



ICNAAM 2014

Rodos Palace Hotel, Rhodes, Greece,
22-28 September 2014

Monday 22 SEPTEMBER 2014

08:50 – 09:00 (ROOM 1)

OPENING CEREMONY

Professor Dr. T.E. Simos (Chairman)

PLEASE ATTENTION

***The Desk of the Conference will be open
for Registration, Requests etc the
following days and hours:***

<u>Sunday</u>	21/9/14: 17.00–20.30
<u>Monday</u>	22/9/14: 09:00–13:30, 17:00 – 20:30
<u>Tuesday</u>	23/9/14: 09:00–13:00, 17:00 – 20:30
<u>Wednesday</u>	24/9/14: 09:30–13:00, 17:30 – 20:30
<u>Thursday</u>	25/9/14: 09:30–12:30
<u>Friday</u>	26/9/14 10:00–13:00, 17:30 – 19:30
<u>Saturday</u>	27/9/14 10:30–13:00, 17:30 – 19:30
<u>Sunday</u>	28/9/14: 10:30–13:00



ICNAAM 2014
Rodos Palace Hotel, Rhodes, Greece,
22-28 September 2014

ANNOUNCEMENTS

1. Excursion – Central Dinner

Please inform the secretary about your participation in the excursion and the number of accompanying persons until 23 September 2014.

This is absolutely necessary in order to determine the number of busses for the excursion.

Also inform the secretary about your participation in the central dinner and the number of accompanying persons.

2. Receipts and Certifications

Receipts and Certifications will be delivered after 22 September 2014



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014 CHAIR: Paul Tucker (ROOM 1)		
9:00 – 10:00	Invited lecture Professor Lyazid Djenidi The lattice Boltzmann Method and its Application to Turbulence	
10:00 – 10:20	<i><u>J. Reiss</u>, R. Touma and J. Sesterhenn</i>	An energy conserving well-balanced scheme for the shallow water equations
10:20 – 10:40	<i><u>F. Dierich</u>, K. Wittig, A. Richter and P.A. Nikrityuk</i>	Parallelization of the 3D SIP Algorithm
10:40 – 11:00	<i><u>S.V. Bogovalov</u>, V.A. Kislov and V.I. Tronin</i>	Gas dynamics in strong centrifugal fields
Lunch Break		



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Santilli Iso-, Geno- and Hyper-Mathematics CHAIR: Anil A. Bhalekar (ROOM 2)		
09:00 – 09:40	<i>J. V. Kadeisvili (DVD by R. M. Santilli)</i>	Origin, applications and open problems of the Lie-Santilli IsoTheory
09:40 – 10:30	<i>S. Georgiev</i>	<i>Advances on Santilli isoMathematcs</i>
10:30 – 11:00	<i>S. Moskaliuk</i>	<i>Category formulation of Santilli isoMathematcs</i>
11:00 – 11:30	Coffee Break	
11:30 – 12:00	<i>Davvaz - Santilli – Vougiouklis, “Algebra, Hyperalgebra and Lie-Santilli Theory”</i>	
12:00 – 12:30	<i>Lygeros, “Enumeration, Isomorphism of Hyperstructures and Spectral Graph Theory”</i>	
12:30 - 13:00	<i>A. S. Muktibodh, “Isopermutation Group”</i>	
13:00 - 13:30	<i>Vougiouklis, “Lie-Santilli Admissibility on non square matrices”</i>	
Lunch Break		



<p align="center">22 September 2014</p> <p align="center">SESSION: Seventh Symposium on Recent Trends in the Numerical Solution of Differential Equations</p> <p align="center">CHAIR: Ewa Weinmueller</p> <p align="center">(ROOM 3)</p>		
09:00 – 09:30	<i>Alessandra Aimi</i>	Energetic BEM-FEM coupling for the numerical solution of the damped wave equation
09:30 – 10:00	<i>Winfried Auzinger</i>	Representation and estimation of the local error of higher-order exponential splitting schemes involving two or three sub-operators
10:00 – 10:30	<i>Gianluca Frasca Caccia</i>	Recent advances in the numerical solution of Hamiltonian PDEs
10:30 – 11:00	<i>James Lambers</i>	High-Order Time-Stepping for Nonlinear PDE through Rapid Estimation of Block Gaussian Quadrature Nodes

<p align="center">22 September 2014</p> <p align="center">SESSION: 11-th Symposium Clifford Analysis and Applications</p> <p align="center">CHAIR: Klaus Guerlebeck and Wolfgang Sproessig</p> <p align="center">(ROOM 4)</p>		
09:00 – 09:30	<i>Dmitry Bryukhov</i>	On Modified Quaternionic Analysis, Gradient Dynamical Systems and Kolmogorov Equations in R^3
09:30 – 10:00	<i>Yuri Grigor'ev</i>	Radial Integration Method in Quaternion Function Theory and its Applications
10:00 – 10:30	<i>Klaus Gürlebeck Uwe Kähler Dmitrii Legatiuk</i>	Interpolation problem arising in a coupling of finite element method with holomorphic basis functions
10:30 – 11:00	<i>Klaus Gürlebeck Manh Hung Nguyen</i>	ψ -hyperholomorphic functions and an application to elasticity problems



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">22 September 2014 SESSION: THE FOURTH SYMPOSIUM ON ADVANCED COMPUTATION AND INFORMATION IN NATURAL AND APPLIED SCIENCES CHAIR: Dr. Claus-Peter Rückemann (ROOM 5)</p>		
09:00 – 09:30	<u><i>Claus-Peter Rückemann</i></u>	Knowledge Integration for Scientific Classification and Computation
09:30 – 10:00	<u><i>Maurizio Citterio</i></u> and <u><i>Raffaella Pavani</i></u>	A fast algorithm for the exactly k-digit best rational approximation to a real number
10:00 – 10:30	<u><i>Oleg Iakushkin</i></u> and <u><i>Valery Grishkin</i></u>	Unification of Control in P2P Communication Middleware: Towards Complex Messaging Patterns

