



**ICNAAM 2013**  
**Rodos Palace Hotel, Rhodes, Greece,**  
**21-27 September 2013**

<b>21 September 2013</b> <b>SESSION: INVITED SPEAKER</b> <b>CHAIR: Klaus Gürlebeck</b> <b>(ROOM 1)</b>		
<b>09:00 – 10:00</b>	<b>Eckhard Hitzer</b>	<b>Extending Fourier transformations to Hamilton's quaternions and Clifford's geometric algebras</b>

<b>21 September 2013</b> <b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b> <b>CHAIR: Remi Abgrall</b> <b>(ROOM 1)</b>		
<b>11:30 – 11:50</b>	<b><u>S. I. Bernad</u>, A. Totorean, A. Bosioc, R. Stanciu and E. S. Bernad</b>	<b>Numerical Investigation of Dean Vortices in a Curved Pipe</b>
<b>1:50 – 12:10</b>	<b><u>H. Alehossein</u> and Z. Qin</b>	<b>Mechanics of Granular-Frictional-Visco-Plastic Fluids in Civil and Mining Engineering</b>
<b>12:10 – 12:30</b>	<b><u>F. Bonelli</u>, A. Viggiano and V. Magi</b>	<b>Large Eddy Simulation of High-Density Ratio Hydrogen Jets</b>
<b>12:30 – 12:50</b>	<b><u>D.O. Njobuenwu</u> and M. Fairweather</b>	<b>Non-Spherical Particle Translation and Orientation in Wall-Bounded Turbulence</b>
<b>12:50 – 13:10</b>	<b><u>R. Przekop</u> and L. Gradon</b>	<b>Effect of Particles and Fiber Size on the Morphology of Deposits in Fibrous Filters</b>



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**Lunch Break**

<b>21 September 2013</b> <b>SESSION: 10-th Symposium on Clifford Analysis and Applications</b> <b>CHAIR: Klaus Gürlebeck</b> <b>(ROOM 2)</b>		
<b>11:30 – 12:00</b>	<b><u>Sprößig, Wolfgang,</u></b>	Some aspects of harmonic analysis in relation with Clifford algebras
<b>12:00 – 12:30</b>	<b><u>Orelma, Heikki</u></b>	On Hodge-de Rham systems in Hyperbolic Clifford Analysis
<b>12:30 – 13:00</b>	<b><u>Furui, Sadataka</u></b>	E. Cartan's Spinor and the Symmetry of Elementary Particles
<b>Lunch Break</b>		

<b>21 September 2013</b> <b>SESSION: Advanced Computation and Information in Natural and Applied Sciences</b> <b>CHAIR: Claus-Peter Rückemann</b> <b>(ROOM 3)</b>		
<b>11:30 – 12:00</b>	<b><u>Claus-Peter Rückemann</u></b>	High End Computing for Diffraction Amplitudes
<b>12:00 – 12:30</b>	<b><u>Raffaella Pavani</u></b>	About characterization of D-stability by a computer algebra approach
<b>12:30 – 13:00</b>	<b><u>Svetlana V. Maltseva</u></b>	A new Numerical Approach to the Function Reconstruction Problem from



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		the Ray Transform in Refraction Tomography
<b>Lunch Break</b>		

<b>21 September 2013</b> <b>SESSION: Computational Bioimaging and Visualization</b> <b>CHAIR: João Manuel R. S. Tavares and R. M. Natal Jorge</b> <b>(ROOM 4)</b>		
11:30 – 12:00	<i><u>Hamada R. H. Al-Absia</u> and Brahim Belhaouari Samir</i>	A Statistical Feature Selection Method for Lung Cancer Classification in CT Scans
12:00 – 12:30	<i><u>Hiroyuki Fujii</u>, Yoko Hoshi, Shinpei Okawa, Tetsuya Yoshinaga, Satoru Kohno and Yukio Yamada</i>	A coupling model of light propagation based on the radiative transfer and diffusion equations

<b>21 September 2013</b> <b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b> <b>CHAIR: Gilcilene Sanchez de Paulo</b> <b>(ROOM 1)</b>		
15:00 – 15:20	<u>A. De</u> and S. Acharya	Investigation of Flow Structures in Hydrogen-enriched Premixed Combustion
15:20 – 15:40	M.G. Cojocaru	Hybrid Discretization of Convective Terms for Aeroacoustics
15:40 – 16:00	M. de' MichieliVitturi, <u>G. La Spina</u> and E. Romenski	A Compressible Single Temperature Conservative Two-Phase Model with Phase Transitions



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16:00 – 16:20	<u>Y. Bae</u> , Y. I. Kim and Y. J. Moon	Numerical Modeling of Anisotropic Drag for Flow across a Perforated Plate
16:20 – 16:40	<u>O. Zavila</u> , M. Bojko, M. Kozubkova, P. Danihelka and L. Malerova	CFD Analysis of the Influence of Meteorological Conditions on Motion of Gas Ammonia in the Case of Emergency Release in Urban Development
16:40 – 17:00	<u>S. Mukhopadhyay</u> , R.J.M. Bastiaans, J.A. van Oijen, L.P.H. de Goey	Application of Explicit Convolution to Numerical Modeling of Turbulent Combustion
<b>Coffee Break</b>		

<b>21 September 2013</b> <b>SESSION: 10-th Symposium on Clifford Analysis and</b> <b>Applications</b> <b>CHAIR: Helmuth Malonek</b> <b>(ROOM 2)</b>		
15:00 – 15:30	<u>Janovska,</u> <u>Drahoslava;</u> Opfer, Gerhard	Zero points of general quaternionic polynomials
15:30 – 16:00	<u>Morais, Joao Pedro</u>	Quaternion Zernike Spherical Polynomials
16:00 – 16:30	<u>Schneider, Baruch;</u> Abreu Blaya, Ricardo; Bory Reyes, Juan	On function theory for the Cimmino system
16:30 – 17:00	<u>Nguyen, Manh</u> <u>Hung;</u> Gürlebeck, Klaus	On $\psi$ -hyperholomorphic functions in $R^3$



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17:00 – 17:30	Coffee Break
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<b>21 September 2013</b> <b>SESSION: Dynamic System Analysis with Continuous and Switching input Applied to Mathematical Ecology</b> <b>CHAIR: Magno Enrique Mendoza Meza</b> <b>(ROOM 3)</b>		
15:00 – 15:30	<i>Alessandra De Rossi, Ilaria Ferrua, Emma Perracchione, Giulia Ruatta, <u>Ezio Venturino</u></i>	Competition models with niche for squirrel population dynamics
15:30 – 16:00	<i><u>Magno Enrique Mendoza Meza</u></i>	Variant of Wodarz and Nowak's virus dynamics model subject to switching input

<b>21 September 2013</b> <b>SESSION: General Session I</b> <b>CHAIR: Igor Averbakh</b> <b>(ROOM 1)</b>		
19:35 – 20:05	<i><u>Igor Averbakh</u> and <u>Jorge Pereira</u></i>	Network Construction / Restoration Problems

<b>21 September 2013</b> <b>SESSION: 10-th Symposium on Clifford Analysis and Applications</b> <b>CHAIR: Joao Morais</b> <b>(ROOM 2)</b>		
19:35 – 20:05	<i><u>Abramov, Viktor</u></i>	Graded q-Differential Matrix Algebra



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20:05 – 20:35	<u>Di Teodoro, Antonio</u>	Necessary and Sufficient Conditions for Associated $q$ -generalized Differential Operators in Quaternionic Analysis and Applications to Initial Value Problems
20:35 – 21:05	<u>Vanegas, Carmen</u> <u>Judith</u>	Initial value problems in Clifford analysis
21:05 – 21:35	<u>Li, Hongbo</u>	Normalization of polynomials in Clifford ring

<b>21 September 2013</b> <b>SESSION: Quasi-Power Laws in Physics and Elsewhere</b> <b>CHAIR: Z.Włodarczyk</b> <b>(ROOM 3)</b>		
19:35 – 20:05	<u>G. Wilk,</u> <u>Z.Włodarczyk</u>	On possible origins of power-law distributions

end 1st day of the Conference



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<b>22 September 2013</b> <b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b> <b>CHAIR: Dia Zeidan</b> <b>(ROOM 1)</b>		
11:30 – 12:30	<b>Invited lecture</b>  <b>Professor Remi Abgrall</b>  <b>On the Numerical Approximation of Some Compressible Multiphase Systems</b>	
12:30 – 12:50	<u>M. Kato</u> , Y. Iso, J. Huang and S. Matsuno	<b>Effect of Surface Texture and Liquid Property on the Liquid Film Flow on an Inclined Wall</b>
12:50 – 13:10	<u>M.L. Niculescu</u> and S. Danaila	<b>Comparative Study of Upwind Schemes for Transonic and Supersonic Internal Flows</b>
13:10 – 13:30	T. Neustupa	<b>Incompressible Viscous Stationary Flow Through a Cascade of Profiles - Existence of a Weak Solution, Transferability of Results From One Period Back to Original Infinite Domain</b>
13:30 – 13:50	K.Alhussan, <u>K. Delendik</u> , O.Voitik, O. Penyazkov and N. Kolyago	<b>Gas Permeation through Membrane on the Base of Anodic Alumina</b>
<b>Lunch Break</b>		



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<b>22 September 2013</b> <b>SESSION: 10-th Symposium on Clifford Analysis and Applications</b> <b>CHAIR: Eckard Hitzer</b> <b>(ROOM 2)</b>		
<b>11:30 – 12:00</b>	<b><u>Sommen, Frank</u></b>	<b>Clifford Superanalysis</b>
<b>12:00 – 12:30</b>	<b><u>Malonek, Helmuth</u></b>	<b>About Pascal's tetrahedron with hypercomplex entries</b>
<b>12:30 – 13:00</b>	<b><u>McClellan, Gene E.</u></b>	<b>The Legendre Transformation in Geometric Calculus</b>
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SESSION: Turbulent Flows: Modeling and Solution Algorithms</b> <b>CHAIR: Mine Çağlar</b> <b>(ROOM 2)</b>		
<b>13:00 – 13:30</b>	<b><i><u>Rukiye Kara, Mine Çağlar</u></i></b>	<b>A Statistical Subgrid Scale Model for Large Eddy Simulations</b>
<b>13:30 – 14:00</b>	<b><i><u>Reza Mokhtarpoor, Shabrina Virta Inma, Metin Muradoglu</u></i></b>	<b>A New Consistent Hybrid Algorithm for Solution of the PDF Equations of Turbulent Reactive Flow</b>





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<b>22 September 2013</b> <b>SESSION: Numerical Optimization and Applications</b> <b>CHAIR: Ana I Pereira and M. Fernanda Costa</b> <b>(ROOM 3)</b>		
11:30 – 12:00	<b>David Bento,</b> <b>Diana Pinho,</b> <b><u>Ana I. Pereira</u> and</b> <b>Rui Lima</b>	<b>Genetic Algorithm and Particle Swarm Optimization combined with Powell Method</b>
12:00 – 12:30	<b><u>Gisela C.V. Ramadas</u></b> <b>and Edite M.G.P. Fernandes</b>	<b>Combined Mutation Differential Evolution to Solve Systems of Nonlinear Equations</b>
12:30 – 13:00	<b><u>M. Fernanda P. Costa,</u></b> Ana Maria <b>A.C. Rocha and</b> <b>Edite M.G.P. Fernandes</b>	<b>Hooke and Jeeves Based Multilevel Coordinate Search to Globally Solving Nonsmooth Problems</b>
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SESSION: 3rd Symposium on Computer Languages, Implementations, and Tools (SCLIT 2013)</b> <b>CHAIR: Zoran Budimac</b> <b>(ROOM 4)</b>		
11:30 – 11:50	<b><u>SCLIT team</u></b>	<b>Welcome talk</b>
11:50 – 12:10	<b><u>Tomas Skersys,</u></b> <b><i>Rimantas Butleris</i></b> <b>and</b> <b><i>Kestutis Kapocius.</i></b>	<b>Extracting Business Vocabularies from Business Process Models: SBVR and BPMN Standards-based Approach</b>
12:10 – 12:30	<b><u>Aleksandar Jevremović,</u></b> <b><i>Nenad Ristić</i></b> <b>and</b>	<b>Using Cryptology Models for Protecting PHP Source Code</b>



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	<i>Mladen Veinović.</i>	
12:30 – 12:50	<i><u>Dragan Macos</u> and Andreas Solymosi.</i>	ScaMo: Realisation of an OO-functional DSL for Cross Platform Mobile Applications Development
12:50 – 13:10	<i>Sasa Totic, Dejan Mitrovic and <u>Mirjana Ivanovic.</u></i>	Agent planning in AgScala
13:10 – 13:30	<i><u>Gordana Rakic,</u> Zoran Budimac and Klaus Bothe.</i>	Introducing Recursive Complexity
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SYMPOSIUM: Dynamics of Complex Systems &amp; Networks:</b> <b>Modelling, Computational Analysis and Control</b> <b>CHAIR: Constantinos Siettos</b> <b>(ROOM 5)</b>		
11:30 – 12:00	<i><u>Lucia Russo</u> and Erasmus Mancusi</i>	Devil's staircases in loop networks with symmetry locking
12:00 – 12:30	<i><u>Lucia Russo,</u> Silvestro Crescitelli and Antonio Brasiello</i>	Bifurcations of limit cycles in open and closed loop reverse flow reactors
12:30 – 13:00	<i>Foteini Protopapa, Dimitris Mylonas, Nikolaos Smyrnis and <u>Constantinos Siettos</u></i>	A Coarse-grained Analysis of the Functional Brain Connectivity from EEG recordings of a Visuo-Perceptual Discrimination task
<b>Lunch Break</b>		



