

# S C H E D U L E

of the 11<sup>th</sup> edition of the International Conference on  
Recent Tendency in Aerospace, Robotics, Manufacturing Systems, Mechanical Engineering, Bioengineering,  
Power and Energy Engineering, Materials Engineering

**OPTIROB, ICAEM, ICREB 2016, 26-29 June 2016**  
**Tismana Club Hotel, Jupiter, Constanta, Romania**

<b>Time table</b>	<b>Action</b>	<b>Place</b>
<i>29.06.2015</i>		
15:00-17:00	<b>Registration of participants</b>	<b>Lobby of the Conference Hotel</b>
<b>19:00- 22:00</b>	<b>Welcome Dinner</b>	<b>Restaurant</b>
<i>30.06.2015</i>		
<b>8:30-9:00</b>	<b>Registration of participants</b>	<b>International Rooms of the Conference Hotel</b>
9:00-9:30	<b>Open Ceremony Introducing the companies, organizations and participants</b>	<b>International Room of the Conference Hotel</b>
<b>9:30-10:00</b>	<b>Tacking photos</b>	<b>Hotel Lobby</b>
10:00-11:30	Presentation of the invited papers and regular papers	Parallel sessions International Rooms 1, 2, 3
<b>11:30-12:00</b>	<b>Coffee break</b>	<b>Restaurant</b>
12:00-13:30	Presentation of the invited papers and regular papers	Parallel sessions International Rooms 1, 2, 3
<b>13:30-15:30</b>	<b>Lunch</b>	<b>Restaurant</b>
15:30-17:30	Presentation of the invited papers and regular papers	Parallel sessions International Rooms 1, 2, 3
<b>17:30-18:00</b>	<b>Coffee break</b>	<b>Restaurant</b>
18:00-19:30	Presentation of the invited papers and regular papers	Parallel sessions International Rooms 1, 2, 3
<b>20:00-23:00</b>	<b>Festive dinner Closing remarks, awarded the best session's papers and UASTRO certificate members</b>	<b>Restaurant</b>
<i>1.07.2016</i>		
<b>10:00-14:00</b>	<b>Visit</b>	<b>Airport Tuzla</b>
14:00-18:00	Social program	Jupiter, Constanta
20:00-23:00	Dinner	Restaurant
<i>2.07.2016</i>		
<b>11:00</b>	<b>Return to Bucharest</b>	<b>Bucharest</b>

**All participants must be registration to get their conference documents and invoices  
in the front of the International Session Room**

# SCHEDULE

*IACSIT/IACT/SCIEI/UAstro*  
*International Conferences*

*on*

**Recent Tendency in Aerospace, Robotics,  
Manufacturing Systems, Mechanical Engineering,  
Bioengineering, Neurorehabilitation, Materials Engineering,  
Renewable Energy and Bioenergy**

# **OPTIROB, ICAEM, ICREB2016**

**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,**

**International Academy of Computer Technology, IACT USA**

**Science and Engineering Institute, SCIEI USA**

**International University Association of Science and Technology, UAstro 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 Mechatronics and Measurements**

**Pro Optica Society**

**University Elias Emergency Hospital**

**Medicine and Pharmacy University**

**Tismana Club Hotel, Jupiter, Constanta  
Romania, 29 June- 2 July 2016**

15:00-17:00	Hotel
19:00-22:00	Arrival, Registration
	Welcome Dinner

Morning, June 30, 2016 (Thursday)