<p align="center">22 September 2014 SESSION: Mechanics of Thin-Walled Structures #1 CHAIR: Andrei Smirnov (ROOM 6)</p>		
09:00 – 09:30	<u><i>Morozov N.F.</i></u>	Keynote lecture Statics and Dynamics of a Rod under axial compression
09:30 – 10:00	<u><i>Indeitsev D.A.</i></u>	Keynote lecture Stress stage influence on diffusion process in materials
10:00 – 10:20	<u><i>Bauer S.M.</i></u>	Application of Shell Theories for Simulation of Intraocular Pressure Changes after Injection
10:20 – 10:40	<u><i>Filippov S.B</i></u>	Stiffened shell of minimal weight in buckling problems
10:40 – 11:00	<u><i>Pavilainen G.V.</i></u>	Elasto-plastic deformations of the beams with CD-effect



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Statistical Inference in Linear Models (I) CHAIR: Francisco Carvalho (ROOM 7)		
09:00 – 09:25	<u>Marco Costa</u> <i>Magda Monteiro</i>	A mixed-effect state space model to environmental data
09:25 – 09:50	<u>Magda Monteiro</u> <i>Marco Costa</i>	A Comparison Between Single Site Modeling and Multiple Site Modeling Approaches using Kalman Filtering
09:50 – 10:15	<i>Anibal Areia</i> <u>Francisco Carvalho</u> <i>João T. Mexia</i>	Influence of Cancer Location, Sex and Country on the Death Age

22 September 2014 SESSION: Applied and Numerical Mathematics I CHAIR: Cristina I. Muresan (ROOM 8)		
09:00 – 09:30	<u>Cristina I. Muresan</u> <i>and Eva H. Dulf</i>	Fractional Order IMC based Controller for Time Delay Systems
09:30 – 10:00	<i>Roxana Both, Eva H. Dulf, and Cristina I. Muresan</i>	Active Disturbance Rejection Controller for Chemical Reactor
10:00 – 10:30	<u>Meral Yaşar</u> , <i>Durmuş Bozkurt and Atakan Tuğkan Yakut</i>	A Proof of an Identity for a Generalization of Well-Known Number Sequences
10:30 – 11:00	<i>Mehmet Pakdemirli and Gözde Sarı</i>	Solution of a Quadratic Nonlinear Problem with Multiple Scales Lindstedt-Poincare Method
11:00 – 11:30	<i>Ioana Cristina Muresan and Roxana Balci</i>	Finite Element Analysis of an Extended End-plate Connection using the T-stub Approach



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Applied and Numerical Mathematics II CHAIR: Durmuş Bozkurt (ROOM 9)		
09:00 – 09:30	<i>Durmuş Bozkurt & Ş Burcu Bozkurt Altındağ</i>	Integer Powers of Certain Complex Tridiagonal Matrices and Some Complex Factorizations
09:30 – 10:00	<i>Osman Hasan, Waqar Ahmed, Sofiène Tahar and Mohamed Salah Hamdi</i>	Reliability Block Diagrams based Analysis: A Survey
10:00 – 10:30	<i>Annamaria Barbagallo and Vincenzo Esposito</i>	New Results on the Cauchy Problem for a Class of Hyperbolic Equations in the Half-space
10:30 – 11:00	<i>Cristiana Mammana and Elisabetta Michetti</i>	Qualitative Dynamics and Numerical Evidences in a Business-cycle Model with Non-concave Production Function and Variable Population Growth Rate
11:00 – 11:30	<i>Fatma Bozkurt and Fatma Özköse</i>	Stability Analysis of Macrophage-Tumor Interaction with Piecewise Constant Arguments



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">22 September 2014 SESSION: Applied and Numerical Mathematics XII CHAIR: Zdeněk Kala (ROOM 10)</p>		
09:00 – 09:30	<i>Zdeněk Kala</i>	Variance-based Sensitivity Indices for Stochastic Models with Correlated Inputs
09:30 – 10:00	<i>Jan Valeš</i>	The Influence of Correlation between Initial Axis Curvature and Cross-Section Rotation on the Beam Static Resistance
10:00 – 10:30	<i>Zdeněk Kala, Martin Kalina and Petr Frantík</i>	Buckling and Post-Buckling of the von Mises Planar Truss
10:30 – 11:00	<i>Zdeněk Kala and Jan Valeš</i>	Fuzzy Analysis of Serviceability Limit State of Slender Steel Beam under Bending
11:00 – 11:30	<i>Zdeněk Kala</i>	Reliability and Sensitivity Analysis of Welded Shell Tanks for Crude Oil Storage

<p align="center">22 September 2014 SESSION: Physical-Chemical Gas-Dynamics: Non-Equilibrium Processes Modeling and Simulation CHAIR: Yuriy Gorbachev (ROOM 12)</p>		
09:00 – 09:30	Evgeniy Kolesnichenko, <u>Yuriy Gorbachev</u>	Non-equilibrium one-temperature reaction rates.
09:30 – 10:00	F.G. Tcheremissine	Testing and acceleration of the conservative projection method for solving Boltzmann kinetic equation
10:00 – 10:30	<u>S. Kokou Dadzie</u>	A single fluid kinetic and continuum model in multicomponent gas mixtures
10:30 – 11:00	<u>Galina I. Zmievskaya,</u> Anna L. Bondareva, Tatiana V. Levchenko, Giuseppe Maino	Computational stochastic model of ions implantation



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: INVITED SPEAKER CHAIR: Klaus Gürlebeck (ROOM 1)		
11:30 – 12:30	Uwe Kähler	Discrete Hypercomplex Function Theory and its Applications

22 September 2014 SESSION: INVITED SPEAKER CHAIR: Luigi Brugnano (ROOM 1)		
12:30 – 13:30	E. B. Weinmüller	Collocation – a powerful tool for solving singular ODEs and DAEs