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<b>22 September 2013</b> <b>SESSION: Symposium on Computational Modeling of Transport Processes in Building Materials and their Multi-Layered Systems</b> <b>CHAIR: Jaroslav Kruis</b> <b>(ROOM 6)</b>		
11:30 – 12:00	Václav Kočí, Jiří Maděra and <u>Robert Černý</u>	Deterministic Physical and Mathematical Models of Coupled Heat, Moisture and Salt Transport in Multi-layered Systems of Building Materials
12:00 – 12:30	<u>Václav Kočí</u> and Robert Černý	Comparison of Computational Methods for Estimation of Energy Balance of Building Envelopes
12:30 – 13:00	Václav Kočí, <u>Jiří Maděra</u> and Robert Černý	Computational Model of Coupled Heat, Moisture and Salt Transport in Multi-layered Building Structures: Implementation of the Deterministic Physical Model and Example of Application
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SESSION: Mathematical Problems in Engineering</b> <b>MPE 2013</b> <b>CHAIR: Cristina Milazzo</b> <b>(ROOM 7)</b>		
11:30 – 12:00	<u>V.K. Kukreja</u> and <u>Ishfaq A. Ganaie</u>	A Novel Numerical Scheme of Cubic Hermite Spline Collocation Method for Solving Burgers' Equation



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12:00 – 12:30	<i>V. Romano and <u>G. Mascali</u></i>	A macroscopic model for electron transport in silicon using analytic descriptions for both the electron bands and the phonon dispersion relations
12:30 – 13:00	<i><u>V. Romano</u> and V. D.Camiola</i>	Simulation of charge transport in graphene nano-ribbons with a model based on MEP
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SESSION: State of the Art of Modeling, Numerical Analysis and Design, Optimizing the Performances, Controls of Wind Turbines and Hybrid Renewable Energy Systems</b> <b>CHAIR: Alexandru Dumitrache &amp; Florin Frunzulica</b> <b>(ROOM 8)</b>		
11:30 – 12:00	<i><u>Andreea BOBONEA</u> M.V.Pricop</i>	Design of Horizontal-Axis Wind Turbine Using Blade Element Momentum Method
12:00 – 12:30	<i><u>S. G. Constantinescu</u>, D. E. Crunteanu and M. L. Niculescu</i>	Aerodynamic Study of a Stall Regulated Horizontal-Axis Wind Turbine
12:30 – 13:00	D.E. Crunteanu, S.G. Constantinescu and <i><u>M.L. Niculescu</u></i>	Aerodynamic Study of a Blade with Sine Variation of Chord Length along the height for



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		Darrieus Wind Turbine
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SESSION: Finite Volume Formulation and Its Applications</b> <b>CHAIR: Shicheng Xue</b> <b>(ROOM 9)</b>		
11:30 – 12:00	Gilmar Mompean	Numerical study of a viscoelastic fluid in the output region of curved duct using a finite volume method.
12:00 – 12:30	Shicheng Xue	Incompressible flow simulations without explicit boundary conditions at any open boundary.
12:30 – 13:00	Negar Daemi	Comparison of different schemes for convection modeling of incompressible flow equations on unstructured grids
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SESSION: Mathematical Modelling of Economic Systems</b> <b>CHAIR: David Hampel</b> <b>(ROOM 10)</b>		
11:30 – 11:50	<u>Jakub Odehnal</u>	Application of Classification Methods in Assessment of NATO Member Countries' Economic, Security and Political Risks



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11:50 – 12:10	<i>Tomas Vanek, Anna Dobesova, <u>David Hampel</u></i>	Selected aspects of modelling monetary transmission mechanism by BVAR model
12:10 – 12:30	<i><u>Ladislava Grochova</u>, Klara Plecita</i>	On Exchange Rate Misalignments in the Eurozone's Peripheral Countries
12:30 – 12:50	<i><u>Lubos Strelec</u>, Ladislava Grochova, Pavel Kolman</i>	On power comparison of normality tests of error terms in regression models
12:50 – 13:00	<i>Zuzana Hubnerova, <u>Lucie Doudova</u></i>	Properties of some test of equality of two negative binomial samples
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SESSION: Computational and Analytical Techniques for Solving Coupled Multiphysics Problems</b> <b>CHAIR: Youhe Zhou</b> <b>(ROOM 11)</b>		
11:30 – 12:00	<i><u>Xiaofan Gou</u>, Justin Schwartz</i>	Fractal-based Modeling of the Stress-strain Relation of Bi <sub>2</sub> Sr <sub>2</sub> CaCu <sub>2</sub> O <sub>x</sub> /AgMg Superconducting Round Wires
12:00 – 12:30	<i><u>Linli Zhu</u>, Jie Wang</i>	Strain/Stress-Engineering in Phonon Properties of Stressed Semiconductor Nanowires
12:30 – 13:00	<i><u>Huadong Yong</u>, Youhe Zhou</i>	On Electromechanical Instability in Semicrystalline Polymer
<b>Lunch Break</b>		



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<b>22 September 2013</b> <b>SESSION: Wavelets and related multiscale methods</b> <b>CHAIR: Eugene B. Postnikov</b> <b>(ROOM 12)</b>		
<b>11:30 – 12:00</b>	<i>Eugene B. Postnikov</i>	Localization of wavelet-spectral components via the spline-smoothing approach
<b>12:00 – 12:30</b>	<i>Anastasia I. Lavrova</i>	Wavelet analysis of location and intensity of spatial rhythms in hippocampus
<b>12:30 – 13:00</b>	<i>Elena A. Lebedeva</i>	Localization of Functions Defined on Cantor Group
<b>Lunch Break</b>		

<b>22 September 2013</b> <b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b> <b>CHAIR: Robert Woolley</b> <b>(ROOM 1)</b>		
<b>15:00 – 15:20</b>	<b>E. Goncalves</b>	Numerical Simulation of Cavitating Flows Based on Preconditioning Technique
<b>15:20 – 15:40</b>	<b><u>Jithin M</u>, Shubham, A. De and M.K. Das</b>	Unsteady Behavior of High Re Flow in Lid Driven Rectangular Cavities Using LBM



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15:40 – 16:00	<u>A. Tucs</u> , S. Spitan, A. Jakovics and E. Baake	Implementation and Verification of Numerical Model for Gas Bubble Dynamics in Electroconductive Fluid
16:00 – 16:20	<u>S. Farooq</u> , M. Basha and A. Z. Al-Garni	Simulation of Flow around a Thick Airfoil with a Vortex Trapping Cavity
16:20 – 16:40	<u>A. Starostin</u> , B. Krasnopolsky, B. Krasnopolsky and A. Osiptsov	Combined Multi-Fluid and Drift-Flux Approaches for Analysis of Pipe Flows
16:40 – 17:00	<u>G.S. Paul</u> , C.M. Oishi and M.F. Tome	A Numerical Study of the FENE-CR Model Applied to a Jet Flow Problem
<b>Coffee Break</b>		

<b>22 September 2013</b> <b>SESSION: 10-th Symposium on Clifford Analysis and Applications</b> <b>CHAIR: Carmen Vanegas (ROOM 2)</b>		
15:00 – 15:30	<u>Klimek, Mariusz</u> ; Schoeps, Sebastian; Weiland, Thomas	Discretization of Maxwell's Equations in the Setting of Geometric Algebra
15:30 – 16:00	<u>Oviedo Galdeano, Hector</u> ; Kravchenko, Vladislav V.; Rabinovich, Vladimir S.	Analysis of Electromagnetic fields from moving modulated sources in dispersive chiral media applying quaternionic analysis and the two-dimensional stationary phase method
16:00 – 16:30	<u>Hitzer, Eckhard</u>	The quest for conformal geometric algebra Fourier transformations





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16:30 – 17:00	<u>Klaus Gürlebeck</u>	Representation formulas for the Lamé-Navier equations
17:00 – 17:30	<b>Coffee Break</b>	

<b>22 September 2013</b> <b>SESSION: Numerical Optimization and Applications</b> <b>CHAIR: Ana I Pereira and M. Fernanda Costa</b> <b>(ROOM 3)</b>		
15:00 – 15:20	<b>Florbela P. Fernandes,</b> <b><u>M. Fernanda P. Costa</u>, Edite M.G.P. Fernandes and Ana Maria A.C. Rocha</b>	Multistart Hooke and Jeeves Filter Method for Mixed Variable Optimization
15:20 – 15:40	<u>Soraia Carvalho</u> and Ana I. Pereira	Characterization of Feet Temperature
15:40 – 16:00	<u>Vânia Rodrigues</u> , Pedro J. Rodrigues, Ana I. Pereira and Rui Lima	Automatic tracking of red blood cells in microchannels using OpenCV
16:00 – 16:20	<u>Ana Curralo</u> , Ana I. Pereira, José Barbosa and Paulo Leitão	Sensibility Study in a Flexible Job Shop Scheduling Problem
16:20 – 16:40	<u>M.F. Teodoro</u>	On the Approximation of a Small Solution from a Forward-Backward Equation
16:40 – 17:00	E. Costa e Silva, J. P. Araújo, D. Machado, <u>M. F. Costa</u> , W. Erlhagen and E. Bicho	Generating Human-like Movements on an Anthropomorphic Robot using an Interior Point Method



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<b>17:00 – 17:30</b>	<b>Coffee Break</b>	

<b>22 September 2013</b> <b>SESSION: 3rd Symposium on Computer Languages, Implementations, and Tools (SCLIT 2013)</b> <b>CHAIR: Mirjana Ivanović</b> <b>(ROOM 4)</b>		
<b>15:00 – 15:20</b>	<b><i>Marcel Jirina, Said Krayem and Marcel Jirina Jr.</i></b>	<b>Adapting GNU Random Forest program for Unix and Windows</b>
<b>15:20 – 15:50</b>	<b><i>Zalán Szűgyi and Attila Góbi.</i></b>	<b>STL Conform Infinite Streams</b>
<b>15:50 – 16:10</b>	<b><i>Christos Malliarakis, Maya Satratzemi and Stelios Xinogalos.</i></b>	<b>Towards optimizing server performance in an educational MMORPG for teaching computer programming</b>
<b>16:10 – 16:30</b>	<b><i>Mirjana Ivanovic and Zoran Budimac.</i></b>	<b>First Programming Language - Never-ending Story</b>
<b>17:00 – 17:30</b>	<b>Coffee Break</b>	

<b>22 September 2013</b> <b>SESSION: Highlights in Copula Modeling</b> <b>CHAIR: V. A. González-López (University of Campinas - Brazil)</b> <b>(ROOM 5)</b>		
<b>15:00 – 15:30</b>	<b><i>M. Fernández and V. A. González-López</i></b>	<b>A copula model to analyze minimum admission scores</b>



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15:30 – 16:00	<u>M. A. P. Franco</u> , M. L. L. Viola and L. E. B. Salasar	Creating new copula models from given distributions
16:00 – 16:30	<u>Jesús E. García</u> and M. Fernández	Copula based model correction for bivariate Bernoulli financial series
16:30 – 17:00	M. Fernández_ and <u>V. A. González-López</u>	A Bayesian approach for convex combination of two Gumbel-Barnett copulas
17:00 – 17:30	<b>Coffee Break</b>	

<b>22 September 2013</b> <b>SESSION: Symposium on Computational Modeling of Transport Processes in Building Materials and their Multi-Layered Systems</b> <b>CHAIR: Jiří Maděra</b> <b>(ROOM 6)</b>		
15:00 – 15:30	<u>Jan Kočí</u> , Jiří Maděra and Robert Černý	A method for selection of a critical weather year for hygrothermal simulation based on incomplete weather data
15:30 – 16:00	<u>Kamil Ďurana</u> , Lukáš Fiala, Jiří Maděra, Robert Černý	A material database for computational models of heat, moisture, salt and momentum transport: construction of the code as an input module and example of application
16:00 – 16:30	<u>Jaroslav Kruis</u>	Heat Transfer in Damaged Material
16:30 – 17:00	<u>T. Koudelka</u> , T. Krejci and M. Broucek	Modelling of Coupled Hydro-Mechanical Problem for Porous Media



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17:00 – 17:30	Coffee Break
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<b>22 September 2013</b> <b>SESSION: Mathematical Problems in Engineering</b> <b>MPE 2013</b> <b>CHAIR: Andrea Alaimo</b> <b>(ROOM 7)</b>		
15:00 – 15:30	<b><u>M. Ruggieri</u></b> <i>and M.P. Speciale</i>	Quasi Self-adjoint Coupled KdV-like Equations
15:30 – 16:00	<b><u>R. E. Barone, V. Salerno and S. M. Siniscalchi</u></b>	An Introductory Study on Deep Neural Networks for High Resolution Aerial Images
16:00 – 16:30	<b><u>V. Artale, M. Collotta, G. Pau and A. Ricciardello</u></b>	Hexacopter trajectory control using a Neural Network
16:30 – 17:00	<b><u>M. Mangiameli, G. Muscato and G. Mussumeci</u></b>	Road Network Modelling In Open Source Gis To Manage The Navigation Of Autonomous Robots
17:00 – 17:30	Coffee Break	

<b>22 September 2013</b> <b>SESSION: New Methods for Modeling and Control of Flexible Structures and Robots</b> <b>Chair: Laura Celentano</b> <b>(ROOM 8)</b>		
15:00 – 15:20	<b><u>Laura Celentano</u></b>	An Easy and Efficient Method for Flexible Robots Modeling and Simulation



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15:20 – 15:40	<u><i>Laura Celentano</i></u>	New Wavelet Functions for Realistic Flexible Robots Modeling
15:40 – 16:00	<u><i>D.P. Coiro,</i></u> <u><i>E. Daniele,</i></u> <u><i>F. Scherillo</i></u>	Effects of Structure Flexibility on Horizontal Axis Wind Turbine Performances
16:00 – 16:20	<u><i>Fabio De Angelis,</i></u> <u><i>Donato Cancellara,</i></u> <u><i>Mariano Modano,</i></u> <u><i>Mario Pasquino</i></u>	Numerical Issues in the Plastic Behavior of Solids
16:20 – 16:40	<u><i>Cesare Rossi,</i></u> <u><i>Sergio Savino</i></u>	Mechanical Model of a Single Tendon Finger
17:00 – 17:30	<b>Coffee Break</b>	

