

Preface

Dear Distinguished Delegates and Guests,

The Organizing Committee warmly welcomes our distinguished delegates and guests to the 10th edition of the IACSIT/IACT/UASTRO International Conference on Aerospace, Robotics, Manufacturing Systems, Mechanical Engineering and Bioengineering (OPTIROB, ICAEM, ICREB 2015), held on June 27-30, 2015, Jupiter, ROMANIA (www.optirob.com , www.icaem.org, www.icreb.org).

The IACSIT/IACT/UASTRO International Conferences are 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), International Academy of Computer Technology of USA (IACT), 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 Robotics, Aerospace, Mechanical Engineering, Manufacturing Systems-and Bioengineering;
- 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 papers were submitted on-line in the TTP site www.scientific.net and were reviewed also on-line. The percentage of the accepted papers was 60%.

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 the field, and the following sessions: Materials Research and Application; Design, Modeling and Simulation; Manufacturing Systems and Tools; Sensors and Mechanical Engineering; Aerospace Engineering Research; Robotics; Power and Energy Engineering; Bioengineering Research.

We are grateful to all those who have contributed to the success of the last edition of IACSIT/IACT/UAstro OPTIROB 2014 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 10th edition of the conference.

IN GOD WE TRUST!

With best regards,

CHAIRMAN

OPTIROB 2015 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

Committee

Honorary Chairs:

IEEE Fellow, Prof.univ.Wang Jun, The Chinese University of Hong Kong, Hong Kong
Prof.univ.Shigeki Toyama, Tokyo University of A&T, Tokyo, Japan
Prof.univ.Cai Wen, Extenincs creator, Gungzhou, P.R.of China
Prof.univ.George Darie, Rector of University Politehnica of Bucharest, Romania
Prof.univ.Thierry Keller, Technalia University, Spain
Prof.univ.Valeriu Jinescu, President of the Mechanical Branch of the Romanian Academy of Technical Sciences
Prof.univ.Aurel Oprean, Vicepresident of the Mechanical Branch of the Romanian Academy of Technical Sciences

Conference co-Chairs:

Prof.univ.Saafa S.Mahmoud, HOD, Ain Shams University, Cairo, Egipt
Prof.univ.Mikulas Hajduk, HOD, Technical University of Kosice, Slovakia
Prof.univ.Yang Chunyan, Director of Extenics Research Institute, Guangzhou,P.R.of China
Prof.univ.Mihai Avram, Dean, University Politehnica of Bucharest, Romania
Prof.univ.Tiberiu Dobrescu, HOD, University Politehnica of Bucharest, Romania
Prof.univ.Adrian Olaru, University Politehnica of Bucharest, Romania
Prof.univ.Adrian-Mihail Stoica, HOD, University Politehnica of Bucharest, Romania
Prof.univ.Gherghe Gheorghe, General Manager INCDMTM
Assoc.prof.univ.Afsin Banazadeh, Sharif University, Tehran, Iran
Prof.univ.Li Weihua, HOD, University of Technology, Guangzhou, P.R.of China
Prof.univ.Liviu Cosoreanu, General Manager of Military Equipment and Tech.Research Academy
Prof.univ.Mihai Berteanu, HOD, Medicine University Carol Davila, Bucharest,Romania
Prof.univ.Catalin Spulber, Academy of Romanian Scientists
Prof.univ.Luige Vladareanu, HOD, Institut of Solid Mechanics, Romanian Academy
Prof.univ.Vintr Zdenek, Dean of the Military Defence Faculty, Brno, Czech Republic
Prof.univ.Mircea Boscoianu, HOD, "Henry Coanda" Air Force Academy
Prof.univ.Ioan Lador, President of the SSEUSU association, Romania
Prof.univ.Tadeusz Mikolajczik, Technical University of Bydgosz, Poland
Prof.univ.Stefan Staicu, University Politehnica of Bucharest, Romania
Prof.univ.Mehram Mirshams, HOD, K.N.Toosi University, Tehran, Iran
Prof.univ.Ghita Barsan, Rector of "Nicolae Balcescu" Military Land Forces Academy
Prof.univ.Marian Tolnay, HOD, Technical University from Bratislava, Slovakia

