

International Conference on Applied Sciences ICAS2019



Hunedoara, Romania, May 9-11, 2019

Organizers:



University Politehnica Timisoara

and



**University of Banja Luka
Republic of Srpska**

University of Banja Luka

in cooperation with

**Ministry for Scientific and Technological Development, Higher Education
and Information Society of the Republic of Srpska**

Academy of Romanian Scientists

Academy of Sciences and Arts of the Republic of Srpska

Academy of Technical Sciences of Romania - Timisoara Branch

General Association of Romanian Engineers - Hunedoara Branch

and

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International Conference on Applied Sciences ICAS2019 took place in Hunedoara, Romania, in the period May 9–11, 2019, at the Engineering Faculty of Hunedoara, with the aims to serve as a platform for exchange of information between various areas of applied sciences, and to promote the communication between the scientists of different nations, countries and continents.

The conference has been focused on several fields of application, operation and influence of the applied sciences and technologies on industry.

Topics of the conference covers a comprehensive spectrum of issues from:

- 1. Materials Science:** Metallic Materials, Composite Materials, Metal Alloys, Metallurgy, Heat Transfer, and others...
- 2. Mechanical Engineering:** Mechanics, Production Engineering, Constructions, Automotive and Traffic Engineering, Safety Engineering, Reliability, and others...
- 3. Mechatronics:** Robotic Systems Engineering, Control Engineering, and others...
- 4. Computers Engineering:** Modeling and Simulation, Computational Methods in Engineering, Software Engineering, Data Bases, and others...
- 5. Electrical Engineering:** Circuits and Systems, Signal Processing, Electric Motors, and others...
- 6. Fundamental Sciences:** Numerical approximation and analysis, Interdisciplinary applications of mathematics and physics, Chemistry, and others...

During the three days of the conference, 5 plenary speakers and 105 oral talks were delivered. Based on the works presented at the conference, 56 papers have been selected to be included in this volume of *Journal of Physics: Conference Series*.

Plenary speakers

Mohsen Razzaghi, Mississippi State University
Mircea Octavian Popoviciu, Academy of Romanian Scientists
Snežana Ćirić Kostić, University of Kragujevac
Branislav Borovac, University of Novi Sad
Ilca Ioan, Academy of Technical Sciences of Romania

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Plenary Speakers Session

Bordeasu Ilare, University Politehnica Timisoara
Golubovic Bugarski Valentina, University of Banja Luka

Materials Science Session

Ardelean Erika, University Politehnica Timisoara
Dobras Dragoslav, University of Banja Luka

Mechanical Engineering Session

Ratiu Sorin, University Politehnica Timisoara
Todic Mladen, University of Banja Luka

Mechatronics Session

Tirian Ovidiu, University Politehnica Timisoara
Latinovic Tihomir, University of Banja Luka

Electrical Engineering Session

Deaconu Sorin, University Politehnica Timisoara
Blanusa Branko, University of Banja Luka

Fundamental Sciences and IT Session

Panoiu Manuela, University Politehnica Timisoara
Vojvodic Biljana, University of Banja Luka

Video-conference Session

Muscalagiu Ionel, University Politehnica Timisoara
Knezevic Bojan, University of Banja Luka

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Tosic Gordana, University of Banja Luka

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We cordially thank the authors for their contributions and we express our gratitude to everyone who contributed to the success of our conference.

Ludovic Dan LEMLE

Editor of the Proceedings of ICAS2019