<b>22 September 2013</b> <b>SESSION: Finite Volume Formulation and Its Applications</b> <b>CHAIR: Shicheng Xue</b> <b>(ROOM 9)</b>		
15:00 – 15:30	Timur Z. Ismagilov	Second-order scheme for Maxwell's equations with discontinuous dielectric permittivity on structured meshes
15:30 – 16:00	Khoshlessan, Mahzad	Evaluation of a control-volume based finite-element collocated scheme for the solution of external steady and unsteady incompressible flows at low Reynolds Numbers
16:00 – 16:30	Timur Z. Ismagilov	Modeling photonic crystal waveguides using second-order scheme on structured meshes



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<b>22 September 2013</b> <b>SESSION: Mathematical Modelling of Economic Systems</b> <b>CHAIR: Ladislava Grochova</b> <b>(ROOM 10)</b>		
15:00 – 15:20	<i><u>Pavel Kolman,</u></i> <i><u>Lubos Strelec</u></i>	Time minimizing transportation of calamity fallen timber
15:20 – 15:40	<i><u>Katerina Myskova,</u></i> <i>Jaroslav Zak</i>	Modelling of Wildlife Migrations and its Economic Impacts
15:40 – 16:00	<i><u>Ladislava Grochova,</u></i> <i>Lubos Strelec</i>	Performance of the OLS estimator in presence of autocorrelation
16:00 – 16:20	<i><u>Martina Zamkova,</u></i> <i>Veronika Blaskova</i>	Identification of factors affecting birth rate in Czech Republic
16:20 – 16:40	<i>Jitka Janova, <u>David Hampel</u></i>	Optimal control of a harmonic oscillator: economic interpretations
17:00 – 17:30	<b>Coffee Break</b>	

<b>22 September 2013</b> <b>SESSION: Computational and Analytical Techniques for Solving Coupled Multiphysics Problems</b> <b>CHAIR: Jizeng Wang</b> <b>(ROOM 11)</b>		
15:00 – 15:30	<i><u>Zhaoxia Zhang,</u></i> <i>Wen Chen, Xiaofan Gou</i>	Analysis of Thermal Residual Strain in Bi2223 Superconductor Composite Tapes
15:30 – 16:00	<i><u>Jie Wang,</u></i> <i>Linli Zhu</i>	Phase Field Simulation on the Domain Evolution of Ferromagnetic Materials



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16:00 – 16:30	<u>Feng Xue, Youhe Zhou</u>	Effect of Strain on Critical Current Density in Grain Boundaries of Superconductors
16:30 – 17:00	<u>Xiaojing Liu, Jizeng Wang, Youhe Zhou</u>	A Wavelet Method for Solving Coupled Viscous Burgers' Equations
17:00 – 17:30	<b>Coffee Break</b>	

<b>22 September 2013</b> <b>SESSION: Physical-Chemical Gas-Dynamics: Non-Equilibrium Processes Modeling and Simulation</b> <b>CHAIR: Yuriy Gorbachev</b> <b>(ROOM 12)</b>		
15:00 – 15:30	Evgeniy Kolesnichenko, <u>Yuriy Gorbachev</u>	Physical-chemical gas-dynamics: challenges and solutions
15:30 – 16:00	Felix G. Tcheremissine	Numerical Analysis of 3D Rarefied Supersonic Jet of Molecular Nitrogen on the Base of the Generalized Boltzmann Equation
16:00 – 16:30	Alexander A. Shevyrin, Yevgeniy A. Bondar, <u>Mikhail S. Ivanov</u>	Validation of DSMC Chemistry Models against RAM-C II Flight Experiment Data
16:30 – 17:00	<u>Vladimir Aristov</u> , Anna Frolova, Sergei Zabelok	Kinetics with Chemical Reactions and Nonequilibrium Structures in Open Systems
17:00 – 17:30	Nikita Petrov, <u>Alexander Schmidt</u>	Non-equilibrium Bubble Nucleation in Underwater Explosion Non-equilibrium Bubble Nucleation in Underwater Explosion



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<b>17:00 – 17:30</b>	<b>Coffee Break</b>
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<b>22 September 2013</b> <b>SESSION: INVITED SPEAKER</b> <b>CHAIR: Wolfgang Sprößig</b> <b>(ROOM 1)</b>		
<b>17:30 – 18:30</b>	<b>Joao Pedro Morais</b>	<b>A Version of Quaternionic Function Theory Related to Prolate Spheroidal Wave Signals algebras</b>

<b>22 September 2013</b> <b>SESSION: 10-th Symposium on Clifford Analysis and Applications</b> <b>CHAIR: Viktor Abramov</b> <b>(ROOM 2)</b>		
<b>19:35 – 20:05</b>	<b><u>Bujack, Roxana,</u> Gerik Scheuermann, Eckhard Hitzer</b>	<b>Demystification of the Geometric Fourier Transforms</b>
<b>20:05 – 20:35</b>	<b><u>Yu, Zhaoyuan</u></b>	<b>Clifford Algebra-based Spatio-temporal Modelling and Analysis for Complex Geo-simulation</b>
<b>20:35 – 21:05</b>	<b><u>Legatiuk, Dmitrii;</u> Bock, Sebastian; Gürlebeck, Klaus</b>	<b>On the convergence of the finite element method with holomorphic function</b>
<b>21:05 – 21:35</b>	<b><u>Schmeikal, Bernd</u></b>	<b>Feynman's little arrows in the Clifford algebra of spacetime</b>





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<b>22 September 2013</b> <b>SESSION: Advancing Mathematics for Stochastic Simulations</b> <b>on Extreme Scales</b> <b>CHAIR: Rick Archibald</b> <b>(ROOM 3)</b>		
19:35 – 20:05	<u><i>Guannan Zhang, Dan Lu, Ming Ye, Max Gunzburger, and Clayton Webster</i></u>	An Efficient Surrogate Modeling Approach in Bayesian Uncertainty Analysis
20:05 – 20:35	<u><i>Akil Narayan</i></u>	Sampling high dimensional optimal measures
20:35 – 21:05	<u><i>Rick Archibald</i></u>	Error estimation in high dimensional space for stochastic collocation methods on arbitrary sparse samples

<b>22 September 2013</b> <b>SESSION: Symposium on Dynamical systems applied to</b> <b>Robotics</b> <b>CHAIR: Cristina P Santos</b> <b>(ROOM 4)</b>		
19:35 – 20:05	<u><i>Miguel Oliveira, Cristina P. Santos and Lino Costa</i></u>	Innovization Procedure applied to a Multi-objective Optimization of a biped Robot Locomotion
20:05 – 20:35	<u><i>Pedro Silva, Cristina P. Santos and Daniel Polani</i></u>	Optimization of Stable Quadruped Locomotion using Mutual Information
20:35 – 21:05	<u><i>Edgar Lobo, José Machado, and João P. Mendonça</i></u>	Development of controller strategies for a robotized filament winding equipment
21:05 – 21:35	<u><i>João André, Cristina Santos and Lino Costa</i></u>	Path Integral Learning of Multidimensional Movement Trajectories



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21:35 – 22:05	<u><i>Emanuel Miron,</i></u> <u><i>João P.M.A. Silva,</i></u> <u><i>José Machado,</i></u> <u><i>Dumitru Olaru,</i></u> <u><i>Gheorghe Prisacaru</i></u>	Using ICT techniques for improving mechatronic systems' Dependability
22:05 – 22:35	<u><i>C. Teixeira, L. Costa</i></u> <u><i>and C. Santos</i></u>	Self-Improving Biped Locomotion

<b>22 September 2013</b> <b>SESSION: Mathematical Problems in Engineering</b> <b>MPE 2013</b> <b>CHAIR: Andrea Alaimo</b> <b>(ROOM 7)</b>		
19:35 – 20:05	<u><i>V. Artale, G. Barbaraci,</i></u> <u><i>C. Milazzo, C. Orlando</i></u> <u><i>and A. Ricciardello</i></u>	Dynamic Analysis of a Hexacopter controlled via LQR-PI
20:05 – 20:35	<u><i>A. Alaimo, V. Artale,</i></u> <u><i>C. Milazzo</i></u> <u><i>and A. Ricciardello</i></u>	Comparison between Euler and Quaternion parametrization in UAV dynamics

<b>22 September 2013</b> <b>SESSION: Computational and Analytical Techniques for Solving Coupled Multiphysics Problems</b> <b>CHAIR: Xiaofan Gou</b> <b>(ROOM 11)</b>		
19:35 – 20:05	<u><i>Long Li, Jizeng Wang</i></u>	On DNA Packaging into Elastic Nanoparticles
20:05 – 20:35	<u><i>Zhuojia Fu, Wen Chen</i></u>	Water Wave Interaction with Multiple Surface-Piercing Porous Cylinders by Singular Boundary Method



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<b>20:35 – 21:05</b>	<i><b>Lei Zhang, Xiaojing Liu, Youhe Zhou, <u>Jizeng Wang</u></b></i>	<b>Influence of Vanishing Moments on the Accuracy of a Modified Wavelet Galerkin Method for Nonlinear Boundary Value Problems</b>
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**end 2nd day of the Conference**



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<b>23 September 2013</b>		
<b>SESSION: INVITED SPEAKER</b>		
<b>CHAIR:</b>		
<b>(ROOM 1)</b>		
<b>10:00 – 11:00</b>	<b>Max Gunzburger</b>	<b>TBA</b>

<b>23 September 2013</b>		
<b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b>		
<b>CHAIR: Evgeniy Romenskiy</b>		
<b>(ROOM 1)</b>		
<b>11:10 – 12:10</b>	<b>Invited lecture</b>	
	<b>Professor Fadl Moukalled</b>	
	<b>A Pressure-Based Framework for the Resolution of Multi-Fluid Flow Problems</b>	
<b>12:10 – 12:30</b>	<b><u>C.J. Wareing</u>, M. Fairweather, J. Peakall, G. Keevil, S.A.E.G. Falle and R.M. Woolley</b>	<b>Numerical Modelling of Particle-Laden Sonic CO<sub>2</sub> Jets with Experimental Validation</b>
<b>12:30 – 12:50</b>	<b><u>J. Solsvik</u> and H. A. Jakobsen</b>	<b>On the Spectral Methods for Population Balance Problems</b>
<b>12:50 – 13:10</b>	<b><u>Z. Chara</u>, B. Kysela and P. Vlasak</b>	<b>Analysis of near Bed Particle Movement in an Open Channel</b>



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<b>13:10 – 13:30</b>	<b>S.G. Constantinescu and <u>M.L. Niculescu</u></b>	<b>Experimental and Numerical Research of Lift Force Produced by Coandă Effect</b>
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SESSION: 10-th Symposium on Clifford Analysis and Applications</b> <b>CHAIR: Wolfgang Sprößig (ROOM 2)</b>		
<b>11:30 – 12:00</b>	<b><u>Georgiev, S.;</u> <u>Morais, J.</u></b>	<b>An introduction to the Hilger quaternion numbers</b>
<b>12:00 – 12:30</b>	<b><u>Kamal, Alaa</u></b>	<b>On Lipschitz continuity and properties of composition operators acting on some hyperbolic classes</b>
<b>12:30 – 13:00</b>	<b><u>Bryukhov, Dmitry</u></b>	<b>On Modified Quaternionic Analysis, Irrotational Velocity Fields and New Gradient Dynamical Systems in <math>R^3</math></b>
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SESSION: Sixth Symposium on “Recent Trends in the Numerical Solution of Differential Equations”</b> <b>CHAIR: E. Weinmueller (ROOM 3)</b>		
<b>11:30 – 12:00</b>	<b><u>P.Burrage</u></b>	<b>Structure-preserving Runge-Kutta methods for Stochastic Hamiltonian equations with</b>



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		additive noise
12:00 – 12:30	<u><i>Y.Sun</i></u>	Enhanced HBVMs for the numerical solution of Hamiltonian problems with multiple invariants
12:30 – 13:00	<u><i>R.Pavani</i></u>	Symmetric block BVMs for the solution of conservative systems
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SESSION: Engineering Problems of Plasticity</b> <b>CHAIR: R.I. Nepershin</b> <b>(ROOM 3)</b>		
13:00 – 13:30	<i>R.I. Nepershin</i>	Tube Bending on the Roll Machine

<b>23 September 2013</b> <b>SESSION: Recent advances in theoretical fluid dynamics, hydrodynamic stability theory and biological fluid mechanics</b> <b>CHAIR: J.S.B. Gajjar</b> <b>(ROOM 4)</b>		
11:30 – 12:00	<u><i>C. Davies,</i></u> <i>C.Thomas, A.P.</i> <i>Bassom, and P.J.</i> <i>Blennerhasset</i>	The linear impulse response for disturbances in an oscillatory Stokes layer
12:00 – 12:30	<u><i>U. Ehrenstein</i></u> and <i>C.</i> <i>Eloy</i>	Skin friction enhancement in a model problem of undulatory swimming



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12:30 – 13:00	<i>S. Chernyshenko, D. Huang, P. Goulart, D. Lasagna and O. Tutty</i>	Nonlinear stability analysis of fluid flow using sum of squares of polynomials
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SESSION: The 2nd Symposium on Numerical Methods of Boundary Value Problems (BVPs): Analysis, Algorithms and Real World Applications</b> <b>CHAIR: Ali Sayfy</b> <b>(ROOM 5)</b>		
11:30 – 12:00	<i>Ali Sayfy, Suheil Khoury &amp; H. Ibdah</i>	A Forth Order Spline Collocation Approach for a Business Cycle Model
12:00 – 12:30	<i>Johnny Henderson &amp; Rodica Luca</i>	Multiple Positive Solutions for a Second-Order Multi-Point Discrete Boundary Value Problem
12:30 – 13:00	<i>Pius W. M. Chin</i>	The qualitative behavior of the solution of the wave equation using the Non-standard finite difference and Galerkin methods
13:00 – 13:30	<i>Thomas Wunderli</i>	Partial Regularity of Gradient Time Flows for Plasticity and Image Denoising Functionals with $L^2$ Penalty
<b>Lunch Break</b>		



