

### **Athens Institute for Education and Research**

# Annual International Conference on Engineering Education & Teaching, 6-9 June 2016, Athens, Greece

Organized by the Engineering & Architecture Research Division of ATINER sponsored by the <u>Technology & Engineering</u>
Scientific and Organizing Committee



Conference Venue: <u>Titania Hotel</u>, 52 Panepistimiou Street, 10678 Athens, Greece

## Monday 6 June 2016

(all sessions include 10 minutes break)

#### 08:00-08:30 Registration and Refreshments

#### 08:30-09:00 Welcome & Opening Address (ROOM C- Mezzanine Floor)

- Gregory T. Papanikos, President, ATINER.
- George Poulos, Vice-President of Research, ATINER & Emeritus Professor, University of South Africa, South Africa.

#### 09:00-10:30 Session I (ROOM C- Mezzanine Floor): Advanced Studies & General Studies

Chair: Nicholas N. Patricios, Director, Engineering & Architecture Research Division, ATINER, and Professor & Dean Emeritus, School of Architecture, University of Miami, USA.

- 1. Nikos Mourtos, Professor and Director, Aerospace Engineering, San Jose State University, USA. Reflection as a Way to Develop Engineering Process Skills.
- 2. \*Vladimir Haasz, Professor, Czech Technical University in Prague, Czech Republic. Progress in Study Programmes at CTU Faculty of Electrical Engineering 16 Years after Bologna Declaration.
- 3. Anne Donnelly, Director, Center for Undergraduate Research, University of Florida, USA, Eakta Jain, Assistant Professor, University of Florida, USA, David Lopatto, Director, Center for Teaching, Learning and Assessment, Grinnell College, USA, Heather Spooner, Center for Arts in Medicine, USA, Sahadeo Ramjatan, Graduate Student, Aerospace Engineering, University of Florida, USA & Grace Chun, Undergraduate Student, University of Florida, USA. The Role of Undergraduate Research in an Undergraduate Curriculum.
- 4. <u>Santiago Pindado</u>, Professor, Universidad Politecnica de Madrid, Spain, Angel Sanz, Universidad Politecnica de Madrid, Spain, Sebastian Franchini, Universidad Politecnica de Madrid, Spain, Isabel Perez-Grande, Universidad Politecnica de Madrid, Spain, Gustavo Alonso, Universidad Politecnica de Madrid, Spain, Javier Perez, Universidad Politecnica de Madrid, Spain, Felix Sorribes, Universidad Politecnica de Madrid, Spain, Javier Cubas, Universidad Politecnica de Madrid, Spain, Andres García, Universidad Politecnica de Madrid, Spain & Elena Roibas, Universidad Politecnica de Madrid, Spain. MUSE (Master in Space System), an Advanced Master's Degree in Space Engineering.

#### 10:30-12:00 Session II (ROOM C- Mezzanine Floor): Urban Studies & Engineering Education

Chair: \*Vladimir Haasz, Professor, Czech Technical University in Prague, Czech Republic.

- 1. \*Anne Nortcliffe, Principal Lecturer, Sheffield Hallam University, U.K., <u>Sam Power</u>, Student, Sheffield Hallam University, U.K. & Karen Vernon-Parry, Principal Lecturer, Sheffield Hallam University, U.K. Engineering Learning through Aerospace Engineering Laboratory.
- 2. \*Sonia M. Gomez Puente, Education Development Policy Advisor, Eindhoven University of Technology (TU/e), The Netherlands & P.C.W. Sommen, Associate Professor, Eindhoven University of Technology (TU/e), The Netherlands. Computer-Based and Screencasts Approach in an Electrical Engineering Course: Does Blended-Learning Work to Motivate Students?
- 3. \*Maria Spiliotopoulou, Ph.D. Candidate and Researcher, Simon Fraser University, Canada & Mark Roseland, Director and Professor, Simon Fraser University, Canada. Sustainable Community Development through the Lens of Urban Productivity.
- 4. <u>Bruno Osorio</u>, Ph.D. Research Student, University of Bath, U.K., Nick McCullen, Lecturer, University of Bath, U.K., Ian Walker, Senior Lecturer, University of Bath, U.K. & David Coley, Professor, University of Bath, U.K. Understanding the Relation between Energy Consumption and Urban Form Characteristics.