Hotel

8:30-9:00	Registration
9:00-9:30	Opening Remarks Conference room
9:30-10:00	Tacking photos
10:00-11:30	<p align="center"><b>International Conference Room 1</b></p> <p align="center"><b>Parallel sessions- moderators: Prof.univ.A.M.Stoica, Prof.univ.M.Boscoianu, Prof.univ.S.Danaila, Assoc.prof.univ.A.Banazadeh</b></p> <p align="center"><b>AEROSPACE ENGINEERING RESEARCH</b></p> <p align="center">Plenary speech 1 Control Oriented Modeling and Identification of Nonlinear Systems - <i>A. Banazadeh</i></p> <p align="center">Plenary speech 2 An <math>H_{\infty}</math> Design Approach for the Heading Hold Autopilot of a Flying Wing UAV - <i>A.M. Stoica</i></p> <p align="center">Plenary speech 3 A Real Options-Based Framework for Strategic Decision-Making in Hostile, Turbulent and Ultra-Volatile Environments- <i>M. Boşcoianu</i></p> <p><b>Regular papers:</b> Reduced-Order Multiple Observer for Aircraft State Estimation during Landing - <i>M. Lungu and R. Lungu</i> Channel Attenuation Models over Ka Band Satellite Systems at Venezuelan Amazonian Area - <i>G. Guedez and G. Qiang</i> Combined POD and Field Analysis of a Turbine Stage with <i>In Situ</i> Reheat - <i>D. Isvoranu, S. Danaila, C. Leventiu and F. Vladulescu</i></p>
11:30-12:00	Coffee Break
12:00- 13:30	<p align="center"><b>Parallel sessions- moderators: Prof.univ.A.M.Stoica, Prof.univ.M.Boscoianu, Prof.univ.S.Danaila, Assoc.prof.univ.A.Banazadeh</b></p> <p align="center"><b>AEROSPACE ENGINEERING RESEARCH</b></p> <p><b>Regular papers:</b> Experimental Investigation of a Four Stroke Spark Ignition Engine Operated with Naphtha or Gasoline Blended LPG - <i>S.M. Abdulhaleem and H.A. Mohammed</i> Small Orbital Launcher, Performance Evaluation - <i>T.V. Chelaru and A. Chelaru</i> On the Variation of the Polytropic Exponent in a High Pressure Fan Impeller - <i>A. Dragomirescu</i> Collision Induced Loads in Pro-Injectors of ADDA Rocket Motors - <i>R.D. Rugescu</i> Global Study of the Performance of a Propeller with a Variable Pitch and a Variable Diameter - <i>R.M. Catana and G. Cican</i> Researches on <math>NO_x</math> Emissions from the Test Bench Testing of a Post Combustion Burner - <i>M. Cretu, E. Barbu, V. Teleaba, V. Vilag and R. Mirea</i> Feasibility of the Microcomputers for the ADDASAT Capsule - <i>R.D. Rugescu</i> A Static Output Feedback Approach for Inverting a Dynamic System - <i>C. Ene and A.M. Stoica</i></p>
13:30-15:30	Lunch Break

Afternoon, June 30, 2016 (Thursday)

Hotel (International Conference Room 1)parallel sessions

15:30-17:30	<p align="center"><b>Parallel sessions- moderators: Prof.univ.C.Spulber, Prof.univ.E.Masehian, Prof.univ.T.Mikolajczyk, Prof.univ.A.Olaru</b></p> <p align="center"><b>ROBOTICS</b></p> <p align="center">Plenary speech 4 Characteristics of and Approaches to Flocking in Swarm Robotics- <i>E. Masehian</i></p> <p align="center">Plenary speech 5 Numerical Control System of Conventional Milling Machine -<i>T. Mikolajczyk</i></p> <p align="center">Plenary speech 6 Controlling of the 3D Space Trajectory of the Multi Robots Applications by Using the Proper Iterative Pseudo Inverse Jacobian Neural Network Matrix Method - <i>A. Olaru</i></p> <p><b>Regular papers:</b> Study Concerning the Hysteresis of Pneumatic Muscles - <i>T. Deaconescu and A. Deaconescu</i> Adaptive Hydraulic Drive of Manipulator - <i>K.S. Ivanov and B. Tultayev</i> Zigler-Nicols PID Tuning Method for Position Control of a Mobile Robot - <i>M. Crenganis, R.E. Breaz, G. Racz and O. Bologa</i> Fractional Order Model Identification for a Billet Unloading Robotic Arm - <i>I. Clitan, V. Mureşan, A. Clitan and M. Abrudean</i></p>
17:30-18:00	Coffee Break
18:00- 19:30	<p align="center"><b>Parallel sessions- moderators: Prof.univ.L.Cosereanu, Prof.univ.R.Breaz, Prof.univ.M.Avram</b></p> <p align="center"><b>MECHATRONICS</b></p>

