

# S C H E D U L E

of the 8<sup>th</sup> edition of the International Conference on  
Optimization of the Smart Systems and their Application in  
Aerospace, Robotics, Mechanical Engineering, Manufacturing Systems, Biomechanics and Neurorheabilitation  
**OPTIROB 2013, 20-23 June 2013**  
**President Hotel, Mangalia, Romania**

<b>Time table</b>	<b>Action</b>	<b>Place</b>
<b>20.06.2013</b>		
13:00-14:00	<b>Registration of participants</b>	<b>International Room of the Conference Hotel</b>
16:00-17:00	<b>Registration of participants</b>	<b>International Room of the Conference Hotel</b>
17:00-19:00	<b>Free program-visit Mangalia</b>	<b>Mangalia Town</b>
<b>19:30- 22:00</b>	<b>Dinner</b>	<b>Restaurant</b>
<b>21.06.2013</b>		
<b>9:00-10:00</b>	<b>Registration of participants</b>	<b>International Room of the Conference Hotel (4<sup>th</sup> floor)</b>
10:00-12:00	<b>Opening Ceremony Introducing the companies, organizations and participants Presentation of the invited papers and regular papers</b>	<b>International Room of the Conference Hotel (4<sup>th</sup> floor)</b>
<b>12:00-12:30</b>	<b>Coffee break</b>	<b>4<sup>th</sup> floor</b>
12:30-14:00	<b>Presentation of the invited papers and regular papers</b>	<b>Parallel sessions International Room 1 (4<sup>th</sup> floor) and 2 (1<sup>st</sup> floor) of the Conference Hotel</b>
<b>14:00-16:00</b>	<b>Taking Photos &amp; Lunch</b>	<b>Restaurant</b>
16:00-17:30	<b>Presentation of the invited papers and regular papers</b>	<b>Parallel sessions International Room 1 (4<sup>th</sup> floor) and 2 (1<sup>st</sup> floor) of the Conference Hotel</b>
<b>17:30-18:00</b>	<b>Coffee break</b>	<b>4<sup>th</sup> floor</b>
18:00-19:30	<b>Presentation regular papers</b>	<b>Parallel sessions International Room 1 (4<sup>th</sup> floor) and 2 (1<sup>st</sup> floor) of the Conference Hotel</b>
<b>20:00-22:00</b>	<b>Festive dinner</b>	<b>Restaurant</b>
<b>22.06.2013</b>		
10:00-12:00	<b>Closing remarks, awarded the best session's papers and UASTRO certificate members</b>	<b>International Room 1 of the Conference Hotel (4<sup>th</sup> floor)</b>
<b>12:00-12:30</b>	<b>Coffee break</b>	<b>4<sup>th</sup> floor</b>
<b>13:00-15:00</b>	<b>Lunch</b>	<b>Restaurant</b>
<b>16:00-20:00</b>	<b>Social program</b>	<b>Mangalia/Constanta</b>
<b>20:00-22:00</b>	<b>Dinner</b>	<b>Restaurant</b>
<b>23.06.2013</b>		
10:00-12:00	<b>Lunch and Prepare return to Bucharest</b>	<b>Hotel Lobby</b>

**All participants must do registration to get their conference documents and invoices  
in the front of the International Room 1 (4<sup>th</sup> floor)**

# SCHEDULE

**International Conference on**  
*Optimization of the Smart Systems and their application in*  
**Aerospace, Robotics, Mechanical Engineering, Manufacturing**  
**Systems, Biomechanics and Neurorehabilitation**

## OPTIROB 2013

**Organized by University Politehnica of Bucharest, Romania**  
**under the higher tutelage of the Romanian Academy of Technical Sciences,**  
**International Association of Computer Sciences and Information Technology IACSIT Singapore,**  
**Science and Engineering Institute USA and**  
**International University Association of Science and Technology from Romania**

**In cooperation with:**

**Military Equipment and Technologies Research Agency**  
**Henry Coanda Air Force Academy**  
**Nicolae Balcescu Land Forces Academy**  
**National Institute of Developing and Research in Mecatronix and Measurements**  
**Pro Optica Society**  
**University Elias Emergency Hospital**  
**Medicine and Pharmacy University**  
**Solids Mechanics Institute of the Romanian Academy**