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<b>23 September 2013</b> <b>SESSION: Second Symposium on Statistical Inference in Linear Models</b> <b>CHAIR: Francisco Carvalho</b> <b>(ROOM 6)</b>		
11:30 – 11:50	<u>Adilson da Silva;</u> Francisco Carvalho; João T. Mexia; Miguel Fonseca	One-sided tolerance interval in a two-way balanced nested model with mixed effects
11:50 – 12:10	<u>Aníbal Areia;</u> Manuela M. Oliveira	Longitudinal Analysis for Matched Series of Studies
12:10 – 12:30	<u>Célia Nunes;</u> Gilberto Capistrano; Dário Ferreira; Sandra S. Ferreira	Longitudinal Analysis for Matched Series of Studies
12:30 – 12:50	<u>Cristina Andrade;</u> João A. Andrade	Climate change projections for precipitation in Portugal
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SESSION: Workshop on Isomathematics and its Applications</b> <b>CHAIR: C. Corda</b> <b>(ROOM 7)</b>		
09:00 – 10:00	<u>R. M. Santilli</u>	Opening Lecture : A recollection of the journey for isomathematics to achieve maturity
10:00 – 11:00	<u>A. A. Bhalekar</u>	Studies of Santilli's isotopic, genotopic and isodual four directions of time





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11:00 – 11:30	<b>Coffee Break</b>	
11:30 – 12:30	<u>S. J. Dhoble</u>	Theoretical and Experimental Basis of Santilli's IsoRedShift(IRS)
12:30 – 13:30	<u>A. S. Muktibodh</u>	Foundations of Isomathematics
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SESSION: Geometric Methods for Integrable Systems and PDE with Applications to Engineering, Biology and Medicine</b> <b>CHAIR: M. Toda and G. Bornia</b> <b>(ROOM 8)</b>		
11:30 – 12:00	<u>Max Gunzburger</u>	TBA
12:00 – 12:30	<u>Simone Bnà,</u> Antonio Cervone, Vincent Le Chenadec, Sandro Manservisi and Ruben Scardovelli	Review of Split and Unsplit Geometric Advection Algorithms
12:30 – 13:00	<u>Giorgio Bornia</u>	On a class of constrained boundary control problems treated with a lifting function approach
<b>Lunch Break</b>		



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<b>23 September 2013</b> <b>SESSION: Dispersed Two-Phase Flows : Dispersion,            Deposition and Agglomeration</b> <b>CHAIR: A. Tanière A.; B. Arcen, C. Marchioli</b> <b>(ROOM 9)</b>		
08:30 – 09:00	<u>A. Tanière A.; B. Arcen, C. Marchioli</u>	Introduction to the symposia
09:00 – 10:00	<u>Jean-Pierre Minier</u>	A modelling approach to colloidal particle deposition and resuspension
10:00 – 10:25	<u>J. Zhang, Y. Shao, N. Huang</u>	Wind-tunnel experiment for dust dry deposition
10:25 – 11:00	<u>A. Kartushinsky, Y. Rudi, D. Stock, M. Hussainov, I. Shcheglov, S. Tisler</u>	3d RANS-RSTM numerical simulation of channel turbulent particulate flow with wall roughness
11:00 – 11:30	<b>Coffee Break</b>	

<b>23 September 2013</b> <b>SESSION: Dispersed Two-Phase Flows : Dispersion,            Deposition and Agglomeration</b> <b>CHAIR: A. Tanière A.; B. Arcen, C. Marchioli</b> <b>(ROOM 9)</b>		
11:30 – 11:55	<u>A. Chernyshev and A. Schmidt</u>	Bubble column dynamics with bubble induced turbulence and dispersion
11:55 – 12:20	<u>W. Michałek, J.G.M. Kuerten, R. Liew, J.C.H. Zeegers and</u>	A hybrid stochastic-deconvolution model for particle-laden LES



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	<i>B.J. Geurts</i>	
12:20 – 13:00	<i>E. Russo, J.G.M. Kuerten, C.W.M. van der Geld and B.J. Geurts</i>	Water circulation in non-isothermal droplet-laden turbulent channel flow
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SYMPOSIUM: Approximation Theory and Special Functions</b> <b>CHAIR: Oktay Duman</b> <b>(ROOM 10)</b>		
11:30 – 12:00	<u>Mehmet Ünver</u>	Abel transforms of positive linear operators
12:00 – 12:30	<u>Tuğba Yurdakadim, Emre Taş and Özlem Atlıhan Girgin</u>	Statistical approximation properties of convolution operators for multivariables
12:30 – 13:00	<u>Emre Taş, Cihan Orhan and Tuğba Yurdakadim</u>	The Stancu-Chlodowsky operators based on q-calculus
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SESSION: Mathematical Optimization in Modern Medicine and Engineering Symposium</b> <b>CHAIR: Flavius Pater, Serban Rosu</b> <b>(ROOM 11)</b>		
11:30 – 12:00	<u>Flavius PATER</u>	A Shift Algebra Problem with Application to Harmonic Signal Models



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12:00 – 12:30	<u><i>Doina CHIORAN,</i></u> <u><i>Adrian NICOARĂ,</i></u> <u><i>Șerban ROȘU, Virgil</i></u> <u><i>CĂRLIGERIU, Emilia</i></u> <u><i>IANEȘ</i></u>	Contours Identification of Elements in a Cone Beam Computed Tomography for Investigating Maxillary Cysts
12:30 – 13:00	<u><i>Mirela Toth-Tascau,</i></u> <u><i>Flavia Balanean and</i></u> <u><i>Mircea Krepelka</i></u>	Assessment and Prediction of Inter-joint Upper Limb Movement Correlations Based on Kinematic Analysis and Statistical Regression
13:00 – 13:30	<u><i>Dana Stoian,</i></u> <u><i>Mihaela</i></u> <u><i>Craciunescu,</i></u> <u><i>Romulus Timar ,</i></u> <u><i>Adalbert Schiller,</i></u> <u><i>Liana Pater, Marius</i></u> <u><i>Craina</i></u>	Age Impact on Autoimmune Thyroid Disease in Females
<b>Lunch Break</b>		

<b>23 September 2013</b>		
<b>SESSION: 2ND SYMPOSIUM ON METAHEURISTIC AND NUMERICAL ANALYSIS / ENGINEERING APPLICATIONS</b>		
<b>CHAIR: Sinan Melih Nigdeli, Gebrail Bekdaş (ROOM 12)</b>		
11:30 – 12:00	Yusuf Cengiz Toklu	Metaheuristics and Engineering
12:00 – 12:30	Sinan Melih Nigdeli and Gebrail Bekdaş	An Optimization Approach for Design of RC Beams Subjected to Flexural and Shear Effects



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<b>12:30 – 13:00</b>	<b>Gebrail Bekdaş and Sinan Melih Nigdeli</b>	<b>Optimization of Tuned Mass Damper for Adjacent Buildings with Equal Properties</b>
<b>13:00 – 13:30</b>	<b>Mustafa Nabi Kocakaya and Osman Hürol Türkakın</b>	<b>Solution of Facility Location Problem in Turkey by Using Fuzzy C-Means Method</b>
<b>Lunch Break</b>		

<b>23 September 2013</b> <b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b> <b>CHAIR: Eric Goncalves</b> <b>(ROOM 1)</b>		
<b>14:30 – 14:50</b>	<b><u>V. K. Sin</u>, J. T. Zhang and S. Cong</b>	<b>Study of Thin Flexible Piezoelectric Membrane for Energy Harvesting</b>
<b>14:50 – 15:10</b>	<b><u>A. Sow</u>, A. Chinnayya and A. Hadjadj</b>	<b>Effect of Friction and Heat Losses on the Mean Structure of One- Dimensional Detonations</b>
<b>15:10 – 15:30</b>	<b><u>E. Romenski</u>, A. Belozarov and I. M. Peshkov</b>	<b>Thermodynamically Compatible Hyperbolic Conservative Model of Compressible Multiphase Flow: Application to Four Phase Flow</b>
<b>15:30 – 15:50</b>	<b><u>S. I. Bernad</u>, A. Bosioc, A. Totorean, R. Stanciu and E.S. Bernad</b>	<b>Vortices in By-pass Graft Flow</b>
<b>15:50 – 16:10</b>	<b>N. Tofighi and <u>M. Yildiz</u></b>	<b>ISPH Simulation of Droplet Spreading at Different Eotvos Numbers</b>



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16:10 – 16:30	<b><u>A. Bobonea</u> and M.V. Pricop</b>	<b>Numerical and Experimental Study of Blowing Jet on a High Lift Airfoil</b>
16:30 – 16:50	<b>J. Halama</b>	<b>Numerical Solution of Two- Phase Flow of Wet Steam with a Given Droplet Size Distribution Function</b>
<b>Coffee Break</b>		

<b>23 September 2013</b> <b>SESSION: '3<sup>rd</sup> Symposium on Distribution Theory, Estimation and Inference'</b> <b>CHAIR: Carlos A. Coelho</b> <b>(ROOM 2)</b>		
15:00 – 15:30	<b><u>Filipe J. Marques</u></b>	<b>The Multisample Block-diagonal Equicorrelation and Equivariance test</b>
15:30 – 16:00	<b><u>Ayana Mateus</u></b>	<b>Comparing Several Tests of Randomness Based on the Difference of Observations</b>
16:00 – 16:30	<b><u>Dora Gomes</u></b>	<b>Reduced bias and threshold choice in the extremal index estimation through resampling techniques</b>
16:30 – 17:00	<b><u>Inês Sequeira</u></b>	<b>Genetic and Statistical Study of HIV Integration in the Human Genome</b>
17:00 – 17:30	<b>Coffee Break</b>	



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<b>23 September 2013</b> <b>SESSION: Sixth Symposium on “Recent Trends in the Numerical Solution of Differential Equations”</b> <b>CHAIR: P. Burrage</b> <b>(ROOM 3)</b>		
15:00 – 15:30	<b><u>L. Bru gnano</u></b>	Efficient implementation of geometric integrators for separable Hamiltonian problems
15:30 – 16:00	<b><u>E. Weinmueller</u></b>	Collocation for Singular BVPs in ODEs with Unsmooth Data
16:00 – 16:30	<b><u>G. Settanni</u></b>	Calculations of the Morphology Dependent Resonances
16:30 – 17:00	<b><u>Symposium group photo</u></b>	

<b>23 September 2013</b> <b>SESSION: Recent advances in theoretical fluid dynamics, hydrodynamic stability theory and biological fluid mechanics</b> <b>CHAIR: S. Chernyshenko</b> <b>(ROOM 4)</b>		
15:00 – 15:30	<b><u>S. Braun, S. Scheichl, and A. Kluwick</u></b>	Adjoint operator approach in marginal separation theory
15:30 – 16:00	<b><u>B. Scheichl</u></b>	On the Euler stage of turbulent separation near the trailing edge of a bluff body
16:00 – 16:30	<b><u>A. Kluwick and M. Kornfeld</u></b>	Triple deck analysis of transonic high Reynolds number flows through slender nozzles



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16:30 – 17:00	<u>S. Scheichl</u> and S. Braun	On blow-up solutions in marginally separated triple-deck flows
17:00 – 17:30	<b>Coffee Break</b>	

<b>23 September 2013</b> <b>SESSION: Numerical Optimization and Applications</b> <b>CHAIR: M. Margarida Ferreira</b> <b>(ROOM 5)</b>		
15:00 – 15:20	<u>M. M. A. Ferreira</u> , A.F. Ribeiro and G.V. Smirnov	Sufficient Conditions of Optimality for Control of Hydro-Electric Power Stations
15:20 – 15:40	V. A. Bushenkov, M. M. A. Ferreira, <u>A. F. Ribeiro</u> and G. V. Smirnov	Numerical Approach to a Problem of Hydroelectric Resources Management
15:40 – 16:00	<u>M H A Biswas</u> and MdR de Pinho	Maximum Principle for State and Mixed Constrained Problems with Equality and Inequality Mixed Constraints: Convex Case
16: 00 – 16:20	<u>L.T. Paiva</u> and F.A.C.C. Fontes	Mesh Refinement Strategy for Optimal Control Problems
16:20 – 16:40	Sofia O. Lopes, Fernando A. C. C. Fontes, Rui M. S. Pereira, <u>A. Manuela Gonçalves</u> and Gaspar J. Machado	Irrigation Planning: An Optimal Control Approach
16:40 – 17:00	Sofia O. Lopes, Fernando A. C. C. Fontes, <u>M. Fernanda P. Costa</u> , Rui M. S.	Irrigation Planning: Replanning and Numerical Solution





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	Pereira, A. Manuela Gonçalves and Gaspar J. Machado	
17:00 – 17:30	<b>Coffee Break</b>	

<b>23 September 2013</b> <b>SESSION: Workshop on Isomathematics and its Applications</b> <b>CHAIR: C. Corda</b> <b>(ROOM 7)</b>		
15:00 – 16:00	<u>P. S. Muktibodh</u>	Introduction to Isodual Mathematics and its Application to Special Relativity
16:00 – 17:00	<u>S. P. Zodape</u>	The Magnehydrogen in hadronic Chemistry
17:00 – 17:30	<b>Coffee Break</b>	
17:30 – 18:30	<u>V. M. Tangde</u>	Elementary and Brief Introduction of Hadronic Chemistry
18:30 – 19:30	<u>P. Rowlands</u>	Rowlands' IsoNilpotency
19:30 – 20:30	<u>S. Georgiev</u>	Isoordinary isodifferential isoequations
20:30 – 21:30	Projection of Prof. Santilli's Lecture IIA of the World Lecture Series	