	<p><b>Regular papers:</b>  Model of a CNC Feed Drive for On-Site Tuning of the Controllers for Single Axis Motion  <i>R.E. Breaz, S.G. Racz, O. Bologa and M. Tera</i>  Placement of Composed LED Light Sources for an Inverse Triangulation Motion Capture System with Reflexive Spherical Markers - <i>C.R. Mirescu and G. Roşca</i>  Solutions for Measuring Weight of Bead Wires - <i>J. Varga, M. Sukop, R. Jánoš, M. Hajduk, P. Duchovič and M. Bezák</i>  Mechatronics and Cyber-Mechatronics in Intelligent Applications from Industry and Society  <i>G. Gheorghe, C. Anghel and I. Iulian</i>  Scientific Evolution from Mix – Integrating Mechatronics to Cyber – Intelligent Mechatronics and to Claytronics Science - <i>G. Gheorghe, C. Anghel and I. Iulian</i>  Rotary Tables for Machine Tools - <i>D. Prodan, A. Bucuresteanu, T. Dobrescu and A. Motomancea</i>  An Introduction to Bipolar Single Valued Neutrosophic Graph Theory - <i>S. Broumi, F. Smarandache, M. Talea and A. Bakali</i>  Error Estimation for Known Marker Position Retrieval by Ideal Pinhole Camera Direct Observation  <i>C.R. Mirescu and G. Roşca</i>  Indoor Mapping Using Low Cost LIDAR Based Systems - <i>T. Tomoiagă, C. Predoi and L. Coşoreanu</i></p>
<b>20:00-23:00</b>	<p style="text-align: center;"><b>Festive Dinner</b></p> <p style="text-align: center;">Closing remarks, the best session's papers awards and UASTRO certificate members</p>

**Morning, June 30, 2015 (Thursday)**  
**Hotel (International Conference Room 2)parallel sessions**

<b>9:30-10:00</b>	<b>Taking Photos</b>
10:00-11:30	<p style="text-align: center;"><b>Parallel sessions- moderators: Prof.univ.C.Alexandru, Prof.univ.C.Spulber, Prof.univ.L.Cosoreanu, Prof.univ.G.Frumusanu</b>  <b>DESIGN- MODELING- SIMULATION</b></p> <p style="text-align: center;">Plenary speech 7  <i>A survey on test case generation techniques using UML diagrams- Nisha Rathee and Rajender Chhillar</i></p> <p style="text-align: center;">Plenary speech 8  Analytical Method for Determining the Static Equilibrium Position of the Rear Axles Guiding Mechanisms of the Motor Vehicles - <i>C. Alexandru</i></p> <p style="text-align: center;">Plenary speech 9  Tolerance Design for Optimal Dimensional Quality of Machine Parts - <i>G.Frumusanu</i></p> <p><b>Regular papers:</b>  Assessment of the Noise Levels inside a Machine Shop for Occupational Safety  <i>A.C. Toma, I.L. Dragasanu, M. Deaconu and D. Mihai</i>  Six Links Passive Modular Groups Involved in Structural Synthesis of Bi-Mobile Mechanisms  <i>A. Comanescu, C. Zaleschi, L. Ungureanu, I. Dugaescu and C. Alionte</i></p>
<b>11:30-12:00</b>	<b>Coffee Break</b>
12:00-13:30	<p style="text-align: center;"><b>Parallel sessions- moderators: Prof.univ.C.Alexandru, Prof.univ.C.Spulber, Prof.univ.L.Cosoreanu, Prof.univ.G.Frumusanu</b>  <b>DESIGN- MODELING- SIMULATION</b></p> <p><b>Regular papers:</b>  Decision Making Support System for Multicriteria Discrete Optimization of Technical Products  <i>I. Malakov, V. Zaharinov and G. Dinev</i>  Study of Deformations for Thermoplastic Polyurethane Membrane by Finite Elements Method (FEM)  <i>M.S. Tripa, A. Botean, L. Ghioltean, A. Sorcoi, C.R. Roman and M. Suci</i>  Approaches in Correlation Analysis and Application on Oil Field Data - <i>D. Vališ and L. Žák</i>  Six Links Passive Modular Group Applied to the Inverse Structural Model of the Bi-Mobile Leg Mechanisms - <i>A. Comanescu, C. Zaleschi, L. Ungureanu, I. Dugaescu and C. Alionte</i>  A study of the influence of Gas Channel Parameters on HT-PEM Fuel Cell Performance Using FEM Analysis- <i>IonescuViorel</i>  Nonlinear FE Modeling of Reinforced Concrete –<i>Yunus Dere and Mehmet Alpaslan Koroglu</i>  Investigation on Pozzolanic Activity Component of Volcanic Rocks from Eastern Jiangxi Province, China-- <i>Lehua Yu</i>  Laboratory-Scale Jet Grouting Machine and Production of Jet Grout Columns--- <i>İbrahim Hakkı Erkan and Özcan Tan</i></p>
<b>13:30- 15:30</b>	<b>Lunch Break</b>
15:30-17:30	<p style="text-align: center;"><b>Parallel sessions- moderators:Prof.univ.G.Frumusanu, Assoc.prof.univ.S.Croituru, Prof.univ.C.Mohora</b>  <b>MANAGEMENT IN MANUFACTURING SYSTEMS</b></p> <p><b>Regular papers:</b>  SolutionProcessed Ferroelectric Perovskite Nanocrystals for Flexible Energy Storage and Transistor Devices -- <i>Gabriel Caruntu, Saman Saleemizadeh Parizi and Daniela Caruntu</i>  Evaluation of Algorithms and Methods for Developing Business Information Systems Using Virtual Factory - <i>M.Ş. Neicu and G.G. Savii</i></p>