**President Hotel, Mangalia, Romania**  
**20-23 June, 2013**

**After noon, June 20, 2013 (Thursday)**

**Hotel (Lobby)**

<b>13:00-14:00</b>	<b>Arrival, Registration</b>
<b>16:00-17:00</b>	<b>Registration</b>
17:00-20:00	Free program-Visiting Mangalia town
<b>19:30-22:00</b>	<b>Dinner</b>

**Morning, June 21, 2013 (Friday)**

**Hotel (International Conference Room 1, 4<sup>th</sup> floor)**

<b>9:00-10:00</b>	<b>Registration</b>
10:00-10:15	Opening Remarks
10:15-10:35	Presentation of the National Organizations
10:35-11:00	SC BFD CNC Technologies SRL- CNC Machines Tools- <i>Doru Bardac</i>
11:00-12:00	Plenary speech 1 Coil Type Ultrasonic Motor for Vascular Endoscope- <i>S. Toyama</i>
	Plenary speech 2 Microbial adhesion to surfaces and beyond- <i>J.Y.Leveau</i>
	Plenary speech 3 Robust Estimation for Optimal Guidance Laws- <i>A.M. Stoica</i>
	Plenary speech 4 Frequency Response Analysis for Dynamic Model Identification and Control of a Ducted Fan Aerial Vehicle in Hover- <i>A. Banazadeh</i>
<b>12:00-12:30</b>	<b>Coffee Break</b>
	<b>Hotel (International Conference room 1) parallel sessions</b>
12:30-14:00	Plenary speech 5 Reentry Design Solution for a Hypersonic Small Capsule- <i>R.D. Rugescu</i>
	Plenary speech 6 Aspects Regarding Software Simulation of a Quadcopter Dynamics- <i>L. Coşereanu</i>
	Plenary speech 7 Extension Hybrid Force-Position Robot Control in Higher Dimensions- <i>L. Vladareanu</i>
	Plenary speech 8 Robotics for Neurorehabilitation- <i>M. Berteanu</i>
	Educational Model for the Cinematic Study of Non-Circular Gears- <i>L. Ciupitu</i>
	Expert System for Coupling Selection- <i>E.V. Butila, A.N. Panfir and G. Mogan</i>
	Researches Regarding Modal Analysis of a Pressure Wave Supercharger Rotor- <i>C.G. Atanasiu and D.E. Buzea</i>
14:00-16:00	On the Choice of Shape Functions of Unsymmetrical Elastic Rotors- <i>H. Parzer, H. Gattringer and S. Hubinger</i>
	Passivity Based Control of a Cart with Inverted Pendulum- <i>M. Jörgl, K. Schlacher and H. Gattringer</i>
	On Mechanical Amplification of the Piezoelectric Actuators Displacements- <i>A.L. Cartal, M. Avram, C. Bucşan, T.C. Apostolescu and V. Gheorghe</i>
	<b>Taking Photos &amp; Lunch Break</b>