#### 12:00-13:30 Session III (ROOM C- Mezzanine Floor): Program Components

#### Chair: \*Alta Greeff, Head, Curro Holdings Ltd, South Africa.

- 1. Erkan Kacan, Head, Computer Technologies Department, Pamukkale University, Turkey. The Effect of Energy Related Educational Program on Renewable Energy Awareness Level
- 2. <u>Youjun Tao</u>, Professor, China University of Mining and Technology, China, Guangyuan Xie, Professor, China University of Mining and Technology, China. Implement the Project of Excellence Engineer to Improve the Students' Engineering Ability of Mineral Processing.
- 3. Nese Sevim, Instructor, Mehmet Akif Ersoy University, Turkey & Zahide Yildirim, Professor, Middle East Technical University, Turkey. The Experiences of Mining Engineering Students in Game Based Learning Environment.
- 4. <u>Jaco de Kock</u>, Curro Holdings Ltd, South Africa & Alta Greeff, Curro Holdings Ltd, South Africa. How to keep Science & Technology Curricula for Middle School relevant to 21<sup>st</sup> Century demand on Teaching and Learning.

#### 13:30-14:30 Lunch

#### 14:30-16:00 Session IV (ROOM B- Mezzanine Floor): Transit, Infrastructure and Other Issues

Chair: Youjun Tao, Professor, China University of Mining and Technology, China.

- 1. \*Slawomir Karas, Head of Road and Bridge Chair, Lublin University of Technology, Poland & Maciej Kowal, Researcher, Road and Bridge Chair, Lublin University of Technology, Poland. Mycenaean Bridges In Situ Inventory and Static Analysis.
- 2. <u>Yali Kuang</u>, Professor, China University of Mining and Technology, China, Guangyuan Xie, Professor, China University of Mining and Technology, China & Youjun Tao, Professor, China University of Mining and Technology, China. Synergism of the Curriculum MPPD and the Graduation Design to Train the Ability Analyzing and Solving Complex Engineering Problems.
- 3. \*Alexander Kolpakov, Research Associate, Center for Urban Transportation Research, University of South Florida, USA. Idle Reduction Practices of the U.S. Transit Fleet.
- 4. \*Marjan Mahdavi, Ph.D. Student, Politecnico di Milano, Italy, Sara Perotti, Assistant Professor, Politecnico di Milano, Italy & Angela Tumino, Assistant Professor, Politecnico di Milano, Italy. Antecedents of ITS Adoption in Intermodal Freight Transport Industry.

#### 16:00-17:30 Session V (ROOM B-Mezzanine Floor): Culture, the City and Education

Chair: \*Slawomir Karas, Head of Road and Bridge Chair, Lublin University of Technology, Poland

- 1. Francesca Guerrucci, Architect, University G.D'Annunzio, Italy. Water as Vehicle of Cultural Spread for Mediterranean Identity.
- 2. <u>Ana Estevens</u>, Researcher, CEG-IGOT, University of Lisbon, Portugal, Leandro Gabriel, Ph.D. Student, CEG-IGOT, University of Lisbon, Portugal & Isabel André, Professor and Researcher, CEG-IGOT, University of Lisbon, Portugal. Sounds of Protest: Music in Deprived Places.
- 3. Ana Medina, Ph.D. Student, Universidad Politécnica de Madrid Goldsmiths University of London, U.K. Post-Revolution Urban Landscape. Transformation of Public Spaces after 2011 Revolutions.

#### 17:30-19:00 Session VI (ROOM B- Mezzanine Floor): History, Application and Management in Spatial Planning – Territorial Planning and Management

Chair: Paul Claval, Emeritus Professor, University of Paris-IV (Paris-Sorbonne), France.

- 1. \*Sayed Sharaf, Researcher, Abu Dhabi Systems and Information Centre, UAE & Pere Serra, Lecturer, Universitat Autònoma de Barcelona, Spain. Charge Detection in Al-Ain Region.
- 2. \*Ana Peric, Post-doc Fellow, Swiss Federal Institute of Technology, Switzerland & Bernd Scholl, Professor, Swiss Federal Institute of Technology, Switzerland. Transnational Cooperation in Europe: The Example of Integrated Spatial and Transport Development along the Hamburg-Athens Corridor.
- 3. Paulo Irineu Barreto Fernandes, Professor, Federal Institute Triângulo Mineiro (Campus Uberlândia, MG), Brazil. Geophilosophy: Is There a Geographical Primacy of Thought?

