

# Preface

Dear Distinguished Delegates and Guests,

The Organizing Committee warmly welcomes our distinguished delegates and guests to the 5<sup>th</sup> edition of the IACSIT/SCIEI/UAstro International Conference on Aerospace, Robotics, Manufacturing Systems, Mechanical Engineering, Biomechatronics, Neurorehabilitation and Human Motility (ICMERA 2014), held on October 24-27, 2014, Bucharest, ROMANIA ([www.icmera.com](http://www.icmera.com)).

The IEEE/IACSIT/SCIEI ICMERA 2014 International Conference is organized by the departments of University POLITEHNICA of Bucharest (Aerospace, Machines and Manufacturing Systems, Mechanical Engineering, Mechanisms and Robotics departments), Romania, under the higher tutelage of the Romanian Academy of Technical Sciences- Mechanical Branch in cooperation with: Academy of Scientists from Romania, University Medicine and Pharmacy of Bucharest, Elias University Emergency Hospital of Bucharest, "Henri Coanda" Air Force Academy, Pro Optica Romanian Society, INCDMTM, Land Forces Academy, Military Equipment and Technologies Research Agency and Solid Mechanics Institute of the Romanian Academy.

The conference will be sustained by International Association of Computer Science and Information Technology of Singapore (IACSIT), Science and Engineer Institute of USA (SCIEI), by International University Association for Science and Technology of Romania (UAstro) and Science, Human Excellency and University Sports Society (SSEUSU) .

The main objective of the conference is to bring together leading researchers, engineers and scientists in the fields of interest from Romania and from around the world in order to: provide a platform for researchers, engineers, academicians as well as industrial professionals to present their latest experiences and developments activities in the field of Smart Systems and their Applications in Aerospace, Robotics, Mechanical Engineering, Manufacturing Systems, Biomechatronics, Neurorehabilitation and Human Motility; provide opportunities for attendees to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

The conference has solicited and gathered technical research submissions related to all aspects of major conference themes and tracks. All the submitted papers in the proceeding have been peer reviewed by the reviewers drawn from the scientific committee, external reviewers and editorial board, depending on the subject matter of the paper.

The Proceedings contents the invited papers from around the world recognition specialists in this field and the following sessions: Optimal Design, Modeling and Simulation; Research of the Materials; Combustion, Flow Dynamics, Turbopower; Monitoring, Controlling and Architecture of the Cyber Physical Systems; Maintenance and Management; Prediction, Security and Vulnerability; Human Motility Research.

We are grateful to all those who have contributed to the success of the last edition of IACSIT/SCIEI/UASTRO ICMERA 2013 International Conference.

We hope that all participants and other interested readers benefit scientifically from the Proceedings and also find it stimulating in the process. Finally, I believe in a complete success of the 5<sup>th</sup> edition of the conference.

**IN GOD WE TRUST!**

With best regards,  
CHAIRMAN  
ICMERA 2014 International Conference  
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