

## Preface

Dear Distinguished Delegates and Guests,

The Organizing Committee warmly welcomes our distinguished delegates and guests to the 11<sup>th</sup> edition of the IACSIT/IACT/UASTRO International Conference on Aerospace, Robotics, Manufacturing Systems, Mechanical Engineering, Biomechatronics and Neurorehabilitation (OPTIROB 2016), held on June 29 – July 2, 2016, Jupiter, Constanta, ROMANIA ([www.optirob.com](http://www.optirob.com)).

The IACSIT/IACT/UASTRO OPTIROB 2016 International Conference is organized by the departments of University POLITEHNICA of Bucharest (departments of Aerospace, Machines and Manufacturing Systems, Mechanical Engineering, Robotics and Mechatronics), 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 and Military Equipment and Technologies Research Agency and will be held together with the IACSIT conferences International Conference on Renewable Energy and Conversion ICREB 2016 [www.icreb.org](http://www.icreb.org) , International Conference on Civil and Building Materials, ICAEM 2016 [www.icaem.org](http://www.icaem.org).

The conference will be sustained by International Association of Computer Science and Information Technology of Singapore (IACSIT), by International Academy of Computer Technology of USA (IACT) and by International University Association for Science and Technology of Romania (UASTRO).

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 and Neurorehabilitation; 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: Science and Technology of Materials, Modeling, Simulation and Optimization, Renew and Unconventional Energy, Advanced Research of the Sensors, Mechatronics and Automation Systems, Advanced Research of Aerospace and Astronautics Systems, Advanced Research in Robotics, Machines Tools and Manufacturing Systems, Advanced research in Maintenance and Management of the Systems, Bioengineering.

On behalf of International organization UASTRO, I would like to thank to all the Conference Chairs, Program Chairs and the technical Committees for his efforts and for their professional advices enable us to prepare the high-quality program. We hope all of you have a wonderful time at the conferences and also in beautiful location Jupiter, Constanta, Romania.

We believe that by these excellent conferences, you can get more opportunity for further communication with researchers and practitioners with the common interest in Aerospace, Robotics, Manufacturing Systems, Mechanical Engineering, Biomechanics and Neurorehabilitation.

We are grateful to all those who have contributed to the success of the last edition of IACSIT/SCIEI/UASTRO OPTIROB 2015 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 11<sup>th</sup> edition of the conference.

In order to hold more professional and significant international conferences, your suggestions are warmly welcomed.

We look forward to meeting you again next time.

**IN GOD WE TRUST!**

With best regards,  
CHAIRMAN

OPTIROB 2016 International Conference  
Prof.univ.Ph.D.Eng.Adrian OLARU  
University POLITEHNICA of Bucharest Romania  
Fellow member of IACSIT, Singapore  
Fellow member of SCIEI, USA  
Member of American Nano Society, USA  
Member of IEEE Automation and Robotics Society, USA