



Athens Institute for Education and Research

3rd Annual International Conference on Industrial, Systems and Design Engineering

2nd Annual International Conference on Technology & Engineering

International Conference on Foresight

22-25 June 2015, Athens, Greece

Organized by ATINER's [Engineering & Architecture Research Division](#)

Conference Venue: [Titania Hotel](#), 52 Panepistimiou Street, 106 78 Athens, Greece

Monday 22 June 2015

(all sessions include 10 minutes break)

08:40-09:40 Registration and Refreshments

09:40-10:00 (ROOM C) Welcome & Opening Remarks

- Dr. Gregory T. Papanikos, President, ATINER & Honorary Professor of Economics, University of Stirling, UK.
- Dr. Theodore Trafalis, Head, Industrial Research Unit, ATINER & Professor of Industrial and Systems Engineering, The University of Oklahoma, USA.

10:00-11:45 Session I (ROOM C): Engineering and Technical Education

Chair: Theodore Trafalis, Head, Industrial Research Unit, ATINER & Professor of Industrial and Systems Engineering, The University of Oklahoma, USA.

1. Rade Ciric, Professor, The Higher Technical School of Professional Studies in Novi Sad, Serbia & Matija Sokola, The Higher Technical School of Professional Studies in Novi Sad, Serbia. Syllabus Course "Distribution and Industrial Networks". (IND)
2. *Bassam Hussein, Chair, Department of Industrial Engineering, Lebanese International University, Lebanon, Lebanon, Mona Aridi, Lebanese International University, Lebanon, Hassan Khachfe, Center for Quality Assurance, Institutional Assessment & Scientific Research (QAIASR), Lebanon & Amin Haj-Ali, Lebanese International University, Lebanon. Measuring the Motivating Potential Score of Academic Staff at the Lebanese International University. (IND)
3. Don Clucas, Senior Lecturer, University of Canterbury, New Zealand & Stefanie Gutschmidt, Senior Lecturer, University of Canterbury, New Zealand. Use of Additive Manufacture and Stirling Engines as Engineering Education Tools. (IND)
4. Adam Postula, Senior Lecturer, University of Queensland, Australia, Matthew D'Souza, Konstanty Bialkowski & Mark Schulz. Embedded System Design in University Teaching Practice. (TEN)
5. *Karen Woodman, Senior Lecturer, Queensland University of Technology, Australia & Prasad KDV Yarlalagadda, Professor, Queensland University of Technology, Australia. Best Practices in Supervision of International Students in Engineering and IT. (TEN)

11:45-13:45 Session II (ROOM C): Advances – Soft I	11:45-13:30 Session III (ROOM D): Industrial Intelligence I
Chair: *Karen Woodman, Senior Lecturer, Queensland University of Technology, Australia.	Chair: * <u>Bassam Hussein</u> , Chair, Department of Industrial Engineering, Lebanese International University, Lebanon.
<ol style="list-style-type: none"> 1. *<u>Peter Hess</u>, Professor, Nuremberg Institute of Technology, Germany & Maximilian Wagner, Scientific Assistant, Nuremberg Institute of Technology, Germany. New Developments in Industrial Robot Programming. (IND) 2. <u>Theo Van Niekerk</u>, Professor, Nelson Mandela Metropolitan University, South Africa & <u>Aiden Cumberlege</u>, Weld Engineer, Nelson Mandela Metropolitan University, South Africa. Wireless Production Line Monitoring via Android. (TEN) 1. C.-Y. Wu, National Cheng-Kung University, Taiwan, <u>Jason Sheng-Hong Tsai</u>, Professor, National Cheng-Kung University, Taiwan, L.-C. Chen, Cheng-Kung University, Taiwan, S.-M. Guo, National Cheng Kung University, Taiwan, L.-S. Shieh, University of Houston, USA & T.-J. Tsai, Tung-Fang Institute of Technology, Taiwan. A New Input Constrained Quadratic Tracker for an Unknown Sampled-Data System with an Input to Output Direct Transmission Term. (IND) 2. <u>Mao-Jiun Wang</u>, Professor, National Tsing Hua University, Taiwan, Chao-Hung Wang, National Tsing Hua University, Taiwan & Wei-Jen Lo, National Tsing Hua University, Taiwan. Augmented Reality based Maintenance Instruction System. (IND) 3. Nabil Semaan, Assistant Professor, University of Balamand, Lebanon. Deterministic, Queueing and Simulation Modeling of the Production of Ready Mix Concrete Batch Plant Industry in Nahr El Maout, Lebanon. (IND) 	<ol style="list-style-type: none"> 1. *<u>Jong-Rong Chen</u>, Professor, National Central University, Taiwan, Chia-Hua Chung, Ph.D. Student, National Central University, Taiwan & Chih-Hai Yang, Professor, National Central University, Taiwan. Non-Practicing Entities, Patent Value, and Patent Transfer. (FOS) 2. *Konstadinos Goulias, Professor, University of California, USA. Design and Implementation of a Simulator of Activities, Greenhouse Gas Emissions, Networks, and Travel (SimAGENT) in Southern California. (FOS) 3. <u>Sebastian Lozano</u>, Professor, Universidad de Sevilla, Spain, Ma Teresa Moreira, Professor, Universidad de Santiago de Compostela, Spain & Gumersindo Feijoo, Professor, Universidad de Santiago de Compostela, Spain. DEA Benchmarking of Wastewater Treatment Plants Using Life Cycle Assessment. (IND) 4. <u>Jose Maldifassi</u>, Assistant Professor, Universidad Adolfo Ibanez, Chile & Agustin De La Cuesta, San Joaquin Campus Director, Professional Institute Duoc – Uc, Chile. A Two-Stage Process for Explaining the Relative Efficiency of Small and Medium-Size Firms in Chile. (TEN)