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014 CHAIR: Julius Reiss (ROOM 1)		
15:00 – 15:20	<i>Z. Chara, P. Vlasak, J. Konfrst and B. Kysela</i>	Movement of Dunes in a Circular Pipe
15:20 – 15:40	<i>A. Znidarcic, O. Coutier-Delgosha and M. Marquillie</i>	A new algorithm for DNS simulations of cavitating flows using homogeneous mixture approach
15:40 – 16:00	<i>Z.K. Birhanu, N.O. Kitterod, H.E. Krogstad and A. Kvaerno</i>	Temperature Boundary Conditions for ATES Systems
16:00 – 16:20	<i>M.Z. Saghir, T. Yousefi and B. Farahbakhsh</i>	Solutal Separation in a Binary Nanofluid due to Thermodiffusion

22 September 2014 SESSION: Santilli Iso-, Geno- and Hyper-Mathematics CHAIR: Anil A. Bhalekar (ROOM 2)		
15:00 – 15:30	<i>Vougiouklis</i>	<i>Iso-hypernumbers, Iso-H_v -numbers</i>
15:30 – 16:00	<i>Nikolaidoy – Vougiouklis</i>	<i>Lie-Santilli admmissibility on the type A_n</i>
16:00 – 16:30	<i>Nikolaidoy – Vougiouklis</i>	<i>Lie-Santilli admmissibility on the type D_n</i>
16:30 – 17:00	<i>Lygeros – Vougiouklis</i>	<i>Characteristics of LV-structures</i>
17:00 – 17:30	Coffee Break	
17:30 – 18:00	<i>S. Georgiev, “Multiple Iso-Integrals”</i>	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">22 September 2014 SESSION: Seventh Symposium on Recent Trends in the Numerical Solution of Differential Equations CHAIR: Zdzislaw Jackiewicz (ROOM 3)</p>		
15:00 – 15:30	<i>Viktor Rukavishnikov</i>	Weighted finite element method of high degree of accuracy for Dirichlet problem with singularity
15:30 – 16:00	<i>Adrian Sandu</i>	Application of implicit-explicit general linear methods to reaction-diffusion problems
16:00 – 16:30	<i>Ivonne Sgura</i>	Numerical methods for spatio-temporal oscillating solutions in reaction-diffusion models
16:30 – 17:00	<i>Severiano Gonzalez Pinto</i>	Some convergence results for inexact Radau IIA methods applied to evolutionary PDEs

<p align="center">22 September 2014 SESSION: 11-th Symposium Clifford Analysis and Applications CHAIR: Klaus Guerlebeck and Wolfgang Sproessig (ROOM 4)</p>		
15:00 – 15:30	<i>R. Michael Porter</i> <i>Hirokazu Shimauchi</i>	A numerical algorithm for solving the Beltrami equation
15:30 – 16:00		
16:00 – 16:30	<i>Yanett Bolívar,</i> <i>Antonio Di Teodoro</i> <i>and Judith Vanegas</i>	Generalized Cauchy-Riemann-type operators and some integral representation formulas



<p align="center">22 September 2014 SESSION: Some New Trends in Nonlinear Differential Equations CHAIR: Prof. Dr. Yıldray Keskin (ROOM 5)</p>		
15:00 – 15:30	<i>Yusuf Pandır</i>	<i>New exact solutions of the space-time fractional potential Kadomtsev-Petviashvili (pKP) equation</i>
15:30 – 16:00	<i>Ahmet Bekir</i>	<i>Solving Nonlinear Space-time Fractional Differential Equations Using the Exp-function Method</i>
16:00 – 16:30	<i>Abdullah Sönmezoğlu</i>	<i>Exact Solutions of Nonlinear Schrödinger's Equation by Using Generalized Kudryashov Method</i>
16:30 – 17:00	<i>Yıldray Keskin</i>	<i>Reduced Differential Transform Method for (2+1)Dimensional type of the Zakharov–Kuznetsov ZK(n,n) Equations</i>

<p align="center">22 September 2014 SESSION: Mechanics of Thin-Walled Structures #2 CHAIR: Svetlana Bauer (ROOM 6)</p>		
15:00 – 15:20	<u><i>Tovstik P.E.</i></u>	Vibrations of a floating beam on marine waves
15:20 – 15:40	<u><i>Smirnov A.L.</i></u>	Free vibrations of perforated thin plates
15:40 – 16:00	<u><i>Pronina Yu.G</i></u>	On the Applicability of Thin Spherical Shell Model for the Problems of Mechanochemical Corrosion
16:00 – 16:20	<u><i>Kabritz S.A</i></u>	Numerical Study of Convergence of Nonlinear Models of the Theory of Shells with Thickness Decrease
16:20 – 16:40	<u><i>Tovstik T.P.</i></u>	Two-dimensional model of plate made of anisotropic inhomogeneous material



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Statistical Inference in Linear Models (II) CHAIR: Francisco Carvalho (ROOM 7)		
15:00 – 15:25	<u>Cristina Andrade</u> João A. Corte-Real	Spatial distribution of climate indices in the Iberian Peninsula
15:25 – 15:50	<u>Dário Ferreira</u> Sandra S. Ferreira Célia Nunes João T. Mexia	Estimation of variance components in normal linear mixed models with additivity
15:50 – 16:15	<u>Célia Nunes</u> Gilberto Capistrano Sandra S. Ferreira Dário Ferreira João T. Mexia	One-way Fixed Effects ANOVA with Missing Observations
16:15 – 16:40	<u>Gilberto Capistrano</u> Célia Nunes Dário Ferreira Sandra S. Ferreira João T. Mexia	One-way Random Effects ANOVA with Random Sample Sizes: An Application to a Brazilian Database on Cancer Registries
16:40 – 17:00	<u>Francisco Carvalho</u> Ricardo Covas	B-Matrices and Linear Models