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<b>23 September 2013</b> <b>SESSION: Second Symposium on Statistical Inference in Linear Models</b> <b>CHAIR: Dário Ferreira</b> <b>(ROOM 6)</b>		
15:00 – 15:20	<u>Dário Ferreira;</u> <i>Sandra S. Ferreira;</i> <i>Célia Nunes; Sónia Inácio</i>	Inducing pivot variables and non-centrality parameters in elliptical distributions
15:20 – 15:40	<u>Dina Salvador;</u> <i>Sandra Monteiro;</i> <i>João T. Mexia</i>	Adjusting models for symmetric stochastic matrices using <i>vec</i> type operators
15:40 – 16:00	<i>Aníbal Areia;</i> <u>Francisco Carvalho</u>	Perfect Families: an application to Orthogonal and Error Orthogonal Models
16:00 – 16:20	<i>Francisco Carvalho;</i> <i>João T. Mexia;</i> <u>Ricardo Covas</u>	Models with homoscedastic orthogonal partition, BQUE and mixed models
16:20 – 16:40	<u>Sandra Monteiro;</u> <i>Dina Salvador; João T. Mexia</i>	Advances in Structured Stair Nesting
17:00 – 17:30	<b>Coffee Break</b>	

<b>23 September 2013</b> <b>SESSION: Geometric Methods for Integrable Systems and PDE with Applications to Engineering, Biology and Medicine</b> <b>CHAIR: M. Toda and G. Bornia</b> <b>(ROOM 8)</b>		
15:00 – 15:30	<u>Alex Solynin</u>	Few Etudes on Continuous Symmetrization
15:30 – 16:00	<u>Simone Bna,</u> Sandro Manservisi, Eugenio Aulisa	A MultiLevel Domain Decomposition solver for Monolithic Fluid-Structure Interaction problems



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16:00 – 16:30	<u>Magdalena Toda</u>	Forchheimer-type equations in conjunction with constant mean curvature graphs
16:30 – 17:00	<u>Magdalena Toda,</u> Bhagya Athukoralage	Geometry of Biological Membranes and Willmore Energy
17:00 – 17:30	<b>Coffee Break</b>	

<b>23 September 2013</b> <b>SESSION: Dispersed Two-Phase Flows : Dispersion,          Deposition and Agglomeration</b> <b>CHAIR: A. Tanière A.; B. Arcen, C. Marchioli          (ROOM 9)</b>		
15:00 – 15:25	<u>A. Bukhvostova,</u> <i>J.G.M. Kuertent, and B.J. Geurts</i>	Low-Mach algorithm for heated droplet-laden turbulent channel flow including phase transition
15:25 – 15:50	<u>D. Swailes and Y. Ammar</u>	The numerical treatment of pdf-based models for the distribution of particle-pair variables
15:50 – 16:15	<u>A. Tanière and B. Arcen</u>	Prediction of turbulent particle laden channel flow: GLM and normalized Stochastic models
16:15 – 17:00	<u>A. Mehel</u>	Comparison of nanoparticles deposition in turbulent flows using electrophoresis and two different charging mechanisms

<b>23 September 2013</b> <b>SYMPOSIUM: Approximation Theory and Special Functions</b> <b>CHAIR: Esra Erkuş-Duman          (ROOM 10)</b>		
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15:00 – 15:30	<b><u>Rabia Aktaş</u></b>	A new multivariable extension of Humbert matrix polynomials
15:30 – 16:00	<b><u>Bayram Çekim</u></b>	Generalized Euler's beta matrix and related functions
16:00 – 16:30	<b><u>Recep Şahin</u></b>	An extension of some Lauricella hypergeometric functions
16:30 – 17:00	<b><u>Nejla Özmen</u> and <u>Esra Erkuş-Duman</u></b>	Some results for a family of multivariable polynomials
17:00 – 17:30	<b>Coffee Break</b>	

<b>23 September 2013</b> <b>SESSION: Mathematical Optimization in Modern Medicine and Engineering Symposium</b> <b>CHAIR: Flavius Pater, Serban Rosu</b> <b>(ROOM 11)</b>		
15:00 – 15:30	<b><i>Daniela Pîslea, Marius Boldea and Florin Sala</i></b>	Assessing the Gluten Content in Wheat as an Expression of the Nutrition Deficit, through Beta Distribution
15:30 – 16:00	<b><i>C. Bota, B. Caruntu and O. Bundau</i></b>	Fibre stability of closed sets of a global monotone dynamical system
16:00 – 16:30	<b><u>Clara Beatrice VÎLCEANU, Ioan Sorin HERBAN, Carmen GRECEA</u></b>	Creating 3D Models of Heritage Objects Using Photogrammetric Image Processing



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<b>16:30 – 17:00</b>	<b><u>Alina Lascutoni,</u> <u>Erika Ardelean, Ana</u> <u>Socalici and Marius</u> <u>Ardelean</u></b>	<b>Mathematical Modeling of Micro-coolers Added in the Continuous Casting Tundish</b>
<b>17:00 – 17:30</b>	<b>Coffee Break</b>	

<b>23 September 2013</b>		
<b>SESSION: 2ND SYMPOSIUM ON METAHEURISTIC AND NUMERICAL ANALYSIS / ENGINEERING APPLICATIONS</b>		
<b>CHAIR: Yusuf Cengiz Toklu and Şemsi Burhanettin Altan (ROOM 12)</b>		
<b>15:00 – 15:30</b>	<b>Sinan Melih Nigdeli and M. Hasan Boduroğlu</b>	<b>Active Tendon Control of Reinforced Concrete Frame Structures Subjected to Near-Fault Effects</b>
<b>15:30 – 16:00</b>	<b>Gebrail Bekdaş</b>	<b>Effect of the Long Wall Assumption on Analysis of Axially Symmetric Cylindrical Shell Walls</b>
<b>16:00 – 16:30</b>	<b>Gebrail Bekdaş and Namık Kemal Oztorun</b>	<b>A Comparative Study on Cylindrical Shell Walls</b>
<b>16:30 – 17:00</b>	<b>Azadeh Noktehdan, Seyedmohammad Seyedhosseini, Ali Husseinzadeh Kashan and Farnaz Barzinpour</b>	<b>A group based league championship algorithm for the manufacturing cell formation problem</b>



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<b>23 September 2013</b> <b>SESSION: Sparse Matrix Inverse Related Algorithms</b> <b>CHAIR: Dr. Song Li</b> <b>(ROOM 1)</b>		
19:35 – 20:05	<u>Song Li, Eric Darve</u>	Accuracy in one-way and two-way algorithms for computing selected entries in the inverse of sparse matrices
20:05 – 20:35	<u>J. Kent Poots</u>	Image Deblurring Applied to Infrared Tongue Position Imaging: Initial Simulation Results

<b>23 September 2013</b> <b>SESSION: Numerical Calculations on Theoretical Magnetism</b> <b>CHAIR: Dr. Gülistan Mert</b> <b>(ROOM 2)</b>		
19:35 – 20:05	<u>Gülistan Mert</u>	Numerical Study of a Two-Sublattice Heisenberg Ferrimagnetic Model: Green's Function Method
20:05 – 20:35	<u>H. Şevki Mert</u> and Gülistan Mert	Phase Diagram of a Three-Sublattice Mixed Ferro-Ferrimagnetic Heisenberg System

<b>23 September 2013</b> <b>SESSION: On the Validity of the Batch Quantile Method for Markov Chains</b> <b>CHAIR: David F. Muñoz</b> <b>(ROOM 3)</b>		
19:35 – 19:55	<u>Adrián Ramírez-Nafarrate</u> and David F. Muñoz	Empirical Comparison of Replication and Batch Approaches for Estimating Steady-State Mean, Variance and Quantile



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19:55 – 20:15	<b><u>Adrián Ramírez-Nafarrate</u></b> and David F. Muñoz	Quantile Estimation for a Non-Geometric Ergodic Markov Chain
20:15 – 20:35	<b>David F. Muñoz</b> and <b><u>Adán Ramírez-López</u></b>	A Note on Bias and Mean Squared Error in Steady-State Quantile Estimation

<b>23 September 2013</b> <b>SESSION: Operational Research and Applications</b> <b>CHAIR: Fernanda A. Ferreira</b> <b>(ROOM 4)</b>		
19:00 – 19:20	<b><u>Fernanda A. Ferreira</u></b> and <b><u>Flávio Ferreira</u></b>	Privatization in a mixed duopoly with environmental taxes
19:20 – 19:40	<b>Fernanda A. Ferreira</b> and <b><u>Flávio Ferreira</u></b>	Environmental and international tariffs in a mixed duopoly
19:40 – 20:00	<b>A. Kosarev, A. Nepp, O. Nikonov, and O. Rushitskaja</b>	Development of Insurance Terms Based on Risk Assessment
20:00 – 20:20	<b><u>Oleg I. Nikonov,</u></b> <b>Vladimir E. Vlasov</b> and <b>Marina A. Medvedeva</b>	Operational Risk Economic Capital Allocation
20:20 – 20:40	<b><u>Luís António de Almeida Vieira</u></b> and <b>Vasco Moço Mano</b>	Euclidean Jordan Algebras, Maclaurin Series and Inequalities on Strongly Regular Graphs

<b>23 September 2013</b> <b>SESSION: Numerical Optimization and Applications</b> <b>CHAIR: Ana I Pereira and M. Fernanda Costa</b> <b>(ROOM 5)</b>		
19:35 – 19:55	<b>Ana I. Pereira,</b> <b><u>José Lima</u></b> and Paulo	Humanoid Robot Gait Optimization: Stretched



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	Costa	Simulated Annealing and Genetic Algorithm a Comparative Study
19:55 – 20:15	<u>M. Fernanda P. Costa</u> and C. Ribeiro	A Modified Fractional Zener Model to Describe the Behaviour of a Carbon Fibre Reinforced Polymer
20:15 – 20:35	<u>Paula Odete Fernandes</u> and <u>Ângela Paula Ferreira</u>	Wind Farms Model Aggregation Using Probabilistic Clustering

<b>23 September 2013</b> <b>SESSION: 1st Symposium on Computational Mathematics and its applications</b> <b>CHAIR: Waheed k. Zahra, M. A. Bek and Dr. M. Hekal (ROOM 6)</b>		
19:35 – 20:05	<u>M. M. Hikal</u> and M. M. A. El-Sheikh	Stability of A General SEIV Epidemic Model With Time Delay
20:05 – 20:35	W. K. Zahra , <u>W. A. Ouf</u> and M. S. El-Azab	B-Spline Soliton Solution of the Fifth Order KdV Type Equations
20:35 – 21:05	D.M. Atwa, <u>N.Aboufotoh</u> , A. Abo El-magd, Y. Badr	Spectroscopic Study of PbS Nano-Structured layer Prepared by PLD Utilized as a Hall-Effect magnetic sensor

<b>23 September 2013</b> <b>SESSION: First Symposium on Pure and Applied Mathematics (2013)</b> <b>CHAIR: Manish Kumar (ROOM 8)</b>		
19:35 – 20:05	Manish Kumar	Image encryption using TSRMSC associated with DWT





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20:05 – 20:35	<b><u>Narsimhulu Dunna,</u></b> Addepalli Ramu and Dipak Kumar Satpathi	Similarity Solutions To Shock Waves In Non-Ideal Magnetogasdynamics
20:35 – 21:05	Akhilesh Prasad, Manoj Kumar Singh and <b><u>Manish Kumar</u></b>	The continuous fractional wave packet transform
21:05 – 21:35	Sunil Mukhi and <b><u>Rahul Nigam</u></b>	Constraints on “Rare” Dyon Decays

<b>23 September 2013</b> <b>SESSION: Mathematical Optimization in Modern Medicine and Engineering Symposium</b> <b>CHAIR: Flavius Pater, Serban Rosu</b> <b>(ROOM 11)</b>		
19:35 – 20:05	<i>Adina Păucă, Teodor Heput, Erika Ardelean and Eugen Crişan</i>	Mathematical Modeling of the Influence of Chemical Composition on the Characteristics of Resistance
20:05 – 20:35	<i>Diana Stoica, Mihail Megan and Dan Ludovic Lemle</i>	Polynomial stability in mean square of stochastic cocycles in Hilbert spaces
20:35 – 21:05	<i><u>Laura Strugariu,</u></i> <i><u>Eugen Crisan,</u></i> <i><u>Virginia Socalici,</u></i> <i><u>Teodor Heput</u></i>	Mathematical Modeling Based on Qualitative Characteristics of Briquettes Depending on the Composition of Recipes
21:05 – 21:35	<i><u>Mirela Toth-Tascau,</u></i> <i><u>Oana Pasca,</u></i> <i><u>Cosmina Vigaru and</u></i> <i><u>Lucian Rusu</u></i>	Assessment of Gait Symmetry for Talus Valgus Children Based on Experimental Kinematic Analysis

end 3rd day of the Conference



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<b>25 September 2013</b> <b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b> <b>CHAIR: Ashoke De</b> <b>(ROOM 1)</b>		
<b>11:10 – 12:10</b>	<b>Invited lecture</b> <b>Professor Sergei Sazhin</b> <b>Droplet Heating and Evaporation:</b> <b>Hydrodynamic, Kinetic and Molecular</b> <b>Dynamics Models</b>	
<b>12:10 – 12:30</b>	<b>A. I. Bosioc, S. Muntean, R. F. Susan-Resiga, L. Vékás, <u>S. Bernad</u></b>	<b>Numerical Simulation of the Swirl Generator Discharge Cone at Lower Runner Speeds</b>
<b>12:30 – 12:50</b>	<b><u>J. Oder</u> and I. Tiselj</b>	<b>Chebyshev Collocation Benchmark for Natural Convection Flow in Differentially Heated Cavity</b>
<b>12:50 – 13:10</b>	<b>J.M. Floryan</b>	<b>On The Super-ThermoHydrophobic Effect</b>
<b>13:10 – 13:30</b>	<b><u>M. Ozbulut</u>, M. Yildiz and O. Goren</b>	<b>SPH Modeling of Sway-Sloshing Notion in a Partially Filled Rectangular Tank</b>
<b>Lunch Break</b>		