13:30-14:30 Lunch

14:30-16:30 Session IV (ROOM C): Industrial Intelligence II	14:30-16:30 Session V (ROOM D): Advances – Hard I
Chair: * <u>Jong-Rong Chen</u> , Professor, National Central University, Taiwan.	Chair: * <u>Till Haenisch</u> , Professor, BW State University, Germany.
<ol style="list-style-type: none"> 1. <u>Tae Jo Ko</u>, Professor, Yeungnam University, Korea & Muhammad Sana Ullah Sahar, Student/Researcher, Yeungnam University, Korea. A Method to Select Optimal Solution for Machine Tools Remanufacturing Multi-Solution Decision Problem. (IND) 2. Lesley Wolk, Associate Professor, Southern Connecticut State University, USA. Increasing Public Awareness for Stuttering: Enhancing Listener Responses and Overall Communication. (FOS) 3. Guldal Guleryuz, Assistant Professor, Hacettepe University, Turkey. Asymptotic Analysis of a Reliability Model with Repair and Standby. (IND) 4. <u>Stefan Junk</u>, Head, Laboratory for Rapid Prototyping, University of Applied Sciences Offenburg, Germany & Steffen Schrock, Researcher, University of Applied Sciences Offenburg, Germany. A Benchmark of Service Providers in Additive Manufacturing. (IND) 5. *Tiina Kymalainen, Research Scientist, VTT Technical Research Centre of Finland Ltd, Finland. Innovative Leap into the Future - Emerging Technology Design by the Science Fiction Prototypes. (FOS) 	<ol style="list-style-type: none"> 1. <u>Gus Calabrese</u>, Head Engineering, Cinternational/WFTelectronics, USA & <u>Joanne Yamaguchi</u>, Post-Doc Researcher, Rasmussen College, USA. Moving Wearables from Toys to a Lifestyle. (FOS) 2. *<u>Peter Boehm</u>, Professor, University of Applied Science, Germany & Christian Lamberti, Ph.D. Student, University of Luxembourg, Luxembourg. On-Line Monitoring of the Laser Joining Process of Aluminium Alloy and Polyamid 6.6 by Acoustic Emission Analysis. (IND) 3. Jason Shih, Professor Emeritus, North Carolina State University, USA. Biogas Technology in Modern Agriculture for Energy Production, Environmental Sustainability, and New Product Development. (FOS) 4. <u>Igor Petrovic</u>, Lecturer, Technical College in Bjelovar, Croatia, Ante Cikic, Associate Professor, Technical College in Bjelovar, Croatia & Tomislav Pavlic, Lecturer, Technical College in Bjelovar, Croatia. The Influence of Solar Insolation and Oxygen Content in Water on the Efficiency of Intensive Hydroponic Salad Growing in Greenhouses. (TEN)

16:30-18:30 Session VI (ROOM C): Advances–Hard II

Chair: *Konstadinos Goulias, Professor, University of California, USA.