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION 1: <u>Mini-Symposium:</u> Particle-Based Multiscale Analysis CHAIR: Rimantas Kačianauskas, Alvaro Ramirez Gomez (ROOM 8)		
15:00 – 15:30	<u>Harald Kruggel-Emden,</u> <u>FredericElskamp</u> (Ruhr University Bochum, Germany)	Numerical Investigation of a Continuous Screening Process by the Discrete Element Method
15:30 – 16:00	<u>Rimantas Kačianauskas,</u> <u>Darius Markauskas,</u> <u>Algirdas Maknickas</u> (Vilnius Gediminas Technical University, Lithuania)	Adapting the Discrete Element Models to Simulation of Acoustic Agglomeration of Aerosols Particles
16:00 – 16:30	<u>Bogdan Kravets,</u> <u>Harald Kruggel-Emden</u> (Ruhr University Bochum, Germany)	Development and Application of a Thermal Lattice Boltzmann scheme
16:30 – 17:00	<u>Raimondas Jasevičius,</u> <u>Romas Baronas</u> (Vilnius University, Lithuania), <u>Rimantas Kačianauskas</u> (Vilnius Gediminas Technical University, Lithuania)	Modelling of the Normal Elastic Dissipative Interaction of a <i>S. Aureus</i> Bacterium
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Fourth ICNAAM Symposium on Recent Developments in Hilbert Space Tools and Methodology for Scientific Computing -1- CHAIR: Metin Demiralp (ROOM 9)		
15:00 – 15:30	<i>Metin Demiralp</i> (Lecture Talk)	Infinite node Interpolation, Space Extension, EMPR Tridiagonalization
15:30 – 16:00	<i>Ayla Okan & Metin Demiralp</i> (with Concise Title)	TKEMPR for Outer Product Sums: Arrowheading EMPR for Kernel (AEMPRK)
16:00 – 16:30	<i>Berfin Kalay & Metin Demiralp</i> (with Concise Title)	Fluctuation Removal Via an Extended Space Expectation Value Weight Function for Singular Quantum Systems
16:30 – 17:00	<i>Metin Demiralp</i>	Separate Node Ascending Derivatives Expansion (SNADE) for Univariate Functions: Conceptuality and Formulation

22 September 2014 SESSION: Structure Preserving Integrators for Differential Equations CHAIR: Roman Kozlov (ROOM 10)		
15:00 – 15:30	<i>Takaharu Yaguchi</i>	Hamiltonian Structures of Wave-Type Equations Compatible with the Finite Element Exterior Calculus
15:30 – 16:00	<i>Ai Ishikawa</i>	Invariance of Furihata's Discrete Gradient Schemes for the Webster Equation with Different Riemannian Structures
16:00 – 16:30	<i>Yuto Miyatake</i>	A fourth-order energy-preserving exponentially-fitted integrator for Poisson systems
16:30 – 17:00	<i>Eirik Hoel Høiseth</i>	Splitting methods for controlled vessel offshore operations



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">22 September 2014</p> <p align="center">SESSION: Symposium on Dynamical systems Applications</p> <p align="center">CHAIR: Pinto, Carla</p> <p align="center">(ROOM 11)</p>		
15:00 – 15:30	<i>Ana R.M Carvalho, Carla M.A. Pinto</i>	Dynamic states of a unidirectional ring of Chen oscillators
15:30 – 16:00	<i>Carla M.A. Pinto</i>	Effects of dynamic quarantine and nonlinear infection rate in a model for computer worms propagation
16:00 – 16:30	<i>Carla M.A. Pinto, Ana R.M. Carvalho</i>	Virus propagation in a SIQR model with impulse quarantine
16:30 – 17:00	<i>Ana R.M Carvalho, Carla M.A. Pinto</i>	Dynamics of coinfection of HIV/AIDS and tuberculosis with exogeneous reinfection
17:00 – 17:30	Coffee Break	

<p align="center">22 September 2014</p> <p align="center">SESSION: Physical-Chemical Gas-Dynamics: Non-Equilibrium Processes Modeling and Simulation</p> <p align="center">CHAIR: : Yuriy Gorbachev</p> <p align="center">(ROOM 12)</p>		
15:00 – 15:30	Mikhail A. Zatevakhin	Multiphase Convective Flow with Steady Sedimentation and Equilibrium Condensation
15:30 – 16:00	<u>Ye.A. Bondar</u> , S.F. Gimelshein	Direct Simulation Monte Carlo modeling of non-equilibrium rarefied re-entry flows
16:00 – 16:30	Nikolay Y. Bykov, <u>Yuriy Gorbachev</u>	DSMC Models for H ₂ O Condensation Process



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: INVITED SPEAKER CHAIR: Ewa Weinmueller (ROOM 1)		
17:30 – 18:30	<u>J.I. Montijano, L. Rández, M. Van Daele and M. Calvo</u>	Exponential fitting techniques for the solution of stiff problems with explicit methods

22 September 2014 SESSION: INVITED SPEAKER CHAIR: Francesca Mazzia (ROOM 1)		
18:30 – 19:30	<u>Luigi Brugnano, Gianluca Frasca Caccia and Felice Iavernaro</u>	Energy conservation issues in the numerical solution of Hamiltonian PDEs

22 September 2014 SESSION: INVITED SPEAKER CHAIR: Luigi Brugnano (ROOM 1)		
19:30 – 20:00	Ross Wright	Jeff Cash: an appreciation



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">22 September 2014 SESSION: Operational Research and Applications CHAIR: Fernanda A. Ferreira (ROOM 7)</p>		
19:10 – 19:30	<i>Conceição Castro and <u>Fernanda A. Ferreira</u></i>	Effects of hotel characteristics on room rates in Porto: a hedonic price approach
19:30 – 19:50	<i>Alexander N. Nepp, <u>Oleg I. Nikonov</u>, Paulina V. Kryuchkova and Alexander N. Semin</i>	Management of investment risks in the pension systems of OECD countries and Russia
19:50 – 20:10	<i><u>Oleg I. Nikonov</u> and Alexandr Tarasyev</i>	Dynamic modeling of interregional migration processes in the Ural Federal District (Russia)
20:10 – 20:30	<i><u>Marina A. Medvedeva</u> and Anatoly M. Volovich</i>	The currency risk management in the real sectors of the economy based on volatility