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<b>25 September 2013</b> <b>SESSION: '3<sup>rd</sup> Symposium on Distribution Theory, Estimation and Inference'</b> <b>CHAIR: Carlos A. Coelho</b> <b>(ROOM 2)</b>		
11:30 – 12:00	<u><i>Frederico Caeiro</i></u>	On the Selection of the Tuning Parameter of a Moment Estimator of the Extreme Value Index
12:00 – 12:30	<u><i>Luís M. Grilo</i></u>	Near-exact distributions for the likelihood ratio statistic used to test the reality of a covariance matrix
12:30 – 13:00	<u><i>Carlos A. Coelho</i></u>	The exact distribution of the likelihood ratio test statistic used to test simultaneously the equality of means and circularity of the covariance matrix
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SESSION: Sixth Symposium on "Recent Trends in the Numerical Solution of Differential Equations"</b> <b>CHAIR: Y. Sun</b> <b>(ROOM 3)</b>		
11:30 – 12:00	<u><i>A.Pedas</i></u>	On the regularity of solutions of nonlinear integral equations
12:00 – 12:30	<u><i>M.Rebello</i></u>	A Stokeslets approach for the numerical solution of Brinkman systems



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<b>12:30 – 13:00</b>	<b><u>G.Vainikko</u></b>	A Smooth Solution to a Nonlinear System of Singular ODEs
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SESSION: Advances in Nonlinear Estimation for Distributed Parameter and Robotic Systems</b> <b>CHAIR: Gerasimos Rigatos</b> <b>(ROOM 4)</b>		
<b>11:30 – 12:00</b>	G. Rigatos and E. Rigatou	A Derivative-free nonlinear Kalman Filtering approach to estimation of wave-type dynamics in neurons' membrane
<b>12:00 – 12:30</b>	G. Rigatos and P. Siano	Control of quadrotors using Differential Flatness theory and the Derivative-free nonlinear Kalman Filter
<b>12:30 – 13:00</b>	G. Rigatos	Adaptive fuzzy control of underactuated robotic systems with the use of differential flatness theory
<b>13:00 - 13:30</b>	G. Rigatos and N. Zervos	Channel equalization and synchronization in chaotic communications using a dual Kalman Filtering scheme
<b>Lunch Break</b>		



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<b>25 September 2013</b> <b>SESSION: Dispersed Two-Phase Flows : Dispersion,          Deposition and Agglomeration</b> <b>CHAIR: A. Tanière A.; B. Arcen, C. Marchioli</b> <b>(ROOM 5)</b>		
09:00 – 10:00	<u><i>Fredrik Lundell</i></u>	Fluid vs. particle inertia: motions of non-spherical particles in shear
10:00 – 10:25	<u><i>M. Wilkinson</i></u>	Alignment of microscopic rods in complex flows
10:25 – 11:00	<u><i>J.-C. Roux and J.-F. Bloch</i></u>	Lubrication theory explains the modification of fiber properties in the refining process
11:00 – 11:30	<b>Coffee Break</b>	

<b>25 September 2013</b> <b>SESSION: Dispersed Two-Phase Flows : Dispersion,          Deposition and Agglomeration</b> <b>CHAIR: A. Tanière A.; B. Arcen, C. Marchioli</b> <b>(ROOM 5)</b>		
11:30 – 11:55	<u><i>A. A. Hoseini, Z. Zavareh, F. Lundell, H. I. Anderson</i></u>	Fiber tracking algorithm in combined piv/ptv measurement of fiber suspension flow
11:55 – 12:20	<u><i>C. Marchioli and A. Soldati</i></u>	Rotation statistics of rigid fibers in turbulent channel flow
12:20 – 12:45	<u><i>J. Ravnik, C. Marchioli, M. Hriberšek and A. Soldati</i></u>	On shear lift force modelling for non-spherical particles in turbulent flows



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12:45 – 13:30	<u>C. Knoop and U. Fritsching</u>	Numerical derivation of Forces on Particles and Agglomerates in a Resonant Acoustic field.
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SYMPOSIUM: Approximation Theory and Special Functions</b> <b>CHAIR: Tamaz S. Vashakmadze</b> <b>(ROOM 6)</b>		
11:30 – 12:00	<u>Alexander P. Buslaev,</u> A.G. Tatashev and Marina V. Yashina	Qualitative properties of dynamical system on toroidal chainmail
12:00 – 12:30	Tamaz S. Vashakmadze, <u>Yusuf F. Gülver</u> and Archil P. Papukashvili	Application of projective methods for solving BVPs of DEs with a small parameter
12:30 – 13:00	Tamaz S. Vashakmadze and <u>Aliki Muradova</u>	To problem of approximate solution of BVPs for ODEs with boundary layers by multipoint methods
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SESSION: Application of the Boltzmann Kinetic Equation to Study Instabilities, the Eddy Problems and Turbulence</b> <b>CHAIR: T. Vougiouklis</b> <b>(ROOM 7)</b>		
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09:00 – 10:00	<u>R. M. Santilli</u>	Recollections on the birth of the isotopies and isodualities achieve maturity
10:00 – 11:00	<u>A. A. Bhalekar</u>	Santilli's Lie-Admissible Mechanics. The Only Option Commensurate with Irreversibility and Nonequilibrium Thermodynamics
11:00 – 11:30	<b>Coffee Break</b>	
11:30 – 12:30	<u>C. Corda</u>	Introduction to Santilli Iso-Mathematics
12:30 – 13:30	<u>R. L. Kohale</u>	Santilli's IsoRedShift and IsoBlueShift. A Brief Review
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SESSION: Dependable Mechatronic Systems</b> <b>CHAIR: José Machado</b> <b>(ROOM 8)</b>		
11:30 – 12:00	Elsa Marcelino-Jesus, Joao Sarraipa, Ricardo Jardim-Goncalves	An Evaluation Approach for Research Project Pilot Technological Applications
12:00 – 12:30	Gheorghe Popan, Gh. Ion Gheorghe, Todoran Gabriel	Testing Command and Control of the Satellites in Formation Flight
12:30 – 13:00	Vasco Delgado-Gomes, José A. Oliveira-Lima, João F. Martins, Ricardo	Towards a Service Bus for Distributed Manufacturing



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	Jardim-Gonçalves	
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SESSION: Symposium on the grid-based quantum many-body problem</b> <b>CHAIR: Toby D. Young</b> <b>(ROOM 9)</b>		
11:30 – 12:30	<u><i>T. Ono</i></u>	Plenary: First-principles electronic-structure and transport calculation formalism using real-space grid based methods
12:30 – 13:00	<u><i>R. O. Esquivel,</i></u> <i>M. Molina-Espíritu,</i> <i>J. S. Dehesa,</i> <i>J. C. Angulo,</i> <i>S. López-Rosa</i>	Grid-based quantum information chemistry: Chemical reactions
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SESSION: Statistical tools and models for applications</b> <b>CHAIR: M. Rosário Ramos</b> <b>(ROOM 10)</b>		
11:30 – 11:50	<u><i>A. Manuela</i></u> <u><i>Gonçalves, Marco</i></u> <u><i>Costa</i></u>	Assessing the performance of Change-point detection based on the SIC procedure for non Gaussian and correlated data - a simulation study





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11:50 – 12:10	<u><i>Helena Mouriño</i></u>	Ordinal Regression Models to Describe Tourist Satisfaction with Sintra's World Heritage
12:10 – 12:30	<u><i>Lucie Dudová, F. Buňka, J. Michálek, M. Sedlačík and L. Buňková</i></u>	Risk Analysis of Tyramine Concentration in Food Production
12:30 – 12:50	<u><i>Marina A. P. Andrade, Hugo F.V. Cardoso</i></u>	The Problem of Age Determination in Living Individuals
12:50 – 13:10	<u><i>Martina Mikušková, Jaroslav Michálek, Pavel Mikuška, Todor Ivanov</i></u>	Statistical analysis of chemical composition of PM1 aerosols
13:10 – 13:30	<u><i>M. J. Costa, M. Pires, C. Neves, D. Tavares, A. M. Quintas, A. I. Ferreira, M. J. Espirito Santo, A. Castro, M.S. Cabral, João J.F Gomes</i></u>	Supracondylar Fracture in Children. Rehabilitation in Occupational Therapy. Yes or No?
13:30 – 13:50	<u><i>M. Rosário Ramos, Clara Cordeiro</i></u>	Trend Tests in Time Series with Missing Values: a Case Study with Imputation.
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SESSION: Mathematical Optimization in Modern Medicine and Engineering Symposium</b> <b>CHAIR: Flavius Pater, Serban Rosu</b> <b>(ROOM 11)</b>		
11:30 – 12:00	<u><i>Cosmin Blidariu, Marius Boldea, Florin Sala</i></u>	Aspects of Modeling Regarding the Contribution of Nitrogen to the Formation of Grape Yields



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12:00 – 12:30	<u>C. Bota, B. Caruntu</u> <u>and O. Bundau</u>	Application of He's Homotopy Perturbation Method for a nonlinear functional equation in Banach spaces
12:30 – 13:00	<u>Mihalea Craciunescu, Dana Stoian, Romulus Timar, Adalbert Schiller, Flavius Pater, Marius Craina</u>	Female Sexual Dysfunction in Young Adult Women – Impact of Age and Lifestyle
13:00 – 13:30	<u>Doina CHIORAN, Adrian NICOARĂ, Șerban ROȘU, Virgil CĂRLIGERIU, Emilia IANEȘ</u>	3D Reconstruction on CBCT in The Cystic Pathology of The Jaws
<b>Lunch Break</b>		

<b>25 September 2013</b> <b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b> <b>CHAIR: Alexander Starostin</b> <b>(ROOM 1)</b>		
15:00 – 15:20	<u>A. Zemitis, O. Iliev, K. Steiner, W. Klein-Hessling, M. Sonnenkalb and M. Freitag</u>	Simulation of Multiphysics in a NPP Containment using Combined Codes with Different Spatial Resolution
15:20 – 15:40	<u>Jithin M, Shubham, A. De and M. K. Das</u>	Study of Lid Driven Rectangular Cavities Using LBM



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15:40 – 16:00	<u>K. Straka</u> , B. Praher and G. Steinbichler	Analyzing Melt Homogeneity in a Single Screw Plasticizing Unit of an Injection Molding Machine
16:00 – 16:20	<u>I. Rusagar</u> and C. Harley	Well-Balancing and Relaxation Schemes for the Numerical Investigation of Heat Transfer in One Dimensional Triangular Fins
16:20 – 16:40	<u>R.M. Woolley</u> , C. Proust, M. Fairweather, S.A.E.G. Falle, C.J. Wareing, J. Hebrard and D. Jamois	Measurement and RANS Modelling of Large-scale Underexpanded CO2 Releases for CCS Applications
16:40 – 17:00	<u>A. Fancello</u> , R.J.M. Bastiaans and L.P.H. de Goey	Towards Numerical Simulation of Turbulent Hydrogen Combustion based on Flamelet Generated Manifolds in OpenFOAM
<b>Coffee Break</b>		

<b>25 September 2013</b> <b>SESSION: Advances in Sampling Theory and Applications</b> <b>CHAIR: Nursel Koyuncu</b> <b>(ROOM 2)</b>		
15:00 – 15:30	<u>Emrah Altun</u> , Hüseyin Tatlidil	A Comparison of Portfolio Selection Models via Application on ISE 100 Index Data
15:30 – 16:00	<u>Hatice O. Cekim</u> , Cem Kadilar, Gamze Ozel	Characterizing Forest Fire Activity in Turkey by Compound Poisson and Time Series Models



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16:00 – 16:30	<u>Selen Cakmakyapan,</u> Gamze Ozel	On The Expected Value and Distribution Function of The First Exit Time for The Polya-Aeppli Process
16:30 – 17:00	<u>Jana Kaderova,</u> Miroslav Vorechovsky	Correlation Process Resulting from Random Swapping of the Order of Elements
17:00 – 17:30	<u>Semra Turkan</u>	Examination of Influential Observations in Penalized Spline Regression

<b>25 September 2013</b> <b>SESSION: Advances in Nonlinear Estimation for Distributed Parameter and Robotic Systems</b> <b>CHAIR: Gerasimos Rigatos (ROOM 3)</b>		
15:00 – 15:30	G. Rigatos and P. Siano	Control of underactuated robotic systems with the use of the Derivative-free nonlinear Kalman Filter
15:30 – 16:00	G. Rigatos	A Kalman Filtering approach for validation of sensor networks monitoring distributed parameter systems

<b>25 September 2013</b> <b>SESSION: Recent advances in theoretical fluid dynamics, hydrodynamic stability theory and biological fluid mechanics</b> <b>CHAIR: A. Kluwick (ROOM 4)</b>		
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15:00 – 15:30	<i><u>A.H. White, P.Hall</u> and <u>M.S. Mughal</u></i>	Numerical and asymptotic analysis of Görtler vortices generated by surface roughness
15:30 – 16:00	<i><u>X. Wu</u></i>	The role of acoustic feedback in boundary-layer instability
16:00 – 16:30	<i><u>S. Farid and J.S.B. Gajjar</u></i>	Liquid layer flow over convex corners in the presence of an electric field
16:30 - 17:00	<i><u>K.Liu and F.T. Smith</u></i>	Collisions, Rebounds and Skimming

<p><b>25 September 2013</b></p> <p><b>SESSION: State of the Art of Modeling, Numerical Analysis and Design, Optimizing the Performances, Controls of Wind Turbines and Hybrid Renewable Energy Systems</b></p> <p><b>CHAIR: Alexandru Dumitrache &amp; Florin Frunzulica</b></p> <p><b>(ROOM 5)</b></p>		
15:00 – 15:30	<i><u>Aurelian Crăciunescu,</u> <u>Claudia Popescu, Mihai Popescu</u> and <u>Leonard Marin Florea</u></i>	Stand-alone hybrid wind-photovoltaic power generation systems optimal sizing
15:30 – 16:00	<i><u>Florin FRUNZULICĂ,</u> <u>Horia DUMITRESCU,</u> <u>Alexandru DUMITRACHE</u> and <u>Bogdan SUATEAN</u></i>	Control of Dynamic Stall Phenomenon for Vertical Axis Wind Turbine
16:00 – 16:30	<i><u>Alexandru Dumitrache,</u> <u>Horia Dumitrescu</u> and <u>Florin Frunzulica</u></i>	Reynolds Number and Pitch Blade Effects on Aerodynamic Performances of Small VAWTs in Starting Phase.