	<p>A Disaster Risk Management Performance Index to Assess Safety and Security in Industrial Plants- <i>F. deFelice, A. Petrillo and F. Zomparelli</i></p> <p>Consideration Regarding the Modeling of Knowledge of Kanban System by Implementing in Technical Academic Institutions - <i>I.O. Popp</i></p> <p>Design and Analysis of Vertical Axis Wind Turbine for Household Application--<i>Ramesh Krishnat Kavade</i></p> <p>Management of electrical energy of a multi-source system using FPGA card-- <i>Rezak Alkama</i></p> <p>Electrostatic Energy Harvesting Systems: A better understanding of their sustainability--<i>Rita Aljadiri</i></p> <p>Performance and Emissions of a Single Cylinder CI Engine Running on Corn Oil Methyl Ester-Diesel Blends--<i>Abd ilvahap ÇAKMAK</i></p>
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<b>17:30-18:00</b>	<b>Coffee break</b>
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18:00-19:30	<p><b>Parallel sessions- moderators: Prof.univ.M.Boscoianu, Assoc.Prof.univ.V.Muresan</b> <b>ENERGY AND ENERGY SUPPLY</b></p> <p><b>Regular papers:</b></p> <p>The Potential of Renewable Energy in the Republic of Moldova: A Case Study <i>E.S. Lakatos, M. Greenley, L. Bacali, M. Boscoianu and R. Vaida</i></p> <p>Using BDI Agents in Flexible Patterns for Cyber-Attacks over Electrical Power Infrastructures <i>H. Moga, M. Boscoianu, D. Ungureanu, F. Sandu and R. Lile</i></p> <p>Conservation Law of Energy Using Fractional Taylor Series - <i>A. Soroush and F. Farahmand</i></p> <p>Hybrid Solar and Wind Electric System for Romanian Nearly Zero Energy Buildings (nZEB) - Case Study - <i>G. Badea, R. Felseghi, S. Răboaca, I. Așchilean, A. Bolboacă, D. Mureșan, E. Moldovan and T. Șoimoșan</i></p> <p>The Study of the Depression Occurred under Different Types of Impellers - <i>L. Mândrea, G. Oprina, C. Băbuțanu, D. Marin and G. Negreanu</i></p> <p>Real Power and Frequency Control – Case Study for a Synchronous Generator from the Structure of a Hydroelectric Power Plant - <i>V. Mureșan, M. Abrudean, T. Coloși, I. Clitan, C. Bondici, M.L. Ungureșan and V. Sita</i></p> <p>Experimental and Theoretical Performance of Mini Solar Chimney Power Plant – <i>TarekMekhail</i></p> <p>Production of The Lowest Viscosity Waste Cooking Oil Biodiesel by Using Ethanol and Potassium Hydroxide--<i>Mert Gil im</i></p>
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<b>20:00-23:00</b>	<p><b>Festive Dinner</b></p> <p>Closing remarks, the best session's papers awards and UASTRO certificate members</p>
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**Morning, June 30, 2016 (Thursday)**  
**Hotel (International Conference Room 3) parallel sessions**

