



Athens Institute for Education and Research
A World Association of Academics & Researchers



6th Annual International Conference on Engineering, 24-27 June 2019, Athens, Greece

Organized by the [Engineering & Architecture Division](#)

Sponsored by the [Athens Journal of Technology & Engineering](#)

Monday 24 June 2019

Conference Venue: Titania Hotel, 52 Panepistimiou Avenue, Athens, Greece (close to metro station *Panepistimio*)

07:50-08:20 Registration and Refreshments

08:30-09:00 (Room A - 10th Floor): [Welcome and Opening Address](#) by Gregory T. Papanikos, President, ATINER.

09:00-10:30 Session I (Room C - 10th Floor): Manufacturing

Chair: Olga Gkounta, Researcher, ATINER.

1. Timothy Young, Professor, University of Tennessee, USA. Quantifying Interactions in Manufacturing using Regression Tree Models – A Useful Inductive Step for Planning a Designed Experiment.
2. [Glen Bright](#), Professor, University of KwaZulu-Natal, South Africa, Ganiyat Soliu, PhD Student, University of KwaZulu-Natal, South Africa & Chiemela Onunka, Mangosuthu University of Technology, South Africa. Performance Optimization on Waiting time using Queuing Theory in an Advanced Manufacturing Environment: Robotics to Enhance Productivity.

10:30-12:00 Session II (Room C - 10th Floor): Special Topics in Engineering

Chair: Theodore Trafalis, Director, Engineering & Architecture Division, ATINER, Professor of Industrial & Systems Engineering and Director, Optimization & Intelligent Systems Laboratory, The University of Oklahoma, USA.

1. Tsutomu Yoshida, Professor, Takushoku University, Japan. Measurement of Time-Varying Stress by Natural Frequency of Impact Sound.
2. Nader Zamani, Professor, University of Windsor, Canada. Two Case Studies Involving Connection Properties for FEA in Catia v5.

12:00-13:30 Session III (Room B - 10th Floor): Recent Issues in Transportation

Chair: Sanaul Chowdhury, Senior Lecturer, Griffith University, Australia.

1. [Akmal Abdelfatah](#), Professor, American University of Sharjah, UAE & Osama El-Sahly, Graduate Student, American University of Sharjah, UAE. Influence of Autonomous Vehicles on Freeway Traffic Performance for Undersaturated Traffic Conditions.
2. Kuo-Liang Lin, Professor and Department Head, I-Shou University, Taiwan. A Vision-Based Method for Determining Degradation Level of a Road Marking.
3. Marian Goellner, Research Fellow, PhD Student, Ostfalia University of Applied Sciences, Germany. Fusion Structure for Environment Perception and Model-Predictive Navigation of Autonomous Vehicles.
4. [Sarvani Sonduru Pantangi](#), Graduate Research Assistant, University at Buffalo, The State University of New York, USA, Md Tawfiq Sarwar, Assistant Professor, East West University, Bangladesh, Abhishek Bhargava, Data Scientist, Advisory Services, USA, Grigorios Fountas, Lecturer, Edinburgh Napier University, UK, Satish Mohan, Associate Professor, University at Buffalo, The State University of New York, USA & Panagiotis Ch. Anastasopoulos, Associate Professor, University at Buffalo, The State University of New York, USA. Public-Private Partnerships for Roadway Construction and Preservation, and Traffic Safety: An Exploratory Empirical Analysis of Crash Frequencies.

13:30-14:30 Lunch

14:30-16:00 Session IV (Room B - 10th Floor): Environmental Engineering

Chair: Timothy Young, Professor, University of Tennessee, USA.

1. Guojian He, Associate Professor, Tsinghua University, China, Hongwei Fang, Professor, Tsinghua University, China, Xu Han, PhD Student, Tsinghua University, China & Lei Huang, Assistant Research Fellow, Tsinghua University, China. The Impacts Analysis of Plant Shape and Spatial Distribution on the Flow Properties.
2. Lei Huang, Assistant Research Fellow, Tsinghua University, China & Hongwei Fang, Professor, Tsinghua University, China. Characteristics of Bacterial Community in the Surface Sediment of Three Gorges Reservoir.
3. Camilo Souto, PhD Candidate, Universidad de Concepción, Chile, Octavio Lagos, Associate Professor, Universidad de Concepción, Chile, Eduardo Holzapfel, Professor, Universidad de Concepción, Chile & Daniele Zaccaria, Specialist, University of California, Davis, USA. A Modified Surface Energy Balance to Soil Evaporation on Partially Wetted Orchards with Drip Irrigation Systems.
4. Marwan Batiha, Professor, Al-Hussein Bin Talal University, Jordan. Synthesis, Characterization and Properties of Bottom Ash Based Geopolymer from Medical Wastes Incineration.
5. Ziad Al-Ghazawi, Associate Professor, Jordan University of Science and Technology, Jordan, Khaldoun Bani-Hani, Professor, Jordan University of Science and Technology, Jordan & Rami Alawneh, Professor, Jordan University of Science and Technology, Jordan. Testing and Evaluation of the Use of Digital Image Analysis and Artificial Neural Networks in Monitoring Wastewater Quality.

