



**2<sup>nd</sup> Annual International Conference on Mechanical Engineering, 23-26 July 2018, Athens, Greece**

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

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

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

**Monday 23 July 2018**

**08:00-09:00 Registration and Refreshments**

**09:00-09:30 [Welcome and Opening Address](#) (Room A)**

**Gregory T. Papanikos, President, ATINER.**

**09:30-11:30 Session I (Room B): Computer: Network, Design and Applications**

**Chair:** Nikos Mourtos, Head, Mechanical Engineering Unit, ATINER & Professor, San Jose State University, USA.

1. Marcos Rodrigues, Professor, Sheffield Hallam University, UK. Improving Product Classification using Generative Recurrent Networks.
2. Panagiotis Artemiadis, Associate Professor, Arizona State University, USA. Dynamics, Modeling, Simulation and Control of Mid-flight Coupling of Quadrotors.
3. Huidan Yu, Associate Professor, Indiana University–Purdue University Indianapolis (IUPUI), USA. Image-based Engineering Assessment for Patient-specific Cardiovascular Diseases toward Precision Medicine.
4. [Mark Lin](#), Graduate Student, San Jose State University, USA & Periklis Papadopoulos, Professor, San Jose State University, USA. Application of Computer Aided Design Tools in CFD for Computational Geometry Preparation.

**11:30-13:00 Session II (Room A): Energy Production & Alternative Fuel**

**Chair:** Alexandre De Bernardinis, Research Scientist, IFSTTAR, France.

1. [Franz Haas](#), Professor and Head of Institute of Production Engineering, Graz University of Technology, Austria & Andres Suarez Gonzalez, Research Assistant, Graz University of Technology, Austria. Energy Consumption Factor (ECF) as a New Classification Figure to Compare Machining Processes.
2. [Ekin Kipcak](#), Research Assistant, Yildiz Technical University, Turkey & Mesut Akgun, Professor, Yildiz Technical University, Turkey. Supercritical Water Gasification of Isopropanol and Isobutanol: An Alternative Approach for Energy Production.
3. Ziad Khalifa, Assistant Professor, The British University in Egypt, Egypt. Biofuel Cells based on Glucose Electrooxidation at Conducting Polymer Modified Electrodes with Palladium and Platinum Nanoparticles.
4. [Ilker Ors](#), Teaching Staff, Selcuk University, Turkey, Murat Ciniviz, Teaching Staff, Selcuk University, Turkey, Ali Kahraman, Teaching Staff, Necmettin Erbakan University, Turkey & Bahar Sayin Kul, Lecturer, Selcuk University, Turkey. Using Biofuels in a CI Engine as Alternative Fuel.

**13:00-14:00 Lunch**

**14:00-16:00 Session III (Room A): Analysis, Materials and Characterizations**

**Chair:** Haiduke Sarafian, Professor, The Pennsylvania State University, USA.

1. Alexandre De Bernardinis, Research Scientist, IFSTTAR, France, Wiem Benatia, MSc Student, Toulouse Paul Sabatier University, France & Richard Lallemand, Research Engineer, IFSTTAR, France. Electro-Thermal Analysis for Lithium Carbon (LiC) Hybrid Supercapacitors.
2. Hongyan Zhang, Professor, The University of Toledo, USA & Jacek Senkara, Professor, Warsaw University of Technology, Poland. Joining Aluminum Sheets.
3. Francisco Delgado, Researcher and Professor, Tecnológico de Monterrey, Mexico. Assembling Large Entangled States in the Ingarden-Urbaniak Entropy Measure under the SU(2)-Dynamics Decomposition for Systems Built from two-Level Subsystems.
4. Viorel-Laurentiu Cartas, Assistant Professor, The Low Danube State University of Galati, Romania. The Viscoelastic Feature of the Spacetime.
5. Florian Nguyen, PhD Student, University of Lille, France, Jean-Philippe Laval, Researcher, CNRS, France, Bérengère Dubrulle, Research Director, CNRS, France & Pierre Kestener, Researcher, CEA, France. Local and Global Anisotropic Multifractal Analysis of Turbulent Flow.