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<b>25 September 2013</b> <b>SYMPOSIUM: Approximation Theory and Special Functions</b> <b>CHAIR: Oktay Duman</b> <b>(ROOM 6)</b>		
15:00 – 15:30	<u>Ceylan Turan</u> and Oktay Duman	Convergence methods on time scales
15:30 – 16:00	<u>İsmet Yüksel</u>	Approximation by $q$ -Baskakov-Schurer-Szasz type operators
16:00 – 16:30	<u>Özlem Öksüzer,</u> Harun Karslı and Fatma Taşdelen Yeşildal	Convergence rates of Bezier variant of an operator involving Laguerre polynomials of degree $n$
16:30 – 17:00	<u>Tamaz S.</u> <u>Vashakmadze,</u> Rezo Chikashua and Gela Manelidze	To problem of reliable calculation of coefficients of secular equation by special functions
17:00 – 17:30	<b>Coffee Break</b>	

<b>25 September 2013</b> <b>SESSION: Application of the Boltzmann Kinetic Equation to Study Instabilities, the Eddy Problems and Turbulence</b> <b>CHAIR: A. Aringazin</b> <b>(ROOM 7)</b>		
15:00 – 16:00	<u>I. B. Das Sarma</u>	Santilli's New Fuels as Sources of Clean Combustion
16:00 – 17:00	<u>Mr. N. Schmidt</u> and <u>Mr. R. Katebi</u>	Applying Santillian iso-mathematics to the triplex numbers and the Inopin holographic ring: preliminary assessment and new hypothesis



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17:00 – 17:30	<b>Coffee Break</b>	
17:30 – 18:30	<b><u>C. S. Burande</u></b>	On the conceptual aspects and experimental verification of the Rutherford-Santilli neutron model
18:30 – 19:30	<b><u>S. S. Dhondge</u></b>	Hadronic Chemistry and Binding Energies
19:30 – 20:30	<b><u>Yun Yang</u></b>	TBA
20:30 – 21:30	Projection of Prof. Santilli's Lecture IIB of the World Lecture Series	

<b>25 September 2013</b> <b>SESSION: Dependable Mechatronic Systems</b> <b>CHAIR: João Sarraipa</b> <b>(ROOM 8)</b>		
15:00 – 15:30	Diogo Lemos, José Machado, Graça Minas, Filomena Soares, Carla Barros, Celina Pinto Leão	Reinterpreting the Cardiovascular System as a mechanical model
15:30 – 16:00	João Almeida, Maria José Ferreira, Pedro Lobarinhas, Luís F. Silva, Abílio Leite, Alfredo Araújo, Fernando Sousa	Development Of An Artificial Multifunctional Foot: A Project Review
16:00 – 16:30	Gheorghe Ion Gheorghe, Gheorghe Popan	Technological and Cross-Border Mixture Value Chain of Science and Engineering



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		of Multi-Integrative Mechatronics-Integronics- Adaptronics
16:30 – 17:00	Camelia Avram, José Machado, Adina Astilean	Modeling and Formal Analysis of Urban Road Traffic
17:00 – 17:30	<b>Coffee Break</b>	

<b>25 September 2013</b> <b>SESSION: Symposium on the grid-based quantum many-body problem</b> <b>CHAIR: Toby D. Young</b> <b>(ROOM 9)</b>		
15:00 – 15:30	<i><u>J. Garza,</u></i> <i>E. García- Hernández,</i> <i>C. Díaz-García,</i> <i>R. Vargas</i>	Four-index integral transformation in many-body perturbation theory and electron propagator to second order for confined atoms on GPUs
15:30 – 16:00	<i>J. Vackar,</i> <i>O. Certik,</i> <i>R. Cimrman,</i> <i>M. Novak,</i> <i>O. Sipr,</i> <i>J. Plesek,</i> <i><u>M. Tuma</u></i>	Solving the eigenvalue problem in electronic structure calculations
16:00 – 16:30	<i><u>K. Rupp,</u></i> <i>Ph. Tillet,</i> <i>B. F. Smith</i> <i>T. Grasser,</i> <i>A. Jünger</i>	A note on the GPU acceleration of eigenvalue computations
16:30 – 17:00	<i><u>T. D. Young</u></i>	Afterword: Grid-based analysis in quantum mechanics





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17:00 – 17:30	<b>Coffee Break</b>
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<b>25 September 2013</b> <b>SESSION: The 4th Symposium on Variational Inequalities  and Equilibrium Problems</b> <b>CHAIR: Annamaria Barbagallo and Maria Alessandra Ragusa  (ROOM 10)</b>		
15:00 – 15:30	<b><u>A. Barbagallo</u></b>	Dynamic elastic Cournot-Nash principle with memory term
15:30 – 16:00	<b><u>M. Lorino</u></b>	Recent results on a general financial equilibrium problem
16:00 – 16:30	<b><u>M.A. Ragusa</u></b>	Persistence Analysis in a Kolmogorov-type Model for Cancer-Immune System Competition
16:30 – 17:00	<b><u>M. Ruggieri</u></b>	On a hierarchy of traveling wave solutions in a shallow stratified fluid
17:00 – 17:30	<b>Coffee Break</b>	
17:30 – 18:00	<b><u>G. Cardone</u></b>	Asymptotic analysis of an eigenvalue in the discrete spectrum of a quantum waveguide
18:00 – 18:30	<b><u>T. Durante</u></b>	Asymptotic behaviour of eigenfunctions in a thin cylinder with distorted ends



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<b>25 September 2013</b> <b>SESSION: Mathematical Optimization in Modern Medicine  and Engineering Symposium</b> <b>CHAIR: Flavius Pater, Serban Rosu</b> <b>(ROOM 11)</b>		
15:00 – 15:30	<i>Samfira Ionel, Ghica  Andreea, Boldea  Marius, Butnariu  Monica,  Sendroni Marius, M-  Kiss Andrei</i>	<b>Mathematical Modeling of  Biological Growth for Some  <i>Vicia faba</i> Varieties</b>
15:30 – 16:00	<i>Samfira Ionel, Ghica  Andreea, Boldea  Marius, Butnariu  Monica,  Sendroni Marius, M-  Kiss Andrei</i>	<b>Comparative Interpretation  of the Development of  Species <i>Phalaris Arundinacea</i></b>
16:00 – 16:30	<u><i>C.Bota, B. Caruntu  and O. Bundau</i></u>	<b>Approximate polynomial  solutions for Riccati  differential  equations using the squared  remains minimization  method</b>
16:30 – 17:00	<u><i>Mihalea  Craciunescu, Dana  Stoian, Romulus  Timar, Adalbert  Schiller, Flavius  Pater, Marius Craina</i></u>	<b>Hormonal Profile Impact on  Female Sexual Function in  Young Women</b>
17:00 – 17:30	<b>Coffee Break</b>	

<b>25 September 2013</b> <b>SESSION: Advances in Sampling Theory and Applications</b> <b>CHAIR: Nursel Koyuncu</b> <b>(ROOM 2)</b>		
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19:35 – 20:05	<u>Esra Polat,</u> Suleyman Gunay	The Comparison of Robust Partial Least Squares Regression with Robust Principal Component Regression on a Real Data
20:05 – 20:35	<u>Gamze Ozel,</u> Nihal Ata	Lindley Frailty Model for a Class of Compound Poisson Processes
20:35 – 21:05	<u>Nursel Koyuncu</u>	Efficient Combined Estimators of Population Mean using Auxiliary Attribute under Stratified Random Sampling
21:05 – 21:35	<u>Nilgun Ozgul,</u> Hülya Cingi	A New Mean Estimator using Auxiliary Variables for Randomized Response Models

<b>25 September 2013</b> <b>SESSION: Dependable Mechatronic Systems</b> <b>CHAIR: José Machado</b> <b>(ROOM 8)</b>		
19:35 – 20:05	Fernando Luis-Ferreira, Ricardo Jardim-Goncalves	A Behavioral Framework for capturing Emotional Information in an Internet of Things Environment
20:05 – 20:35	Ruben Costa, Celson Lima, João Sarraipa, Ricardo Jardim-Gonçalves	Semantic Enrichment of Building and Construction Knowledge Sources using a Domain Ontology for Classification
20:35 – 21:05	Adina Cretan, Carlos Coutinho, Ben Bratuc, Ricardo Jardim-Goncalves	Multi-Agent Framework for Negotiation in a Closed Environment



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<b>19:35 – 20:05</b>	<b><i>Dana Stoian, Mihaela Craciunescu, Romulus Timar , Adalbert Schiller, Liana Pater, Marius Craina</i></b>	<b>Need of Tetraiodothyronine Supplemental Therapy in Pregnant Women</b>
<b>20:05 – 20:35</b>	<b><i>Adina Budiul- Berghian, Teodor Vasiu, Cristian Abrudean and Diana Stoica</i></b>	<b>Mathematical Model to Determine the Acceleration to the Elements of the Laboratory Model to the 8000kn Shears</b>
<b>20:35 – 21:05</b>	<b><i><u>Mirela Toth-Taşcău,</u> <u>Flavius Pater and</u> <u>Dan Ioan Stoia</u></i></b>	<b>A Model of Flexion- Extension Movement in Hip Joint using Polynomial Interpolation</b>
<b>21:05 – 21:35</b>	<b><i><u>Mirela Toth-Taşcău,</u> <u>Flavius Pater and</u> <u>Dan Ioan Stoia</u></i></b>	<b>Interpolation Function for Approximating Knee Joint Behavior in Human Gait</b>

end 5th day of the Conference



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<b>26 September 2013</b> <b>SESSION: The 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer-Numerical Fluids Symposium 2013</b> <b>CHAIR: Sandor Bernad</b> <b>(ROOM 1)</b>		
09:00 – 09:20	<u>M. Chapwanya</u> and J. M-S. Lubuma	An Operator Splitting Method for the Advection Diffusion Reaction Equation for Problems in Porous Flow
09:20 – 09:40	<u>A. Donini</u> , S.M. Martin, R.J.M. Bastiaans, J.A. van Oijen & L.P.H. de Goey	High Pressure Jet Flame Numerical Analysis of CO Emissions by Means of the Flamelet Generated Manifolds Technique
09:40 – 10:00	<u>A.F. Widodo</u> and L.R. Zuhail	Simulation of Moving Flat Plate with Unsteady Translational Motion Using Vortex Method
10:00 – 10:20	R. Merejulli, <u>G.S. Paulo</u> and M.F. Tome	Application of the PTT Model to Axisymmetric Free Surface Flows
10:20 – 10:40	<u>D. Zeidan</u> , R. Touma and A. Slaouti	Using Gas-Solid Mixture Conservation Laws For Volcanic Eruptions
10:40 – 11:00	<u>D. Zeidan</u> , E. Goncalve and A. Slaouti	Computer Simulations of Cavitating Two-Phase Flows
<b>Lunch Break</b>		



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<b>26 September 2013</b> <b>SESSION: "Statistics and Modelling IV"</b> <b>CHAIR: Katharina Proksch</b> <b>(ROOM 2)</b>		
09:00 – 09:30	Christine Duller	<i>Numbers, diagrams and other secrets</i>
09:30 – 10:00	Karl Moder	<i>About Robustness of Some Sequential Tests under Several Violations of Prerequisites</i>
10:00 – 10:30	Katharina Proksch	<i>Statistical inference for inverse problems</i>

<b>26 September 2013</b> <b>SESSION: Symposium on Computational Modeling of Transport Processes in Building Materials and their Multi-Layered Systems</b> <b>CHAIR: Jiří Vala</b> <b>(ROOM 3)</b>		
09:00 – 09:30	<u>T. Krejci</u> , T. Koudelka and M. Broucek	<b>Numerical Modelling of Moisture Transfer in Saturated and Non-saturated Porous Media</b>
09:30 – 10:00	<u>Pavel Beran</u>	<b>The Impact of the Coefficient of Absorption of Solar Radiation on the State of Stress in Heterogeneous Masonry</b>
10:00 – 10:30	<u>P. Jarošová</u> and S. Štátník	<b>Modelling of thermal transfer for energy saving buildings</b>
10:30 – 11:00	<u>Pavel Beran</u>	<b>Thermal fatigue: the Impact of the Length of Time Step on the Amount of Stress Cycles</b>



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<b>26 September 2013</b> <b>SESSION: Workshop on Genomathematics for Matter and its Isodual for Antimatter</b> <b>CHAIR: A. A. Bhalekar</b> <b>(ROOM 7)</b>		
09:00 – 10:00	<u><i>R. M. Santilli</i></u>	Recollections on the birth of the Lie-admissible formulations
10:00 – 11:00	<u><i>T. Vougiouklis</i></u>	The hypernumbers (e-hypernumbers) in Santilli's sense
11:00 – 11:30	<b>Coffee Break</b>	
11:30 – 12:30	<u><i>P. Nikolaidou</i></u>	The Lie-Santilli admissible hyperalgebras of type $A_n$
12:30 – 13:30	<u><i>N. Lygeros</i></u>	Notes on Hv-groups
<b>Lunch Break</b>		