<b>9:30-10:00</b>	<b>Taking Photos</b>
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10:00-11:30	<p><b>Parallel sessions- moderators: Prof.univ.S.Toyama, Prof.univ.AdinelGavrus, Prof.univ.O.Adiguzel,Prof.univ.B.K.Sarkar</b> <b>MATERIALS AND BIOENGINEERING RESEARCH</b></p> <p>Plenary speech 10 Phase Difference Control System for TR Motor - <i>S. Toyama</i></p> <p>Plenary speech 11 Studies Concerning Numerical Prediction of Metal Fibering Obtained by Cold Bulk Forming Using Sensitivity Analysis of Tribological and Rheological Properties on a Cylindrical Crushing Process- <i>A. Gavrus</i></p> <p>Plenary speech 12 Crystal TwinningandMultivariant Nature of Martensite Structures in Shape Memory Alloys- <i>O.Adiguzel</i></p> <p>Plenary speech 13 The study of the thermal and optical properties of smart materials: An application of Photoacoustic Spectroscopy-<i>Bimal Kumar Sarkar</i></p>
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<b>11:30-12:00</b>	<b>Coffee Break</b>
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12:00-13:30	<p><b>Parallel sessions- moderators: Prof.univ.S.Toyama, Prof.univ.O.Adiguzel, Prof.univ.B.K.Sarkar</b> <b>MATERIALS RESEARCH AND APPLICATION</b></p> <p><b>Regular papers:</b></p> <p>Sheet Metal Hydroforming Technology - State-of-the-Art - <i>R. Vasile and O. Bologna</i></p> <p>Design and Analysis of Multi-Point System for Forming Three Dimensional Free- Form Surfaces <i>A.K.J. Kadhim and R.A. Neama</i></p> <p>An Investigation of the Thermal Sprayed Molybdenum Coatings Behaviour to Micro-Abrasion Wear <i>G. Matache, A. Paraschiv and C. Puscasu</i></p> <p>Research on Combined Processing Technology of Superficial Layers Hardened Steel <i>P. Corabieru, S. Velicu, A. Corabieru, D.D. Vasilescu and I. Păunescu</i></p> <p>Estimation of the Appropriate Output of Diesel Generator for Microgrid System in Chuja Island <i>Sangheon Chae, Eel-Hwan Kim, Ho Min Kim, Seungmin Lee and Ngoc-Thinh Quach</i></p> <p>Analyzing Modulation Techniques for the Modular Multilevel Converter--Ngoc-Thinh Quach, Sang Heon Chae, Seungmin Lee, Ho-Chan Kim and Eel-Hwan Kim</p> <p>Effect Of Sub-Zero Treatment On Ageing Of Aluminium Composite--- <i>Ahmet Taskesen, Sinan Aksoz</i></p>
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	<i>and A. Tamer Ozdemir</i>
<b>13:30- 15:30</b>	<b>Lunch Breach</b>
15:30-17:30	<b>Parallel sessions- moderators: Prof.univ.S.Toyama, Prof.univ.O.Adiguzel, Prof.univ.B.K.Sarkar</b> <b>MATERIALS RESEARCH AND APPLICATION</b>
	<b>Regular papers:</b> Behavioural Study Of Steel Fiber And Polypropylene Fibre Reinforced Concrete- <i>Mehmet Alpaslan Koroglu and Nebi Ozdoner</i> Reinforcing Fibre Reinforced Polymer Bridge Decks with Steel Rods - <i>Mehmet AlpaslanKoroglu</i> Hydrogen Bonding in Assemblies of Mn(II)/Mn(III)-NEt <sub>3</sub> Complex Self-Organized with the Formation of Hydrophobic Core - <i>Alexander Udal'Tsov, Vladimir Lyutoev and Dmitri Belykh</i> Bending analysis of FGM rectangular plates resting on non-uniform elastic foundations in thermal environment-- <i>Bachir Bouderbera;Abdelouahed Tounsi;E.A. Adda Bedia</i> Wind Profile Characteristics and Energy Potential Assessment For Electricity Generation at the Karaburun peninsula, Albania-- <i>Eduart Serdari</i> Reducing Harmfull Effects of ICE Using EV in Metropolitan Cities-- <i>Arif Senol Sener</i> Exfoliated Sodium Montmorillonite Reinforced Elastomeric Nanocomposites: Ablation, Thermal Transport/Decomposition/Transitions and Mechanical Aspects--- <i>Sadia Sagar Iqbal, Nadeem Iqbal, Tahir Jamil and Arshad Bashir</i> Multifunctional Magnetic Iron Oxide Nanoparticles for Intracellular Imaging and Drug Delivery to Cancer Cells--- <i>Kheireddine El-Boubbou</i>
<b>17:30-18:00</b>	<b>Coffee Break</b>
18:00- 19:30	<b>Regular papers:</b>
<b>20:00-23:00</b>	<b>Festive Dinner</b> Closing remarks, the best session's papers awards and UASTRO certificate members
<b>July 1.07.2016</b> <b>Lobby Hotel</b>	
<b>10:00-14:00</b>	<b>Visit Tuzla Airport</b>
<b>14:00- 16:00</b>	<b>Lunch</b>
16:00- 19:00	Social program
20:00-23:00	Dinner and closing remarks
<b>June2.07.2016</b>	
11:00	Return to Bucharest

**Attention!***For each lunch and dinner must take your bill from organizers.*  
*All persons must be present one hour before the support work.*  
*Free parking*

**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

**Tismana Club Hotel, Jupiter, Constanta, Romania**

**The organizing committee invites all participants to come in Bucharest with some of their last products, banners and show them in the showroom with occasion of the exhibition OPTIROB, ICAEM, ICREB2016**