**16:00-17:30 Session IV (Room B): Physics of Gravity, Plasma, and Oscillators**

**Chair:** Ionel Tifrea, Professor, California State University, Fullerton, USA.

1. Haiduke Sarafian, Professor, The Pennsylvania State University, USA. Two-Dimensional Nonlinear Oscillations in an Electrically Charged Rectangular Frame.
2. Liudmyla Kozak, Associate Professor, Taras Shevchenko National University of Kyiv, Ukraine, Bogdan Petrenko, Student, Taras Shevchenko National University of Kyiv, Ukraine, Elena Kronberg, Scientist, Max Planck Institute for Solar System Research, Germany, Andrew Prokhorenkov, PhD Student, Taras Shevchenko National University of Kyiv, Ukraine, Elena Grigorenko, Scientist, Space Research Institute, RAS, Russia & Antony Lui, Principal Professional Staff, Johns Hopkins University Applied Physics Laboratory, USA. Investigation of Turbulent Processes in Magnetosphere Plasma.
3. Piret Kuusk, Head of the Laboratory of Theoretical Physics, University of Tartu, Estonia. Theories of Gravity and Contemporary Observations.
4. Mazen Qaisi, Faculty Member, University of Jordan, Jordan. Power Series Solution to Strongly Nonlinear Oscillators.

**17:30-19:30 Session V (Room A): ATINER's 2018 Series of Academic Dialogues A Symposium on The Future Developments and Prospects of Engineering and Science Education & Research in a Global World**

**Chairs:** Ethel Petrou, Academic Member, ATINER & Professor and Chair, Department of Physics, Erie Community College-South, State University of New York, USA & Lampros Pyrgiotis, Chemical Engineer, Delegate of the Assembly Presidium, Technical Chamber of Greece.

1. Bala Maheswaran, Head, Electrical Engineering Unit, ATINER & Professor, Northeastern University, USA. Experiential and Interactive Learning on Innovation, Prototyping, and Entrepreneurship.
2. Nikos Mourtos, Head, Mechanical Engineering Unit, ATINER & Professor, San Jose State University, USA. Engineering & Science Education & Research in the 21st Century: Are We Dancing to the Music?
3. Marie Bukowski, Director of the School of Art, Kent State University, USA. Designing for the Future.
4. Dimitris Argyropoulos, Distinguished Professor, North Carolina State University & University of Helsinki, USA & Finland. The Dangers of Making Corporations out of Our Universities & the Apparent Rift between Faculty, Administrators and Funding Agencies.
5. Franz Haas, Professor and Head, Graz University of Technology, Austria. The Role of Additive Design and 3D-Printing for the next Product Generation.
6. Francisco Delgado, Professor, Tecnológico de Monterrey, Mexico. STEM Initiatives in Mexico for 2030: Challenges and Achievements.
7. Haiduke Sarafian, Professor, The Pennsylvania State University, USA. Implicit Challenges Facing Native Local Students to the Influx of Visiting Foreign Students in Engineering and Science.
8. Ellene Tratras Contis, Head, Chemistry Unit, ATINER & Professor of Chemistry, Eastern Michigan University, USA. STEM-it! Increasing Success Rates for Our Students.
9. Peter Yannopoulos, Vice President of Global Communications, ATINER, Co-editor, Athens Journal of Business and Economics & Professor, Brock University, Canada. Marketing a STEAM Program.

**21:00-23:00 Greek Night and Dinner**

## Tuesday 24 July 2018

### 07:45-11:00 Session VI: An Educational Urban Walk in Modern and Ancient Athens

**Chair:** Gregory A. Katsas, Vice President of Academic Affairs, ATINER & Associate Professor, The American College of Greece-Deree College, Greece.