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

## Tuesday 7 June 2016

#### 09:30-11:00 Session VII (ROOM C-Mezzanine Floor): Practice

Chair: Anne Donnelly, Director, Center for Undergraduate Research, University of Florida, USA

- 1. <u>Jutnae Kim</u>, Professor, Dongguk University, South Korea, <u>Euy Soo Lee</u>, Professor, Dongguk University, South Korea, <u>Chee Sun Won</u>, Professor, Dongguk University, South Korea, Hae-Jong Joo, Professor, Dongguk University, South Korea & Byung-hoon Jeon, Professor, Dongguk University, South Korea. Boosting Industry-University Collaboration: Lessons from a Government-Supported Program.
- 2. <u>Dong Sik Jang</u>, Professor, Korea University, South Korea, <u>Kwang Ho Song</u>, Professor, Korea University, South Korea, <u>Ju Hyun Jeon</u>, Professor, Korea University, South Korea, <u>Bokyung Son</u>, Staff, Korea University, South Korea & <u>YuJin Kim</u>, Staff, Korea University, South Korea. Activities & Program of Innovation Center for Engineering Education, Korea University.
- 3. Il Geon Yoo, Professor, Hongik University, South Korea. Development of Business Feasibility Analysis Methods for Engineers and Engineering Education.
- 4. <u>Jiwon Hwang</u>, Research Professor, University of Seoul, South Korea, <u>Ohsung Song</u>, Professor, University of Seoul, South Korea & <u>Hakjin Kim</u>, Researcher, University of Seoul, South Korea. Correlation Analysis of the K-CESA Key Competencies and Course Grades for Engineering Students in University of Seoul.
- 5. <u>Diogo S. Dutra</u>, MSc Student, University of Sao Paulo, Brazil, Marcos R. P. Barretto, Professor, University of Sao Paulo, Brazil & José Reinaldo Silva, Professor, University of Sao Paulo, Brazil. Entrepreneur Education for Engineers A Case Study of Academic Working Capital Program.

#### 11:00-14:00 Educational and Cultural Urban Walk Around Modern and Ancient Athens (Details during registration)

#### 14:00-15:00 Lunch

#### 15:00-16:30 Session VIII (ROOM C- Mezzanine Floor): Methods

Chair: Moshe Barak, Professor, Ben-Gurion University of the Negev, Israel.

- 1. Dalene Gelderblom, Curro Holdings Ltd, South Africa & Alta Greeff, Curro Holdings Ltd, South Africa. Robotics as part of a 21st Century School Curriculum.
- 2. Woohyun Kim, Researcher, KISTI (Korea Institute of Science and Technology Information), South Korea. A Case Study of Online Simulation Education Utilizing th EDISON Platform.

#### 16:30-18:30 Session IX (ROOM B-Mezzanine Floor): Special Topics II

Chair: Serdjo Kos, Tenure Professor and Dean, Faculty of Maritime Studies, University of Rijeka, Croatia.

- 1. Moshe Barak, Professor, Ben-Gurion University of the Negev, Israel. Teaching Engineering in K-12 Education: The Role of Cognitive Knowledge and Problem-Solving Taxonomies.
- 2. <u>Melita Milenkovic</u>, Assistant Chair of Transport Law and Economics, University of Zagreb, Croatia & Goran Vojkovic, Assistant Professor, University of Zagreb, Croatia. The Supervisory Role of the Ministry of Finance in the Process of Awarding of Concessions in the Republic of Croatia.
- 3. <u>Chen-Yi Wu</u>, Ph.D. Candidate, National Taipei University, Taiwan, Chen-Jai Lee, Professor, National Taipei University, Taiwan & Bo-xiu Jian, Associate Professor, Shih Hsin University Department of Tourism, Taiwan. Creative Tourism and Big Variation of Community.
- 4. Seong-Woo Woo, Director and Principal Researcher, Korea Testing Co., South Korea. Reliability Design of Residential Sized Refrigerators Subjected to Repetitive Random Vibration Loads during Rail Transport.
- 5. \*Jesus J. Lara, Associate Professor, The Ohio State University, USA. The Urban Design Studio Pedagogic Approaches to Urban Sustainability: Problem-Based Solutions from the Classroom to the Community.

#### 21:00-22:30 Dinner (Details during registration)

Wednesday 8 June 2016 Cruise: (Details during registration)

Thursday 9 June 2016
Delphi Visit: (Details during registration)