<p align="center">22 September 2014 SESSION: The 1st Symposium on Multiscale, Multiphysics and Turbulent flow Simulations CHAIR: Huseyin C. Yalcin (ROOM 3)</p>		
20:05 – 20:35	<i><u>Gursan Coban</u>, Serdar Celebi</i>	Exact Analytical Representation of Fiber Stress Tensor Based on Angular Integration (AI) Through Cellular Level Probabilistic Equations
20:35 – 21:05	<i><u>Vesselin Krassimirov Krastev</u>, Gino Bella</i>	High Reynolds Number Hybrid RANS/LES Modeling With Turbulent Time Scale Bounding
21:05 – 21:35	<i><u>Rukiye Kara</u></i>	Representing Subgrid Stress with Cinlar Velocity Field in Large Eddy Simulation
21:35 – 22:05	<i><u>Armin Amindari</u>, Huseyin C. Yalcin</i>	Numerical Investigation Of Influence Of Leaflet Calcification On Aortic Valve Hemodynamics



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Numerical Methods for Linear Algebra and Approximations CHAIR: Takemitsu Hasegawa (ROOM 2)		
19:35 – 20:05	<i>Shinya Ozawa</i> <i>Yohsuke Hosoda</i> <i>Takemitsu Hasegawa</i>	A new QR factorization method by recursive blocked Gram-Schmidt algorithm and recursive blocked Cholesky factorization
20:05 – 20:35	<i>Nobuyoshi Asai</i> <i>Yoshinori Miyazaki</i>	On Computing Eigenvalues of Lamé Equation and Zeros of Whittaker Function by Matrix Method
20:35 – 21:05	<i>Kensuke Aihara</i> <i>Akira Osato</i> <i>Kuniyoshi Abe</i> <i>Emiko Ishiwata</i>	An Implementation of IDRstab with Biorthogonality Relations for Solving Linear Systems
21:05 – 21:35	<i>Kuniyoshi Abe</i> <i>Kensuke Aihara</i>	Hybrid BiCR methods with a stabilization strategy for solving linear equations
21:35 – 22:05	<i>Ryo Sumikura</i> <i>Akiko Fukuda</i> <i>Emiko Ishiwata</i> <i>Yusaku Yamamoto</i> <i>Masashi Iwasaki</i> <i>Yoshimasa Nakamura</i>	Eigenvalue Computation of Totally Nonnegative Upper Hessenberg Matrices Based on a Variant of the Discrete Hungry Toda Equation



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Analytical Approaches for Nonlinear Differential Equations Modeling Complex Natural Phenomena & Advanced Technological Processes CHAIR: CHAIR: Shi Jun Liao and Hang Xu (ROOM 4)		
20:05 – 20:35	<i>Jiaojiao Li, Jifeng Cui and Hang Xu</i>	Homotopy analysis method for the convection flow in two rotating disks filled by a nanofluid containing both nanoparticles and microorganisms
20:35 – 21:05	<i>Biao Wang, Chao Wu, Xiang Li, Qingkai Zhao, and Tong Ge</i>	Survivability Design for a Hybrid Underwater Vehicle
21:05 – 21:35	<i>Xiang Li, Xuyang Wang, Biao Wang, Xiaochen Li, Tong Ge and Yan Wen</i>	Performance study and flow analysis of an annular multi-nozzle macrobenthos sampler
21:35 – 22:05	<i>Qingqing Yuan, Min Zhao, Tong Ge, Ammarah Raees</i>	The Scour Prediction of Non-contact Trencher with Numerical Method

22 September 2014 SESSION: Some New Trends in Nonlinear Differential Equations CHAIR: Prof. Dr. Yusuf Pandir (ROOM 5)		
20:05 – 20:35	<i>Ayşe Betül Koç</i>	<i>An Efficient Approach for Solving Telegraph Equation</i>
20:35 – 21:05	<i>Sema Servi</i>	<i>Reduced Differential Transform Method For Improved Boussinesq Equation</i>
21:05 – 21:35	<i>Masatomo Matsushima</i>	<i>The n-th stationary KdV equation and the monodromy</i>



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Second Symposium on Computational and Applied Science CHAIR: Michal Beneš (ROOM 6)		
20:05 – 20:35	<i>Hatice Kübra DURU</i>	Solution of the system of Cauchy-type singular integral equations of the first kind by third- and fourth-kind
20:35 – 21:05	<i>B H Liu, T N Xu, X Q Xu, Y T Sun and Y B Li</i>	Numerical Analysis on Energy Absorption Characteristics of PVB Laminated Windshield Subject to Human Head Impact
21:05 – 21:35	<i>Michal Beneš</i>	Asynchronous Time Integration of Parabolic Problems in Composite Media



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION 2: <u>Mini-Symposium:</u> Particle-Based Multiscale Analysis CHAIR: Harald Kruggel-Emden (ROOM 8)		
20:05 – 20:35	<i>Carlos González-Montellano</i> <i>(WESTEEL EMEA S.L., Spain),</i> <i>Alvaro Ramírez-Gómez</i> <i>(Technical University Madrid, Spain)</i>	Discrete Element Analysis on the Discharge Rate of Elongated Particles
20:35 – 21:05	<i>Kevin Vollmari,</i> <i>Muhammad S Khan,</i> <i>Tobias Oschmann,</i> <i>Harald Kruggel-Emden</i> <i>(Ruhr University Bochum, Germany)</i>	Numerical and Experimental Investigation of the Pressure Drop in Packings of Spherical and Non-Spherical Particles
21:05 – 21:35	<i>Urtė Radvilaitė,</i> <i>Rimantas Kačianauskas</i> <i>(Vilnius Gediminas Technical</i> <i>University, Lithuania),</i> <i>Alvaro Ramírez-Gómez</i> <i>(Technical University Madrid, Spain)</i>	Semi-Analytical Model for Non- Spherical Particles
21:35 – 22:05	<i>Ona Lukoševičienė,</i> <i>Saulius Pilkavičius.</i> <i>Rimantas Kačianauskas</i> <i>(Vilnius Gediminas Technical</i> <i>University, Lithuania)</i>	Simulation of Random Cracking of Heterogeneous Matrix Reinforced by the Ribbed Bar



