð kennsla í verkefni með virkri þátttöku nemenda*). Presentation at *Menntakvika*, University of Iceland, 26-28 Sept. 2018.

Patents

K Andersen, K Hallvardsson, S Narfason, V Erlingsson. Laser mirror vision, US Patent 7,205,529. 2007.

V Erlingsson, H Eiriksson, K Andersen. Apparatus for inspecting food items, EP Patent 1,730,515. 2006

K Andersen, K Hallvardsson, S Narfason. Method and apparatus for determining a three dimensional image of a moving object by means of light, WO Patent 2,002,061,368. 2002

R&D projects applied for to competitive research funds

K Andersen, RJ Barnett, GE Cook, K Ramaswamy, T Prasad. Intelligent Gas Tungsten Arc Welding Control. SBIR Phase I Final Report, NASA Contract NAS8-37306. Mid-South Engineering, Inc. / Vanderbilt University, Nashville, Tennessee, Sept. 1987.

K Andersen, RJ Barnett, GE Cook, S Zein-Sabattou. Robotic Weld Path Programming. SBIR Phase I Final Report, NASA Contract NAS8-37621. Mid-South Engineering, Inc. / Vanderbilt University, Nashville, Tennessee, Sept. 1988.

K Andersen, RJ Barnett, JF Springfield, GE Cook, AM Strauss, JB Bjorgvinsson. Intelligent Gas Tungsten Arc Welding Control. SBIR Phase II Final Report, NASA Contract NAS8-37401. Mid-South Engineering, Inc. / Vanderbilt University, Nashville, Tennessee, February, 1991.

K Andersen, RJ Barnett, JF Springfield, GE Cook. Welding Technology: VPPAW Modeling and Control using Artificial Neural Networks. SBIR Phase I Final Report, NASA Contract NAS8-38918. Mid-South Engineering, Inc. / Vanderbilt University, Nashville, Tennessee, August, 1991.

K Andersen, RJ Barnett, JF Springfield, GE Cook. WELDSMART: A Vision-Based Expert System for Quality Control. Final Report, NASA Contract NAS8-37685, Mid-South Engineering, Inc. / Vanderbilt University, Nashville, Tennessee, 09/1992.

K Andersen. Innovative weighing technology (*Nýsköpun í vigtunartækni*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Project application fall 1998.

K Andersen. Raw material transfer in fish processing (*Hráefnisfærsla í fiskvinnslu*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Final report March-1998.

K Andersen, P Jensson. Optimization of portion processing (*Beztun bitavinnslu*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Final report March-1998.

K Andersen. ESSI Process Improvement Experiment: Extended Teamwork in Software Development (ETSD), ESSI Process Improvement Experiment (PIE), European Commission Esprit Contract No. 27382. Numerous technical reports and final report 1-June-1998 through 31-May-1999.

K Andersen, P Jensson. Control and yield from probabilistic intelligent batching (*Styring og árangur líkindasamvals*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel and the University of Iceland. Final report May-2000.

K Andersen. Three-dimensional computer vision (*Þrívíddartölvasjón*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Project application Nov. 2000.

K Andersen, R Birgisson. A computer model for raw material analysis in fish processing (*Tölvulíkan fyrir hráefnisgreiningu í fiskvinnslu*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel and the Icelandic Seafood Research Institute (RF). Project application Nov. 2000.

K Andersen. Automatisering av filetlíne (beinplukkerteknologi). Selected for funding following competitive evaluation by the Norwegian FHF Fund. Project managed and implemented at Marel. Numerous technical reports Feb. 2001 through Dec. 2003.

K Andersen. Meat processing systems (*Kjötvinnskúkerfi*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Final report Apr-2003.

K Andersen, et al. Non-Contact System for Real-Time Texture Quality Measurements in Food Processing (FOODTEXTURE). European Commission FP5-IST Project IPS-2001-42118. Numerous technical reports and final report July 2003 through June 2006.

K Andersen. Development and implementation of robots in meat processing (*Þróun og innleiðing róbóta í kjötvinnslu*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Progress report Nov. 2004.

K Andersen. Fish processing using robots (*Fiskvinnsla með róbótum*). Application for funding in competitive evaluation by the Icelandic AVS Seafood R&D Fund, 2004.

K Andersen. New technology generation for whitefish processing (*Ný kynslóð vinnslutækni fyrir hvítfisk*). Selected for funding following competitive evaluation by the Icelandic AVS Seafood R&D Fund. Project managed and implemented at Marel. Final report Jan. 2005.

K Andersen. Robotic handling of fish portions (*Meðhöndlun fiskestykja með róbótum*). Selected for funding following competitive evaluation by the Icelandic AVS Seafood R&D Fund. Project managed and implemented at Marel and Matis. Final report July 2006.