1. *[Till Haenisch](#), Professor, BW State University, Germany & Stefanie Haenisch, BW State University, Germany. Using a LED Flashlight for High Speed Photography in Industrial Settings. (TEN)
2. *[Carlos Alberto Guerrero-Fajardo](#), Associate Professor, National University of Colombia, Colombia & Maria del Pilar Trivino-Restrepo, Professor, Universidad Pedagogica y Tecnologica de Colombia, Colombia. Mesoporous Carbon as Catalytic Support for Biodiesel Production from Oilseeds. (TEN)
3. *[Jerry Davis](#), Associate Professor, Auburn University, USA, Richard Sesek, Associate Professor, LuAnn Sims, Ph.D. Candidate & Sean Gallagher, Associate Professor, Auburn University, USA. Developing Empirical Donning Times for Smoke Hoods. (IND)
4. Velmurugan Muthu, Ph.D. Student, Indian Institute of Technology Madras, India. I-Beam to Square CFT Column Seismic Connection using External Diaphragm and Rib Plate for Moment Frames. (TEN)
5. [Maria del Rosario Tapia Baranda](#), Ph.D. Candidate, Universidad de Valencia, Spain & Guillermo Gandara Fierro, Instituto Tecnologico de Estudios Superiores de Monterrey, Mexico. Towards Sustainable Development on Sugarcane Agro Industrial Sector: Scenarios to Veracruz 2030 (FOS)

18:30-20:30 Session VII (ROOM C): A Round-Table Discussion on The Future of Technology and Engineering Education

Chair: Dr Lampros Pyrgiotis, Independent Researcher; President, Greek Society of Regional Scientists, Greece.

1. Dr Jong-Rong Chen, Professor, National Central University, Taiwan.
2. Dr Don Clucas, Senior Lecturer, University of Canterbury, New Zealand.
3. Dr Patrick van der Duin, Assistant Professor, Delft University of Technology, The Netherlands.
4. Dr Konstadinos Goulias, Professor, University of California Santa Barbara, USA.
5. Dr Till Hanisch, Professor, BW State University, Germany.
6. Dr Theo van Niekerk, Professor, Nelson Mandela Metropolitan University, South Africa.
7. Dr Theodore Trafalis, Head, Industrial Research Unit, ATINER & Professor of Industrial and Systems Engineering, The University of Oklahoma, USA.
8. [Dr Themistoklis Xanthopoulos, Professor Emeritus & former Rector, National Technical University of Athens \(NTUA\), Greece.](#)
9. Dr Jin Zhouying, Director, Chinese Academy of Social Sciences, China.

21:00-23:00 Greek Night and Dinner (Details during registration)

Tuesday 23 June 2015

08:15-10:30 Session VIII (ROOM C): Foresight Exercise

Chair: *Peter Hess, Professor, Nuremberg Institute of Technology, Germany.

1. Ali Paya, Senior Visiting Research Fellow, University of Westminster, UK. A Critical Assessment of Foresight Methodologies.
2. *Patrick van der Duin, Assistant Professor, Delft University of Technology and Associate Professor, Fontys University of Applied Sciences, The Netherlands, Jacintha Scheerder, The Netherlands Study Centre for Technology Trends, Rene Hoogerwerf, The Netherlands Study Centre for Technology Trends, Silke de Wilde, The Netherlands Study Centre for Technology Trends & Vincent Marchau, Delft University of Technology/Radboud University, The Netherlands. Challenging the Future. The Implications of the 'Horizonscan 2050' for Dutch Innovation System Policy. (FOS)
3. Zhouying Jin, Director, Center for Technology Innovation and Strategy Studies, Chinese Academy of Social Sciences, China. The Human Future Evolution - From Humanity - Social Perspectives. (FOS)
4. *Antje Bierwisch, Senior Researcher, Fraunhofer Institute for Systems and Innovation Research, Germany. Grand Challenges "Secure Society" and Integrated Foresight Approach for Technology Assessment. (FOS)
5. James Steinhoff, Ph.D. Student, The University of Western Ontario, Canada. Species Being: An Alternate Political Future for Transhumanism. (FOS)
6. Dimitrios Kyriakou, Lead Economist, Smart Specialization Platform, European Commission (JRC-IPTS), Spain. Foresight and Smart Specialization: The Twain Shall Meet. (FOS)
7. Ana Jakil, Project Manager, European Environment Agency, Denmark. Uses of Foresight Methodologies and Methods in the European Environment Agency's 'Assessment of Global Megatrends 2015': Lessons Learned and Potential Opportunities. (FOS)

10:30-12:30 Session IX (ROOM C): Industrial Intelligence III

Chair: *Patrick van der Duin, Assistant Professor, Delft University of Technology and Associate Professor, Fontys University of Applied Sciences, The Netherlands.