Sessions co- chairs:

Prof.univ.Jerzy Zajac, Technical University of Cracovia, Poland
Prof.univ.Ionel Staretu, University Transilvania of Brasov, Romania
Assoc.Prof.univ.Radomil Matousek, HOD, Technical University of Birno, Czech R.
Prof.univ.Constantin Nitu, HOD, University Politehnica of Bucharest, Romania
Prof.univ.Vistrian Maties, Technical University of Cluj, Romania
Prof.univ.Ramesh Choudhary, Director APIIT, India
Prof.univ.Luciana Cristea, Technical University of Brasov, Romania
Prof.univ.Valer Dolga, University Politehnica of Timisoara, Romania
Prof.univ.Laurean Bogdan, University "Lucian Blaga" of Sibiu, Romania
Prof.univ.Ghita Barsan, "Nicolae Balcescu" Land Forces Academy of Sibiu
Prof.univ.Ioan Barsan, University "Lucian Blaga" of Sibiu, Romania

Prof.univ.Andrei Tudor, University Politehnica of Bucharest, Romania
Prof.univ.Mihaela Baritz, University Transilvania of Brasov, Romania

Publishing chair:

Dr.Yi Xie, IACSIT Singapore
Dr.Sony Sue, IACT, USA

Technical Committee:

Prof.univ.Alexandru Catalin, Technical University of Brasov, Romania
Assoc.prof.univ.Afsin Banazadeh, Shariff University of Tehran, Iran
Prof.univ.Frumusanu Gabriel, Technical University of Galati, Romania
Prof.univ.Adrian Mihai Stoica, University Politehnica of Bucharest, Romania
Assoc.prof.univ.Sorin Croitoru, University Politehnica of Bucharest, Romania
Prof.univ.Cristina Mohora, University Politehnica of Bucharest, Romania
Prof.univ.Constantin Dogariu, University Politehnica of Bucharest, Romania
Prof.univ.Hamid Taghirad, KNTToosi University of Tehran, Iran
Prof.univ.Mircea Boscoianu, Air Force Academy, Brasov, Romania
Assoc.prof.univ.Liviu Ciupitu, University Politehnica of Bucharest, Romania
Assoc.prof.univ.Doru Bardac, University Politehnica of Bucharest, Romania
Prof.univ.Dan Prodan, University Politehnica of Bucharest, Romania
Prof.univ.Ali Moosavian, KNTToosi University of Tehran, Iran
Assoc.prof.univ.Anca Bucuresteanu, University Politehnica of Bucharest, Romania
Prof.univ.Lazarov Andon, Technical University of Sofia, Bulgaria
Prof.univ.Munteanu Florin, INCAS Bucharest, Romania
Prof.univ.Baritz Mihaela, Technical University of Brasov, Romania
Prof.univ.Dorina Purcaru, Technical University of Craiova, Romania
Prof.univ.Berteanu Mihai, Medicine and Pharmacie University of Bucharest, Romania
Prof.univ.Bogdan Laurean, Technical University of Sibiu, Romania
Prof.univ. Krishna Murari Pandey, Technical University of N.I.T Silchar of Assam, India
Prof.univ.Octav Dontu, University Politehnica of Bucharest, Romania
Assoc.prof.univ.Cotet Costel, University Politehnica of Bucharest, Romania
Prof.univ.Tadeusz Mikolaszcik, Bydgosz Technical University, Poland
Prof.univ.Spulber Catalin, ProOptica Society, Romania
Prof.univ.Staretu Ionel, Technical University of Brasov, Romania
Prof.univ.Luige Vladareanu, Romanian Academy Solid Mechanics Institute, Bucharest, Romania
Prof.univ.Adrian Olaru, University Politehnica of Bucharest, Romania

Sponsors