**Afternoon, June 21, 2013 (Friday)**

**Hotel (International Conference Room 1) parallel sessions**

16:00-17:30	Hydrodynamic Studies on Spherical Valve- <i>I. Florescu, D. Florescu and D. Nedelcu</i> Multi-Objective Genetic Algorithm for Hover Stabilization of an Insect-Like Flapping Wing- <i>H. Khodabakhsh and A. Banazadeh</i> Frequency Response Analysis for Dynamic Model Identification and Control of a Ducted Fan Aerial Vehicle in Hover- <i>M. Effati and A. Banazadeh</i> Experimental Investigations and Numerical Simulations of the Viscous Flow around T-Profiles- <i>M. Schiaua, A. Dragomirescu and C.A. Safta</i> On a New Model Reduction Method for CFD Systems Used for Flow Control Design- <i>A.M. Stoica and M. Stoia-Djeska</i> Design Methodology and Preliminary Sizing of an Unmanned Mars Exploration Plane (UMEP)- <i>M. Behroo, A. Banazadeh and A.R. Golkhandan</i> Control of Vertical Flows Past Open Cavities- <i>M. Stoia-Djeska, C.A. Safta and A. Cotuna</i>
<b>17:30-18:00</b>	<b>Coffee Break</b>
	<b>Hotel (International Conference Room 1) parallel sessions</b>
18:00-19:30	Robust Stability Analysis in the Presence of Time-Varying Uncertainties and Time Delay- <i>V. Pana and A.M. Stoica</i> A Fault Tolerant SINS/GPS/CNS Integrated Navigation Scheme Realized through Federated Kalman Filter- <i>M. Ushaq, F.J. Cheng and J. Ali</i> How to Synchronize and Register an Optical-Inertial Tracking System- <i>A. Soroush, M. Akbar and F. Farahmand</i> Calculus and Implementation of a TRTR Industrial Robot Servicing a Flexible Manufacturing Cell Destined for the AAV Building Industry- <i>S.M. Petrişor and G. Bârsan</i>

	<p>Research of the influence of progressive plantar supporters on the stability in biped position- <i>B.C. Braun, I.C. Rosca and M.I. Baritz</i></p> <p>Adaptronics - an Intelligent Science Adaptive to Advanced Systems/Micro-Nanosystems- <i>G.I.Gheorghe, V. Bratu and O. Dontu</i></p> <p>Evaluate the Electromagnetic Radiation Effects on the Facial Tissue- <i>L. Ungureanu, L. Cristea, M.I. Baritz, D. Cazangiu and D. Buzea</i></p> <p>Design and Simulation of a Single DOF Human-Like Leg Mechanism- <i>I.D. Geonea, C. Alexandru, A. Margine and A. Ungureanu</i></p> <p>Study on a Gripping Biomechanism Represented by the Human Dento-Maxillary Apparatus- <i>M. Ciortan, L. Luca and A. Stancioiu</i></p> <p>Tribological Analysis and Optimization of Polymer Prosthetic Components as Drug Delivery Systems- <i>M. Stamate Cretan and C. Stamate</i></p>
<b>20:00-22:00</b>	<b>Festive Dinner</b>