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014 SESSION: Fourth ICNAAM Symposium on Recent Developments in Hilbert Space Tools and Methodology for Scientific Computing -2- CHAIR: Metin Demiralp (ROOM 9)		
20:05 – 20:35	<i>N.A. Baykara & M. Demiralp</i> <i>(with concise title)</i>	SNADE for Univariate Functions: Polynomial Recursions, Remainder Bounds and the Convergence
20:35 – 21:05	<i>N.A. Baykara & Ercan Gürvit</i> <i>(with concise title)</i>	SNADE for Univariate Functions: Univariate Numerical Integration
21:05 – 21:35	<i>E. Gürvit & N. A. Baykara</i> <i>(with concise title)</i>	SNADE for Univariate Functions: Node Optimization via Partial Fluctuation Suppression
21:35 – 22:05	<i>İrem Yaman</i>	THDMR on the Unit Disk

22 September 2014 SESSION: Structure Preserving Integrators for Differential Equations CHAIR: Roman Kozlov (ROOM 10)		
20:05 – 20:35	<i>Raffaele D'Ambrosio</i>	Long-term stability of multi-value methods for Hamiltonian problems
20:35 – 21:05	<i>Mike Hay</i>	Two definitions of fake Lax pairs



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

22 September 2014

SESSION: Multi-scale computational modelling and simulation for complex materials (fluid and solid)

**CHAIR: Dr. Salvatore Federico
(ROOM 11)**

20:05 – 20:35	<i>Jianming Zhang, Yang Yang</i>	Shear deformable deformation of carbon nanotubes based on a new analytical nonlocal Timoshenko beam model
20:35 – 21:05	<i>Aleksandar Tomic, Alfio Grillo, Salvatore Federico</i>	Microstructural Computational Modelling of Soft Tissues

22 September 2014 (09:00 - 11:00)

Statistical Inference in Linear Models - Poster Session

<i>Marco Costa</i> <i>A. Manuela Gonçalves</i> <i>Joana Silva</i>	Forecasting time series combining Holt-Winters and Bootstrap approaches
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END OF THE 1ST DAY



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014 CHAIR: Sergei Bogovalov (ROOM 1)		
9:00 – 10:00	Invited lecture Professor Bendiks Jan Boersma Turbulent Heat Transfer in Flows Near the Critical Point	
10:00 – 10:20	<i>A. Dylak and <u>Z. Jaworski</u></i>	A CFD Study of Formation of the Intensive Mixing Zone in a Highly Non-Newtonian Fluid
10:20 – 10:40	<i><u>V. Hric</u> and J. Halama</i>	Numerical Solution of 2D Wet Steam Flow with Non-equilibrium Condensation and Real Thermodynamics
10:40 – 11:00	<i>A. R. Appadu, J. K. Djoko and H. H. Gidey</i>	A Computational Study of Some Numerical Schemes for a Test Case with Steep Boundary Layers
Lunch Break		



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014		
SESSION: Nuclear Syntheses without Harmful Radiations		
CHAIR: THOMAS VOUGIOUKLIS		
(ROOM 2)		
08:30 – 09:30	<i>R. M. Santilli</i>	Insufficiencies of quantum mechanics in nuclear physics and their apparent resolution by hadronic mechanics
09:30 – 10:00	<i>C. S. Burande</i>	On The Rutherford-Santilli Neutron Model
10:00 – 10:30	<i>S. S. Dhondge</i>	Santilli's Hadronic Mechanics of Formation of Deuteron
10:30 – 11:00	<i>R. B. Lanjewar</i>	A Review of Intermediate Controlled Nuclear Syntheses (ICNS) without Harmful Radiations
11:00 – 11:30	Coffee Break	
11:30 – 12:00	<i>A. Nas, "Experimental set up for the synthesis of the Silica from Carbon and Oxygen"</i>	
12:00 – 12:30	I. Das Sarma, "Hadronic Nuclear Energy: An Approach Towards Green Energy"	
12:30 – 13:00	U. Abundo, "An Intrinsically Irreversible, Neural-network-like Approach to the Schrödinger Equation and some Results of Application to Drive Nuclear Synthesis Research Work"	
13:00-13:30	C. S. Burande, "Bose-Einstein Correlation within the Framework of Hadronic Mechanics"	
Lunch Break		



<p align="center">23 September 2014 SESSION: Seventh Symposium on Recent Trends in the Numerical Solution of Differential Equations CHAIR: Yaroslav Sergeev (ROOM 3)</p>		
09:00 – 09:30	<i>Raffaele D'Ambrosio</i>	Highly stable multivalued numerical methods
09:30 – 10:00	<i>Felice Iavernaro</i>	Modified Line Integral Methods for conservative problems with multiple invariants
10:00 – 10:30	<i>Zdzislaw Jackiewicz</i>	Strong stability preserving general linear methods
10:30 – 11:00	<i>Luis Randez</i>	Exponentially Fitted Fifth-Order Two-Step Peer Explicit Methods

<p align="center">23 September 2014 SESSION: Mathematical models for Energy systems CHAIR: Vincenzo Duraccio (ROOM 4)</p>		
09:00 - 09:25	<i>L. Tribioli</i>	Optimal Control of a Repowered Vehicle: Plug-in Fuel Cell against Plug-in Hybrid Electric Powertrain
09:25 – 09:50	<i>R. Cozzolino</i>	On-board diesel autothermal reforming for PEM fuel cells: simulation and optimization
09:50 – 10:10	<i>S. Ubertini</i>	Development of a System-Level Model for Fuel Cell Power Units Operated with Syngas
10:10 – 10:35	<i>G. Falcucci</i>	On the Detailed Multidimensional Modeling of HT PEM Fuel Cells and Stacks
10:35 – 11:00	<i>A. L. Facci</i>	Control strategy optimization of HVAC plants



