



P R E F A C E

Dear Distinguished Delegates and Guests,

The Organizing Committee warmly welcomes our distinguished delegates and guests to the 7th edition of the IEEE/IACSIT International Conference on Optimization of the Mechanical Engineering, Manufacturing Systems, Robotics and Aerospace (OPTIROB 2012), held on June 21-23, 2012 in Flora Hotel, Mamaia, ROMANIA (www.wix.com/olaruadrian/optirob2012).

The IEEE/IACSIT OPTIROB 2012 International Conference is organized by University POLITEHNICA of Bucharest in collaboration with University ELIAS Urgency Hospital, Medicine and Pharmacy University Carol Davila, Institute of Solid Mechanics of Romanian Academy, Pro Optica SA Bucharest, Romanian Academy of Scientists, INCDMTM Bucharest, Henri Coanda Air Force Academy, Military Equipment and Technologies Research Agency and University Association for Science and Technology of Romania under the higher tutelage of the Romanian Academy of Technical Sciences- Section II- Mechanical Branch and sponsored by International Association of Computer Science and Information Technology (IACSIT) of Singapore.

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: Mechanical Engineering, Manufacturing Systems, Robotics, Medical and Military field; 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 following sessions: Invited papers, Mechanical Engineering, Manufacturing Systems, Robotics and Aerospace.

We are grateful to all those who have contributed to the success of the 7th edition of IEEE/IACSIT OPTIROB 2012 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 7th edition of the conference.

IN GOD WE TRUST!
GOOD LUCK!

With best regards,
CHAIRMAN OPTIROB 2012 International Conference
Prof.univ.Ph.D.Eng.Adrian Olaru

University POLITEHNICA of Bucharest, Romania
Senior member of International Association of Computer Science and
Information Technology (IACSIT), Singapore
Senior member of Mechanical Engineering Society (MES), Singapore
Senior member of Automation and Robotics Society (ARS), Singapore
Member of American Nano Society (ANS), USA
Member of Romanian Robotics Society (RRS), Romania
President of University Association for Science and Technology (UASTRO)
of Romania

Technical Committee

Anania	Dorel	dorel.anania@yahoo.com
Antonescu	Ovidiu	oval33@hotmail.com
Antonescu	Paun	panton38@hotmail.com
Baritz	Mihaela	mbaritz@unitbv.ro
Barsan	Ioan	ioan.barsan@ulbsibiu.ro
Barsan	Ghita	ghbarsan@gmail.com
Bisu	Claudiu	bisu_claudiu_florinel@hotmail.com
Bogdan	Laurean	laurean.bogdan@ulbsibiu.ro
Ciupitu	Liviu	liviuc_2001@yahoo.com
Corneliu	Arsene	arsenecorneliu@yahoo.co.uk
Cotet	Costel	costelemilcotet@gmail.com
Cristescu	Corneliu	corneliu_cristescu@yahoo.com
Croitoru	Sorin	sorin.croitoru@gmail.com
Daneshmehar	Alireza R.	daneshmehar@ut.ac.ir
Dogariu	Constantin	cdogariu@gmail.com
Dontu	Octav	octavdontu@yahoo.com
Frumusanu	Gabriel	gabriel.frumusanu@ugal.ro
Gattringer	Hubert	hubert.gattringer@jku.at
Ghariblu	Hashem	ghariblu@znu.ac.ir
Hajduk	Mikulas	mikulas.hajduk@tuke.sk
Lazarov	Andon	lazarov@bfu.bg
Lolu	Irina	lolu_irina@yahoo.com
Luciana	Cristea	lcristea@unitbv.ro
Lutfi	Mutlu	lutfi@live.com
Mikolajczyk	Tadeusz	tami@atr.bydgoszcz.pl
Mirshams	Mehram	mirshams@kntu.ac.ir
Mirzaei	Masoud	mirzaei@yahoo.com
Mohora	Cristina	cristinamohora@yahoo.com
Olaru	Adrian	aolaru_51@yahoo.com
Petrova	Radostina	rpetrova123@abv.bg
Pondilov	Zoran	panzo@ereb.mf.ukim.edu.mk
Prodan	Dan	prodand2004@yahoo.com
Pupaza	Cristina	cristinapupaza@yahoo.co.uk
Rizescu	Ciprian	ciprianrizescu2001@yahoo.com
Sacala	Ioan	sacalaioan@yahoo.com
Spulber	Cătălin	catalin.spulber@yahoo.com
Staicu	Stefan	staicunstefan@yahoo.com
Staretu	Ionel	istaretu@yahoo.com
Stoica	Adrian	amstoica@rdslink.ro
Suciu	Mihaela	mihaelaica2007@yahoo.fr
Tolnay	Marian	marian.tolnay@stuba.sk
Tomoiaga	Tiberius	tiberius.tomoiaga@acttm.ro
Toyama	Shigeki	toyama@cc.tuat.ac.jp
Vladareanu	Luige	luigiv2007@yahoo.com.sg
Zapciu	Miron	miron.zapciu@upb.ro