21:00-23:00 Greek Night and Dinner

Tuesday 25 June 2019

08:30-12:00 Session V: An Educational Urban Walk in Modern and Ancient Athens

Group Discussion on Ancient and Modern Athens.

Visit to the Most Important Historical and Cultural Monuments of the City (be prepared to walk and talk as in the ancient peripatetic school of Aristotle)

Conference Venue: University of Athens (Kapodistriako), 48 Akadimias Street, Athens, Greece ([map](#), close to metro station *Panepistimio*)

12:30-14:00 Session VI (Room B): Sustainability, Resilience and Other Issues

Chair: Fouad Mohammad, Senior Lecturer, Nottingham Trent University, UK.

1. John Sansalone, Professor, University of Florida, USA. Permeable Pavement as Green and Low Impact Development Urban Infrastructure.
2. Norma Jean Mattei, Professor, University of New Orleans, USA. Barriers to Sustainable and Resilient Inland Waterway Infrastructure in the United States.
3. Onur Kuzgunkaya, Associate Professor, Concordia University, Canada, Navneet Vidyarthi, Associate Professor, Concordia University, Canada & Masoud Amel Monirian, PhD Student, Concordia University, Canada. Mixed-Integer Second-Order Cone Programming: An Application in the Design of Preventive Healthcare Facility Network.
4. Anna Mazzi, Assistant Professor, University of Padova, Italy & Beatrice Gatto, Master Student, University of Padova, Italy. Circular Economy Concept in Sustainable Building Design.

14:00-15:00 Lunch

15:00-16:00 Session VII (Room B): Special Topics: Design, Construction and Machine Learning

Chair: Yew-Chaye Loo, Professor Emeritus, Griffith University, Australia.

1. Hector Estrada, Professor, University of the Pacific, USA. Performance Based Design (PBD): A Renovating Seismic Design in Building Codes.
2. Fouad Mohammad, Senior Lecturer, Nottingham Trent University, UK & Michael Wright, Principal Structural Engineer, Arc Partnership, UK. Optimum Design of Cold-Formed Steel Mono-Pitch Portal Frames According to BS 5950.
3. Andreea Mihailescu, Research Scientist / Development Engineer, Lasers Department, National Institute for Lasers, Plasma and Radiation Physics / Politehnica University of Bucharest, Romania. Machine Learning for Intelligent Wireless Sensors Networks, Wearables and Autonomous Unmanned Systems.

16:00-17:00 Session VIII (Room B): Recent Developments in Construction

Chair: Hector Estrada, Professor, University of the Pacific, USA.

1. Fawzi Bouras, PhD Student, University of Orleans - LafargeHolcim, France, Nouffou Tapsoba, LafargeHolcim, France, Mylène Martin, LafargeHolcim, France, Serge Sabio, LafargeHolcim, France, Alain Jacquet, LafargeHolcim, France, Kevin Beck, University of Orleans, France, Naima Belayachi, University of Orleans, France, Marwen Bouasker, University of Orleans, France & Muzahim Al-Mukhtar, University of Orleans, France. Effect of Hydrated Lime and Cement on the Engineering Behavior of Highly Expansive Clay.
2. Zhuoya Wu, PhD Student, The University of Hong Kong (HKU), Hong Kong. High Strength Concrete Tests under Elevated Temperature.

20:30- 22:00 Dinner

**Wednesday 26 June 2019
Mycenae and Island of Poros Visit
Educational Island Tour**

**Thursday 27 June 2019
Delphi Visit**

**Friday 28 June 2019
Ancient Corinth and Cape Sounion**

All ATINER's conferences are organized by the [Academic Council](#). This conference has been organized with the assistance of the following academics, who contributed by a) setting up the program b) chairing the conference sessions, and/or c) reviewing the submitted abstracts and papers:

1. Gregory T. Papanikos, President, ATINER & Honorary Professor, University of Stirling, UK.
2. Dr. Panagiotis Petratos, Vice-President of Information Communications Technology, ATINER, Fellow, Institution of Engineering and Technology & Professor, Department of Computer Information Systems, California State University, Stanislaus, USA.

3. Nicholas N. Patricios, Vice President of Strategic Planning & Analysis, ATINER and Professor & Dean Emeritus, School of Architecture, University of Miami, USA.
4. Timothy Young, Director, Center for Business & Manufacturing Excellence (CBME), ATINER & Professor and Graduate Director, Center for Renewable Carbon, The University of Tennessee, USA.
5. Theodore Trafalis, Director, Engineering & Architecture Division, ATINER, Professor of Industrial & Systems Engineering and Director, Optimization & Intelligent Systems Laboratory, The University of Oklahoma, USA.
6. Dimitrios Goulias, Head, Civil Engineering Unit, ATINER and Associate Professor & Director of Undergraduate Studies Civil & Environmental Engineering Department, University of Maryland, USA.
7. Hector Estrada, Professor, University of the Pacific, USA.
8. Yew-Chaye Loo, Professor Emeritus, Griffith University, Australia.
9. Fouad Mohammad, Academic Member, ATINER & Senior Lecturer, Nottingham Trent University, UK.
10. Sanaul Chowdhury, Senior Lecturer, Griffith University, Australia.
11. Olga Gkounta, Researcher, ATINER.