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>23 September 2014 SESSION: No. 102, The 2nd Symposium on Computational and Analytical Techniques for Solving Coupled Multiphysics Problems CHAIR: Xiaofan Gou (ROOM 5)</p>		
09:00 – 09:30	<i>Linli Zhu</i>	Influence of Pre-stress Fields on Electric Properties of Semiconductor Nanowires
09:30 – 10:00	<i>Feng Hu</i>	Dynamic Response of Pile in Elasto-viscoplastic Soil by Load-transfer Methods
10:00 – 10:30	<i>Dan Huang, Guangda Lu, Mengwei Wang</i>	A Non-local Bond-based Peridynamic Model for Elastic Behavior and Fracture Analysis
10:30 – 11:00	<i>Zhichao Zhang, Xingzhe Wang</i>	Effective Electromagnetic and Thermoelastic Properties for Multi-phase Composites Based on the Generalized M-T Method

<p>23 September 2014 SESSION (PART A1): Workshop on Numerical and Symbolic Computation in Surface and Curve Modeling CHAIR: Ryszard KOZERA (ROOM 6)</p>		
09:00 – 09:30	<i><u>R.Kozera</u> & L. Noakes</i>	Exponential parameterization & e-uniformly sampled reduced data
09:30 – 10:00	<i><u>A. Jastrzebska</u>, W. Pedrycz & W. Homenda</i>	Fuzzy cognitive map reconstruction
10:00 – 10:30	<i><u>M. Pietras</u></i>	Error analysis in the hardware networks applications using reduced floating-point numbers representation
10:30 – 11:00	<i><u>L. Mazurowski</u></i>	Generative electronic background music system



23 September 2014 SESSION: Computational Modeling and Experimental Assessment of Transport Processes in Building Materials and their Multi-Layered Systems CHAIR: Michal Kuráž (ROOM 7)		
09:00 – 09:30	<i>Milena Pavlíková, Zbyšek Pavlík and <u>Robert Černý</u></i>	Effect of Cation Type on Chloride Binding in Building Stones
09:30 – 10:00	<i>Milena Pavlíková, Zbyšek Pavlík, Anton Trník, Jaroslav Pokorný, and Robert Černý</i>	Characterization of a Lime-Pozzolan Plaster Containing Phase Change Material
10:00 – 10:30	<i><u>Pavel Beran</u></i>	The Impact of Stone Shape to the Thermal Stress of Ashlar Masonry
10:30 – 11:00	<i><u>Lukáš Fiala</u> and Robert Černý</i>	Application of the Lichtenecker's Mixing Rule in Modeling the Thermal Properties of Autoclaved Aerated Concrete

23 September 2014 SESSION: Modeling, Simulation and Optimization of Transportation Networks CHAIR: Nadir Farhi (ROOM 8)		
09:00 – 09:30	<i>Boris Kerner</i>	Criticism of generally accepted Fundamentals and Methodologies of Traffic and Transportation Theory
09:30 – 10:00		
10:00 – 10:30	<i>Valentina Kurtc and Igor Anufriev</i>	Fast Multirate Numerical Integration Scheme for Large-scale Traffic Simulation
10:30 – 11:00	<i>Nadir Farhi, Habib Haj-Salem and Jean- Patrick Lebacque</i>	On the robust guidance of users in road traffic networks



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">23 September 2014 SESSION: Numerical Optimization and Applications CHAIR: Ana I Pereira and M. Fernanda Costa (ROOM 9)</p>		
10:00 – 10:20	<i>Ana I. Pereira, José Lima and Paulo Costa</i>	Combining Gait Optimization with Passive System to Increase the Energy Efficiency of a Humanoid Robot Walking Movement
10:20 – 10:40	<i>C. B. Vaz and A. P. Ferreira</i>	Efficiency Assessment of Wind Farms: a Two-stage Approach
10:40 – 11:00	<i>Eliana Costa e Silva, M. Fernanda Costa, Wolfram Erhagen and Estela Bicho</i>	Global vs. Local Nonlinear Optimization Techniques for Human-Like Movement of an Anthropomorphic Robot

<p align="center">23 September 2014 SESSION: Modelling of Biological Cells, Fluid Flow and Microfluidics CHAIR: Ivan Cimrak (ROOM 11)</p>		
9:00 – 9:20	<i>Markus Gusenbauer and Thomas Schrefl</i>	Dynamics of Magnetic Particles in Microfluidic Channels
9:20 – 9:40	<i>Renata Tothova and Ivan Cimrak</i>	Local stress analysis of red blood cells in shear flow
9:40 – 10:00	<i>Iveta Jancigova and Ivan Cimrak</i>	A novel approach with non-uniform force allocation for area preservation in spring network models
10:00 – 10:20	<i>Ivan Cimrak</i>	A simplified model for dynamics of cell rolling and cell-surface adhesion
10:20 – 10:40	<i>Rodney Averett</i>	Mechanical behavior of Erythrocytes in Diseased States
10:40 – 11:00	<i>Iveta Jancigova and Katarina Bachrata</i>	Bending modulus of elastic membrane in a spring-network model of red blood cell