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)

### 11:15-13:00 Session VII (Room A): STEAM: The Current Trend

**Chair:** Christine Condaris, Professor, Massachusetts College of Liberal Arts, USA.

1. Adrienne Coleman, Director of Equity and Inclusion, Illinois Mathematics and Science Academy, USA. Diversifying the STEM (Science, Technology, Engineering, Mathematics) Education to Career Pipeline.
2. Abe Zeid, Professor, Northeastern University, USA. Engineering-Based Learning: A New Methodology for High School Students STEM Learning.
3. Francis Stonier, Associate Professor, University of West Georgia, USA & Jill Drake, Professor and Department Chair, University of West Georgia, USA. Chinese Pre-Service Teachers STEAM Engagement through Legos.
4. Lorraine Howard, President, Women and Mathematics Education, Wilkes University, USA. Girls' Mathematics Identity: The Gateway to STEAM Success.
5. Gladys Ong, Graduate Student / Senior Education Officer, University College London / Ministry of Education, UK / Singapore. Exploring Authentic Assessment in the Learning of Mathematics.
6. Ronnie Bryan, Teacher, Sequoyah High School, USA. Math Foundations at Sequoyah High School.

### 13:00-14:00 Lunch

### 14:00-15:30 Session VIII (Room B): Special Topics

**Chair:** Marcos Rodrigues, Professor, Sheffield Hallam University, UK.

1. Scott Grenquist, Associate Professor, Wentworth Institute of Technology, USA. Ancient Dimensions and Units: Ancient Greek Unitary Systems and Their Evolution from Earlier Systems of Measurement.
2. Yung-Cheng Ma, Assistant Professor, Chang-Gung University, Taiwan. Power-Gated Processor Architecture for Dark Silicon.
3. Richard Wainwright, PhD Student, Sheffield Hallam University, UK & Alex Shenfield, Senior Lecturer, Sheffield Hallam University, UK. Human Activity Recognition on Smartphones Making Use of Long Short Term Memory Techniques.

### 20:00- 21:30 Dinner

**Wednesday 25 July 2018**  
**Mycenae and Island of Poros Visit**  
**Educational Island Tour**

**Thursday 26 July 2018**  
**Delphi Visit**

**Friday 27 July 2018**  
**Ancient Corinth and Cape Sounion**

All ATINER's conferences are small events which serve the mission of the association (<https://www.atiner.gr/mission>) under the guidance of its Academic Committee (<https://www.atiner.gr/academic-committee>) which sets the policies (<http://www.atiner.gr/acceptance>). In addition, each conference has its own academic committee. Members of the committee include all those who have evaluated the abstract-paper submissions and have chaired the sessions of the conference. The members of the academic committee of the 2<sup>nd</sup> Annual International Conference on Mechanical Engineering, 23-26 July 2018, Athens, Greece, were the following:

1. Gregory T. Papanikos, President, ATINER.
2. Nikos Mourtos, Head, Mechanical Engineering Unit, ATINER & Professor, San Jose State University, USA.
3. Bala Maheswaran, Head, Electrical Engineering Unit, ATINER & Professor, Northeastern University, USA.
4. Marcos Rodrigues, Professor, Sheffield Hallam University, UK.
5. Alexandre De Bernardinis, Research Scientist, IFSTTAR, France.
6. Ionel Tifrea, Professor, California State University, Fullerton, USA.
7. Ethel Petrou, Academic Member, ATINER & Professor and Chair, Department of Physics, Erie Community College-South, State University of New York, USA.
8. Haiduke Sarafian, Professor, The Pennsylvania State University, USA.
9. Christine Condaris, Professor, Massachusetts College of Liberal Arts, USA.
10. Lampros Pyrgiotis, Chemical Engineer, Delegate of the Assembly Presidium, Technical Chamber of Greece.

The Organizing Committee of the conference included the following:

1. Olga Gkounta, Researcher, ATINER.
2. Konstantinos Manolidis, Administrator, ATINER.
3. Kostas Spyropoulos, Administrator, ATINER.