<b>26 September 2013</b> <b>SESSION: Sequence spaces, Summability and Applications</b> <b>CHAIR: Jeff CONNOR</b> <b>(ROOM 1)</b>		
11:30 – 12:00	<u><i>Ekrem Savas</i></u>	On Asymptotically Generalized Statistical Equivalent Set Sequences



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12:00 – 12:30	<u><i>Maria Zeltser</i></u>	The Hahn Property of Bounded Domains of Some Matrix Methods
12:30 – 13:00	<u><i>Nimet Pancaroglu</i></u>	On Asymptotically Lacunary Invariant Statistical Equivalent Set Sequences
<b>Lunch Break</b>		

<b>26 September 2013</b> <b>SESSION: Boundary value Problems and Integral Equations with Applications</b> <b>CHAIR: P. A. Krutitskii</b> <b>(ROOM 2)</b>		
11:30 – 12:00	<u><i>P.A.Krutitskii</i></u>	On the Dirichlet problem for the dissipative Helmholtz equation in the exterior of non-closed Lipschitz surfaces
12:00 – 12:30	<u><i>Gleb V. Ryzhakov</i></u>	On Estimate of the Gradient of the Hypersingular Integral Equation Solution with use of Some Numerical Scheme
12:30 – 13:00	<u><i>G.V. Alekseev and A.V. Lobanov</i></u>	Analysis of 2-D cloaking problem using wave flow method
13:00 – 13:30	<u><i>Arvet Pedas and Gennadi Vainikko</i></u>	On the regularity of solutions of nonlinear integral equations
<b>Lunch Break</b>		





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<b>26 September 2013</b> <b>SESSION: Symposium on Computational Modeling of Transport Processes in Building Materials and their Multi-Layered Systems</b> <b>CHAIR: Tomáš Krejčí (ROOM 3)</b>		
11:30 – 12:00	<u>J. Vala</u> and P. Jarošová	Identification of the capillary transfer coefficient in porous building materials
12:00 – 12:30	<u>L. Škripková</u>	Capillary transfer coefficient of polynomial type in the diffusion equation
12:30 – 13:00	Tomáš Vavříník, <u>Jan Zatloukal</u> , Jindřich Fornůsek, Petr Konvalinka	Numerical Analysis of Projectile Impact on Cementitious Composite
<b>Lunch Break</b>		

<b>26 September 2013</b> <b>SESSION: Application of Fuzzy Logic and Neural Networks in Construction Management</b> <b>CHAIR: Edyta Plebankiewicz (ROOM 4)</b>		
11:30 – 12:00	<u>M. Kuźawa</u> , J. Bień, M. Gładysz	Hybrid Knowledge Expert Tool for Load Capacity Assessment of Railway Plate Girders with Defects
12:00 – 12:30	<u>N. Ibadova</u> , J.Kulejewski, M.Krzemiński	Fuzzy Ordering of the Factors Affecting the Implementation of Construction Projects in Poland



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<b>12:30 – 13:00</b>	<b>M. Juszczuk</b>	<b>The Use Of Artificial Neural Networks For Residential Buildings Conceptual Cost Estimation</b>
<b>13:00 – 13:30</b>	<b>K. Zima</b>	<b>The Concept Of Investment Decision Suport Model Using Fuzzy Set Theory</b>
<b>13:30 – 14:00</b>	<b>A. Leśniak</b>	<b>The application of artificial neural networks in indirect cost estimation</b>
<b>Lunch Break</b>		

<b>26 September 2013</b> <b>SESSION: Sequence spaces, Summability and Applications</b> <b>CHAIR: Ekrem SAVAS</b> <b>(ROOM 1)</b>		
<b>15:00 – 15:30</b>	<i>Jeff Connor</i>	<b>Lacunary Statistical and Sliding Window Convergence for Measurable Functions</b>
<b>15:30 – 16:00</b>	<i>Hafize Gumus</i>	<b>Lacunary Strongly <math>(A, \varphi)_f</math> Convergent Sequences Defined by a Modulus Function</b>
<b>16:00 – 16:30</b>	<i><u>Mustafa Kemal</u> <u>Özdemir</u></i>	<b>On Some New Double Spaces of <math>\lambda</math>-convergent and <math>\lambda</math>-bounded Sequences Defined by Orlicz Function</b>

<b>26 September 2013</b> <b>SESSION: The 2nd Symposium on Numerical Methods of Boundary Value Problems (BVPs): Analysis, Algorithms and Real World Applications</b> <b>CHAIR: Suheil Khoury</b> <b>(ROOM 2)</b>		
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15:00 – 15:30	<u><i>Kahar El-Hussein</i></u> <i>Invited Speaker</i>	Functions and numerical solutions of partial differential equation with variables coefficients
15:30 – 16:00	<u><i>Jan Lamac</i></u>	Asymptotic expansion of the solution of the singularly perturbed convection-diffusion equation in the 2D convex polygonal domain
16:00 – 16:30	<u><i>Diana Alina Bistrrian</i></u>	Parallel Processing Numerical Method for Confined Vortex Dynamics and Applications
16:30 – 17:00	<u><i>Suheil Khoury,</i></u> <i>Hussain Ibdah</i> & <i>Ali Sayfy</i>	ABCs and Fourth-Order Spline Collocation for the Solution of Two-Point Boundary Value Problems over an Infinite Domain
17:00 – 17:30	<b>Coffee Break</b>	

<b>26 September 2013</b> <b>SESSION: Boundary value Problems and Integral Equations with Applications</b> <b>CHAIR: P. A. Krutitskii</b> <b>(ROOM 3)</b>		
15:00 – 15:30	<i>Nikolay Makarenko</i> and <u><i>Janna Maltseva</i></u>	Nonlinear Lee Waves over Combined Obstacles
15:30 – 16:00	<u><i>SASAMOTO Akira</i></u> and <i>P. A. Krutitskii</i>	Integral representation of surface voltage on half-plane conductor with embedded crack by D.C. potential difference method



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<b>26 September 2013</b> <b>SESSION: 2013 - Symposium on Numerical Optimization Techniques for Mitigating the Hydrodynamic and Aerodynamic Turbulence with Applications</b> <b>CHAIR: Diana Alina Bistran</b> <b>(ROOM 4)</b>		
<b>15:00 – 15:15</b>	<i><b>Marcel Topor and Diana Alina Bistran</b></i>	<b>Solutions for accelerating the numerical algorithms in hydrodynamic problems</b>
<b>15:15 – 15:30</b>	<i><b>Florica Ioana Dragomirescu, Romeo Susan-Resiga and Sebastian Muntean</b></i>	<b>Proper orthogonal decomposition method in swirling flows applications</b>
<b>15:30 – 15:45</b>	<i><b>Loredana Ghiormez, Octavian Prostean, Manuela Panoiu and Caius Panoiu</b></i>	<b>Numerical modelling of some nonlinear processes in electric arc furnace operation</b>
<b>15:45 – 16:00</b>	<i><b>Cristian Abrudean</b></i>	<b>Numerical simulation of phase transitions in heating or refrigeration processes</b>
<b>16:00 – 16:15</b>	<i><b>Alina Lascutoni, Erika Diana Ardelean, Viorel Liviu Pascu and Teodor Heput</b></i>	<b>Mathematical model regarding at addition of microcoolers in tundish of continuous casting machines</b>
<b>16:15 – 16:30</b>	<i><b>Manuela Panoiu, Loredana Ghiormez, Caius Panoiu and Anca Iordan</b></i>	<b>A numerical modelling of nonlinear load behaviour using artificial neural networks</b>
<b>16:30 – 16:45</b>	<i><b>Cristian Abrudean</b></i>	<b>Optimization of iterative calculus over large arrays in multiprocessor systems</b>
<b>16:45 – 17:00</b>	<i><b>Raluca Rob and Cezara Rat</b></i>	<b>Mathematical model for studying the variation of the electrical parameters in functioning of nonlinear loads</b>



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<b>Poster Session</b>	
<b>26 September 2013: 15:00 – 17:00</b>	
<b>SESSION (107): 2013 - Symposium on Numerical Optimization Techniques for Mitigating the Hydrodynamic and Aerodynamic Turbulence with Applications</b>	
<b><i>Luiza Zavalan, Delia Teleaga and Marius Stoia-Djeska</i></b>	<b>Estimated order of accuracy of a Finite-Volume-Particle scheme for artificial compressibility Euler equations</b>

<b>26 September 2013</b>		
<b>SESSION: Second Minisymposium on Mathematical Modeling in Hydrology: Novel Insight in Hydrological Modeling</b>		
<b>CHAIR: Ubertini Lucio and Fabio Russo</b>		
<b>(ROOM 5)</b>		
<b>15:00 – 15:18</b>	<b><i>Di Francesco</i></b>	<b>Wall roughness effect in the Lattice Boltzmann method S. Di Francesco, A. Zarghami, C. Biscarini, P. Manciola</b>
<b>15:19 – 15:37</b>	<b><i>Russo</i></b>	<b>Comparison of different fittings of experimental DSD E. Adirosi, L. Baldini, F. Lombardo, F. Russo, F. Napolitano</b>
<b>15:38 – 15:55</b>	<b><i>Vertommen</i></b>	<b>Joint Probabilities of Demands on a Water Distribution Network: A Non-Parametric Approach E. Ridolfi, I. Vertommen, R. Magini</b>
<b>15:56 – 16:14</b>	<b><i>Spina</i></b>	<b>Data selection to assess bias in rainfall radar estimates: an entropy based method S. Spina, S. Sebastianelli, E.</b>



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		<i>Ridolfi, F. Russo, F. Napolitano, L. Baldini, L. Alfonso</i>
16:15 – 16:23	<i>Spina</i>	IDF relationships for short duration rainfall V. <i>Montesarchio, S. Spina, F. Russo, F. Napolitano</i>
16:24 – 16:42	<i>Orlando</i>	Long Term Discharge Simulation through a Geomorphological Model D. <i>Orlando, M. Rianna, M. Giglioni, V. Baiocchi, F. Russo, F. Napolitano</i>
16:43 – 17:00	<i>Orlando</i>	Identification of Independent Storm Events: Seasonal and Spatial Variability of Times between Storms in Alpine Area <i>C. Iadanza, M. Rianna, D. Orlando, F. Napolitano, L. Ubertini</i>
17:00 – 17:30	<b>Coffee Break</b>	

<b>26 September 2013</b>		
<b>SESSION: Symposium on the Numerical Solution of Differential Equations and their Applications</b>		
<b>CHAIR: Zacharoula Kalogiratos and Theodore Monovasilis (ROOM 6)</b>		
15:00 – 15:30	<u><i>Z. Kalogiratos, Th. Monovasilis, T.E.Simos</i></u>	A Trigonometrically Fitted Modified Symplectic Runge-Kutta-Nystrom Methods of Order Four
15:30 – 16:00	<u><i>Th. Monovasilis, Z. Kalogiratos, T.E.Simos</i></u>	Exponentially Fitted Symplectic Runge Kutta Nystrom Methods Derived by Partitioned Runge Kutta methods.



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16:00 – 16:30	<u><i>Josef Rebenda,</i></u> <i>Zdenek Smarda</i>	Comparison of differential transformation method with Adomian decomposition method for functional differential equations with proportional delays
16:30 – 17:00	<u><i>D.F. Papadopoulos</i></u> <i>and T.E. Simos</i>	TBA
17:00 – 17:30	<b>Coffee Break</b>	

<b>26 September 2013</b> <b>SESSION: Workshop on Genomathematics for Matter and its</b> <b>Isodual for Antimatter</b> <b>CHAIR: V. M. Tangde</b> <b>(ROOM 7)</b>		
15:00 – 16:00	<u><i>A. K. Aringazin</i></u>	Special orthogonal and unitary Lie-Santilli groups, their relationship and action on linear spaces
16:00 – 17:00	<u><i>S. Georgiev</i></u>	Isofunctions and their properties
17:00 – 17:30	<b>Coffee Break</b>	
17:30 – 18:30	<u><i>J. T. Gbolahan</i></u>	Quasigroup, Loops and their applications
18:30 – 19:30	<u><i>T. Vougiouklis</i></u>	Geno-hyper-fields and geno-hyper-numbers for a matter and antimatter model
19:30 – 20:30	<u><i>N. Lygeros</i></u>	From Hv-groups to e-hyperstructures and e-hyperfields



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<b>26 September 2013</b>		
<b>SESSION: Advanced Topics in Solid Mechanics</b>		
<b>CHAIR: Prof. Simona ROATESI</b>		
<b>(ROOM 8)</b>		
<b>16:00 – 16:30</b>	<b><u>Simona ROATESI</u></b>	Analytical Approach of the Tunnel Face Effect on the Rock-Support Interface in Viscoelastic Rock Mass
<b>16:30 – 17:00</b>	<b><u>Iuliana SPRINTU,</u></b> <b>S. ROATESI</b>	Experimental Validation Of New Mathematical Solutions For Orthotropic Plates With Clamped Edges
<b>17:00 – 17:30</b>	<b>Coffee Break</b>	

end 6th day of the Conference





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<b>27 September 2013</b> <b>SESSION: Theoretical and numerical modeling of systems with long range interactions</b> <b>CHAIR: Sergio Curilef (ROOM 1)</b>		
<b>11:30 – 12:00</b>	<b><u>S Curilef</u></b>	Analytical solutions for a nonlinear reaction-diffusion equation
<b>12:00 – 12:30</b>	<b><u>L Velazquez</u></b>	Remarks on thermo-statistical description of gravitational clustering phenomenon in cosmology
<b>12:30 – 13:00</b>	<b><u>S Davis</u></b>	Estimation of Tsallis' q-index in non-extensive systems
<b>13:00 – 13:30</b>	<b><u>N Kalogeropoulos</u></b>	Tsallis entropy and hyperbolicity
<b>Lunch Break</b>		

end 7th day of the Conference  
end of the Conference