1. Rina Sadia, Lecturer, Shenkar College of Engineering and Design, Israel. A System Approach Linking Organizational Effectiveness, Employees Health and Quality Culture-Findings from the Literature. (IND)
2. Sermin Sahin, Industrial Engineer, Hacettepe University, Turkey, Seda Albayrak, Industrial Engineer, Hacettepe University, Turkey, Feyza Bulak, Industrial Engineer, Hacettepe University, Turkey & Zeynep Dur, Industrial Engineer, Hacettepe University, Turkey. Flexible Job Shop Scheduling for a Project Based Company. (IND)
3. Mateus Balan, Post Graduate Student, University of Sao Paulo, Brazil, Tesoro Elena Del Carpio-Huayllas, Post Graduate Student, University of Sao Paulo, Brazil & Dorel Soares Ramos, Associate Professor, University of Sao Paulo, Brazil. Operational Cost Assessment of Microgrids Containing Renewable and Non-renewable Generators. (TEN)
4. Aysegul Sarac, R&D Specialist, Arcelik Washing Machine R&D Center, Turkey, Serdar Baysan, Research Assistant, Istanbul Technical University, Turkey & Bulent Durmusoglu, Professor, Istanbul Technical University, Turkey. Integrating Lean Principles on Project Management to Reduce Project Lead Time: A Real Application in a Multi-Project R&D Center. (IND)

12:30-14:00 Session X (ROOM C): Advances–Soft II

Chair: *Antje Bierwisch, Senior Researcher, Fraunhofer Institute for Systems and Innovation Research, Germany.

1. Yahya Isik, Lecturer, Uludag University, Turkey. The Design of Internally Cooled Tools in Orthogonal Metal Cutting. (IND)
2. Ali Hussain Tarrad, General Manager, Al-Sunbula Al-Thahabiya for General Trading Company, Jordan & Al-Nadawi Ayad, Assistant Lecturer, Iraq. Modeling of Finned-Tube Evaporator using Pure and Zeotropic Blend Refrigerants. (TEN)
3. Mert Varol, Research Assistant, Turgut Ozal University, Turkey, Ecehan Kaylan, Industrial Engineer, Turkey, Okan Ay, Industrial Engineer, Turkey & Guldal Guleryuz, Assistant Professor, Hacettepe University, Turkey. Remnant Storage Area Re-design and Inventory Tracking System for a Steel Fabrication Factory. (IND)
4. Asli Atalay, Research Assistant, Marmara University, Turkey. A New Approach to Design E-Textiles by Integrating Piezoelectric PVDF in/onto Yarns. (IND)
5. Lamia Atma Djoudi, Researcher, Synchrone Technologies, France & Miguel Rome, Manager, Synchrone Technologies, France. Software Reusability for Research Tools.

14:00-15:00 Lunch

15:00-16:30 Session XI (ROOM C): Industrial Intelligence IV

Chair: Olga Gkounta, Researcher, ATINER.

1. Xin Fan, MSc Student, Beijing Institute of Technology, China, Dong-hua Zhu, Professor, Beijing Institute of Technology, China, Xue-feng Wang, Professor, Beijing Institute of Technology, China & Ying Guo, Beijing Institute of Technology, China. Enterprise Technology Forecasting Based on Patent Map and TRIZ Theory. (FOS)
2. Bogdan Epureanu, Professor, University of Michigan, USA & Kiran D'Souza, Assistant Professor, Ohio State University, USA. An Approach for Evaluating the Utility and Cost of a Fleet of Modular Vehicles. (IND)

16:30-19:00 Urban Walk (Details during registration)

20:30- 22:00 Dinner (Details during registration)

Wednesday 24 June 2015
Cruise: (Details during registration)

Thursday 25 June 2015
Delphi Visit: (Details during registration)