**Morning, June 21, 2013 (Friday)**

**Hotel (International Conference Room 2) parallel sessions**

12:30-14:00	<p>Plenary speech 9</p> <p>Automatic Manipulation of Parts Made from Yielding Material- <i>J. Slamka, M. Jedinák, M. Tolnay, M. Bachratý and O. Staš</i></p> <p>Plenary speech 10</p> <p>Optimisation of Single Edge Tools Exploitation Process- <i>T. Mikolajczyk and L. Romanowski</i></p> <p>Plenary speech 11</p> <p>Dimensional Compensation in Stern Tube Bushes Machining- <i>G.R. Frumusanu and A. Epureanu</i></p> <p>Plenary speech 12</p> <p>Assisted Research of the Robots Kinematics and Dynamics Behavior with LabVIEW Instrumentation- <i>A. Olaru and S. Olaru</i></p> <p>Design of the User Interface for a Robotic Spray Pyrolysis System to Deposit Thin Films- <i>M.L. Enescu, C. Alexandru and M. Enescu</i></p> <p>Determining the Shape and Volume of the Work Space for the Robot with Parallel Structure Delta 3DOF Using the Monte Carlo Method- <i>D. Andrioaia, G. Stan, M. Pascu and L. Mihăilă</i></p> <p>NAO Robots Collaboration for Object Manipulation- <i>A.N. Panfir, R.G. Boboc and G. Mogan</i></p> <p>Determining the Driving Torques of the Robots with Delta 3DOF Parallel Structure by Using the MSC ADAMS Software Pack- <i>D. Andrioaia, D. Rotar and G. Puiu</i></p> <p>Software Modules for Command and Control of the Anthropomorphic Gripper for Robots- <i>I. Staretu, A. Itu and C.C. Moldovan</i></p> <p>Fuzzy Multiobjective Optimization Used in Tolerance Synthesis of Mechanisms- <i>D. Duminiță, I. Dutu, M. Avram and V. Gheorghe</i></p> <p>Control System Design for a Mechatronic Solar Tracker- <i>M.A. Ionitã and C. Alexandru</i></p> <p>Videoptical Surface Shape and Integrity Estimation in Robots Machining- <i>T. Mikolajczyk</i></p>
<b>14:00-16:00</b>	<b>Taking Photos &amp; Lunch Break</b>
	<b>Hotel (International Conference Room 2) parallel sessions</b>
16:00-17:30	<p>Multi-Criteria Kinematic Optimization of a Front Multi-Link Suspension Mechanism Using DOE Screening and Regression Model- <i>V. Țoțu and C. Alexandru</i></p> <p>Vibration Behavior Analysis of Wire Rope Isolators Under Traction and Compression Load- <i>D. Buzea, A. Iacob, C. Soimaru and L. Ungureanu</i></p> <p>About the Mechanical Characteristics Determination for Desmopan Membrane by Digital Image Correlation Method- <i>L. Suci, A. Botean, M. Suci and V. Ros</i></p>
<b>17:30-18:00</b>	<b>Coffee Break</b>
	<b>Hotel (International Conference Room 2) parallel sessions</b>
18:00-19:30	<p>Probe-Radius Compensation of the Bevel Gears Tooth Surface Using 3D Measured Points- <i>E. Faluvegi and L. Cristea</i></p> <p>Mathematical Model for the Calculation of Linear Speed for a Water Jet Cutting Machine- <i>S. Ferent-Pipas, B. Padurean and C. Ciupan</i></p> <p>Raw Material Stock Analysis in a Supply Chain- <i>E. Campean, L. Morar, L. Blaga, S. Pap and C. Gelmereanu</i></p> <p>Improving the Accuracy of Parts Manufactured by Single Point Incremental Forming- <i>C. Radu, I. Cristea, E. Herghelegiu and S. Tabacu</i></p> <p>Contribution to Mathematical Modelling of Oil Field Data- <i>D. Valis, L. Zak, J. Glos and A. Walek</i></p> <p>Research on the Influence of Progressive Plantar Supporters on the Stability in Virtual Effort: An Advanced User Interface that Combines Various Visual Information with a Kinetic System for Virtual Object Manipulations- <i>C.C. Moldovan and I. Staretu</i></p> <p>Methodology for the Identification of Needles Trajectories in Robotic Brachytherapy Procedure Using VR Technology- <i>S. Butnariu and F. Girbacia</i></p> <p>Analysis of Stability Asymmetries and of Gait Cycle Used to Determine the Recovery Degree for Subjects with Traumatic Locomotion Disorder- <i>M.I. Baritz, D.L. Cotoros, L. Cristea and B. Braun</i></p>
<b>20:00-22:00</b>	<b>Festive Dinner</b>

<b>Morning June, 22.06.2013</b> <b>Hotel (International Conference room 1)</b>	
10:00-11:00	Closing remarks, the best session's papers awards and AUSTRO certificate members
<b>11:00-11:30</b>	<b>Coffee break</b>
<b>12:00-13:30</b>	<b>Lunch</b>
<b>13:30-19:30</b>	<b>Social program</b>
<b>20:00-22:00</b>	<b>Dinner</b>
<b>Morning, June 23.06.2013</b> <b>President Hotel Lobby</b>	
10:00-12:00	<b>Lunch</b> <b>Prepare return to Bucharest</b>

**Attention! For each lunch and dinner must take your bill from organizers.**  
**Free parking, beach and pool only for OPTIROB participants (contact hotel desk)**  
**Devices provided by the Conference Organizer:**  
 Laptops (with MS-office 2003 & Adobe Reader)  
 Projectors & Screen  
**Materials provided by the presenters:**  
 Power Point or PDF files  
**Duration of each Presentation (Tentatively):**  
**Plenary presentation:** 15 minutes of presentation and 5 minutes of Q&A  
**Regular Oral Session:** 10 minutes of presentation and 5 minutes of Q&A  
**President Hotel, Mangalia, Romania**