K Andersen. Implementing robotic technology in meat processing (*Innleiðing róbótatækni í kjötvinnslu*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Final report Sept. 2006.

K Andersen. Development of an X-ray sensor - FOBIX (*Þróun röntgenskynjara - FOBIX*). Selected for funding following competitive evaluation by the Icelandic RANNIS Research Fund. Project managed and implemented at Marel. Final report Oct. 2010.

K Andersen, JGF Cleland. Tests for pre-processing of salmon (*Prófanir vegna forvinnslu á laxi*). Selected for funding following competitive evaluation by the Icelandic AVS Seafood R&D Fund. Project managed and implemented at Marel. Final report Nov. 2010.

K Andersen. Salmon processing with superchilling (*Laxavinnsla með ofurkælingu*). Application for funding in competitive evaluation by the Icelandic AVS Seafood R&D Fund, 2011.

K Andersen. APRICOT – Automated Pinbone Removal in Cod and Whitefish. Selected for funding following competitive evaluation by the Nordic Innovation Fund. Project managed and implemented at Marel. 3-year project in progress, numerous technical reports from Jan. 2012.

K Andersen. Automatic cleaning in food processing (*Sívirki þrif í matvælaninnslu*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Progress report Dec. 2013.

K Andersen. Pre-trimming of fillets (*Forsnyrting flaka*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Project started 2013.

K Andersen. New generation of X-ray technology (*Ný kynslóð röntgentækni*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund. Project managed and implemented at Marel. Project application Feb. 2014.

K. Andersen. Regular ordering (*Regluleg röðun*). Selected for funding following competitive evaluation by the Icelandic RANNIS Technology Development Fund – Applied Research. Project started June 2017.

Review of papers and conference administration

Chair and member of the editorial board of the Annual Journal of the Engineering Associations in Iceland (*Árbók VFI/TFÍ*), 1995 through 2005.

Treasurer and Conference Committee of the 7th Nordic Signal Processing Symposium, NORSIG 2006, Reykjavik, Iceland, June 2006.

Treasurer and Conference Committee of the IEEE International Symposium on Wireless Communication Systems, ISWCS 2008, Reykjavik, Iceland, October 2008.

Reviewing papers for the IEEE Transactions on Control Systems Technology, from 2012.

Conference Committee for the 28th EAEEIE (European Association for Education in Electrical and Information Engineering), Reykjavik, Iceland, Sept. 2018.

Student thesis committees and guidance

Advisory for MS thesis in Computer Science at the University of Iceland. Thorvaldur Petursson: Distributed embedded systems (*Dreifð ívafskerfi*). May 2004.

Advisory for MS thesis in electrical engineering at KTH, Sweden. Emil Sigursveinsson: Cooling of X-ray Sensor (*Kæling röntgenskynjara*). June 2009.

Advisory for BS final project in Applied Engineering at Reykjavik University. NN: Design and Implementation of a Segway Vehicle (*Hönnun og smíði Segway farartækis*). August 2009.

Advisor for BS final project in Applied Electrical Engineering at Reykjavik University. Ragnar Einarsson: Optical Speedometer for Conveyors (*Optískur hraðamælir fyrir færubönd*). December 2010.

Advisory for MS thesis in Computer Science at the University of Iceland. Hermann J. Ingjaldsson: Determining bone types in X-ray Images (*Greining tegunda beina í röntgemyndum*). May 2011.

Advisory for BS final project in Applied Mechanical Engineering at Reykjavik University. Oli Saevar Olafsson: Handling of Salted Fish by Robots (*Saltfiskmötun með róbóta*). December 2011.

Advisory for BS final project in Applied Mechanical Engineering at Reykjavik University. Ornlófur Thor Ornlófsson: Design and Testing of Basic Elements of Water Jet Cutting for Whitefish (*Hönnun og prófun á grunnatriðum vatnsskurðarbúnaðar fyrir bolffiske*). May 2012.

Advisory for MS thesis in Electrical and Computer Engineering at the University of Iceland. Francis S. Cagatin: Active Shape Models in the Poultry Processing Industry (*“Active Shape” líkön notuð í kjúklingavinnslu*). May 2012.

Examiner for MS thesis in Software Engineering at the University of Iceland. Gunnar Sigurjonsson: Scope Evaluation using History Points – Real Case Investigation for a Scrum Project (*Umfangsmat með sögupunktum – raundæmisrannsókn á Scrum verkefni*). Advisor Helgi Thorbergsson. May 2013.

Opponent for PhD dissertation at the Technical University of Denmark. Hildur Einarsdóttir: Image Analysis for X-ray Imaging of Food. September 2016.