



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



**7<sup>th</sup> Annual International Conference on Industrial, Systems and Design Engineering, 24-27 June 2019, Athens, Greece**

**Organized by the [Industrial Engineering Unit](#)**

**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 - 10<sup>th</sup> Floor): [Welcome and Opening Address](#) by Gregory T. Papanikos, President, ATINER.**

**09:00-10:30 Session I (Room C - 10<sup>th</sup> 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 - 10<sup>th</sup> 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 - 10<sup>th</sup> 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 - 10<sup>th</sup> 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.

**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. Theodore Trafalis, Director, Engineering & Architecture Division, ATINER, Professor of Industrial & Systems Engineering and Director, Optimization & Intelligent Systems Laboratory, The University of Oklahoma, USA.
3. Timothy Young, Director, Center for Business & Manufacturing Excellence (CBME), ATINER & Professor and Graduate Director, Center for Renewable Carbon, The University of Tennessee, USA.
4. Dimitrios Goulias, Head, Civil Engineering Unit, ATINER and Associate Professor & Director of Undergraduate Studies Civil & Environmental Engineering Department, University of Maryland, USA.
5. Yew-Chaye Loo, Professor Emeritus, Griffith University, Australia.
6. Fouad Mohammad, Academic Member, ATINER & Senior Lecturer, Nottingham Trent University, UK.
7. Sanaul Chowdhury, Senior Lecturer, Griffith University, Australia.
8. Olga Gkounta, Researcher, ATINER.