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: Third Minisymposium on Mathematical Modeling in Hydrology: Novel Insight in Hydrological Modeling CHAIR: Lucio Ubertini and Fabio Russo (ROOM 10)		
09:00	<i>L. Ubertini</i>	Introduction
09:00 – 09:15	<i>C. Biscarini</i>	Structural health monitoring through fiber bragg grating strain sensing
09:15 – 09:30	<i>F. Prodi</i>	Microwave Active Sensors and River Basin Hydrology
09:30 – 09:45	<i>M. Giglioni</i>	Calibration of Maidment's Formula Coefficients for Runoff Velocity
09:45 – 10:00	<i>S. Spina</i>	Real-time control of urban drainage system: optimization of spillways
10:00 – 10:15	<i>F. Russo</i>	Using disdrometer measured raindrop size distributions to establish weather radar algorithms
10:15 – 10:30	<i>M. Rianna</i>	A Preliminary Analysis of Rainfall Spatial Distribution at Catchment Scale
10:30 – 10:45	<i>D. Orlando</i>	Evaluation of Optimal Rain Gauge Network Density for Rainfall-Runoff Modelling
10:45 – 11:00	<i>E. Ridolfi</i>	A Bivariate Analysis of Temperature and Rainfall Series for Snowfall Return Time Estimation
17:00 – 17:30	Coffee Break	



<p>23 September 2014 SESSION: Symposium on High Performance Computing in Engineering and Environmental Sciences CHAIR: Tomas Kozubek (ROOM 12)</p>		
09:00 – 09:30	<i>L. Říha, T. Brzobohatý, A. Markopoulos, M. Jarošová, <u>T. Kozubek</u></i>	Implementation of Hybrid Total FETI (HTFETI) solver for Multi-core Architectures
09:30 – 10:00	<i>M. Čermák, V. Hapla, A. Markopoulos, <u>T. Karásek</u></i>	Solving elastoplastic problems with different preconditioners
10:00 – 10:30	<i>O. Meca, <u>S. Böhm</u></i>	Verification of MPI applications
10:30 – 11:00	<i>A. Markopoulos, <u>M. Čermák</u>, V. Hapla, R. Halama</i>	Implementation of the plasticity solver in the PermonCube software package

<p>23 September 2014 SESSION: Border Zones Between Experimental and Numerical Application Including Solution Approaches by Extensions of Standard Numerical Methods CHAIR: Sigrun Ortleb, Christian Seidel (ROOM 13)</p>		
09:00 – 09:30	<i><u>Sigrun Ortleb</u></i>	An Application of Parameter Sensitivity Analysis for Shallow Water Flow Around a Pier
09:30 – 10:00	<i><u>Robert Geise</u></i>	Electromagnetic Scattering Problems - Numerical Issues and New Experimental Approaches of Validation
10:00 – 10:30	<i><u>Maryam Khanian</u></i>	An Improved Stopping Criterion for Anisotropic Diffusion
10:30 – 11:00	<i><u>Nikolai Wagner</u></i>	Experimental and Numerical Analysis of Tensegrity Structures



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: Mathematical Modelling of Economic Systems II CHAIR: David Hampel (ROOM 14)		
09:00 – 09:20	<i><u>Holcner Vladan,</u></i> <i><u>Neubauer Jiri</u></i>	Modelling Expected Defense Specific Inflation
09:20 – 09:40	<i><u>Issever Grochova</u></i> <i><u>Ladislava</u></i>	Can Economic Growth Be Acceptable if Environmental Issues are Considered? Economic Consequences in the EU Countries
9:40 – 10:00	<i><u>Odehnal Jakub,</u></i> <i><u>Sedlacik Marek</u></i>	The Demand for Military Spending in NATO Member Countries
10:00 – 10:20	<i><u>David Hampel,</u></i> <i>Jitka</i> <i>Janova</i>	Estimation of Cost and Revenue Functions for Reforestation System in Drahanska Highlands
10:20 – 10:40	<i><u>Zak Jaroslav,</u></i> <i>Zak</i> <i>Jiri</i>	Economic Environmental and Structural Analysis of Green Bridges
10:40 – 11:00	<i><u>Myskova Katerina</u></i>	Influence of Technical Parameters of Overpasses on Wildlife Migrations and Economic Aspects
11:00 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014		
SESSION: Numerical Methods for High Dimensional Stochastic Systems		
CHAIR: Max Gunzburger (FSU) and Clayton Webster (ORNL) (ROOM 15)		
09:00 – 09:30	Hyung-Chun Lee	Sparse grid stochastic collocation method for stochastic Burgers equation
09:30 – 10:00	Abdellah Chkifa	Polynomial interpolation for intrusive treatment of parametric PDEs
10:00 – 10:30	Guannan Zhang	Hierarchical acceleration of stochastic collocation for PDEs with random inputs
10:30 – 11:00	Clayton Webster	Quasi-optimal polynomial approximations for PDEs with linear and nonlinear stochastic coefficients
11:00 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: INVITED SPEAKER CHAIR: Ernst Hairer (ROOM 1)		
11:30 – 12:30	J. C. Butcher	Algebraic analysis of structure-preserving general linear methods

23 September 2014 SESSION: INVITED SPEAKER CHAIR: J. C. Butcher (ROOM 1)		
12:30 – 13:30	Ernst Hairer	Long-time numerical energy preservation for oscillatory differential equations



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>23 September 2013</p> <p>SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014</p> <p>CHAIR: Hoarau Yannick</p> <p>(ROOM 1)</p>		
15:00 – 15:20	<u>S. Krajnovic</u> and G. Minelli	Partially-Averaged Navier-Stokes simulation of the flow around simplified vehicle
15:20 – 15:40	T. Neustupa	The Mathematical Model of a Steady Flow Through a Plane Profile Cascade with an Arbitrarily Large Inflow – Existence of a Weak Solution
15:40 – 16:00	<u>W. Ruili</u> , Z. Shudao and L. Quan	One Method of Constructing Manufactured Solutions to 2D Hydrodynamics Euler Equations
16:00 – 16:20	<u>R. Jafari</u> and T. Okutucu	The Arbitrary Lagrangian-Eulerian (ALE) Modeling of a Vapor Bubble Growth in a Microtube
16:20 – 16:40	H.H. Teng, G.H. Morgan, C.B. Kiyanda, N. Nikiforakis and <u>H.D. Ng</u>	GPU-based Simulation of the Two-Dimensional Unstable Structure of Gaseous Oblique Detonations
<p>Coffee Break</p>		



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014		
SESSION: Nuclear Syntheses without Harmful Radiations		
CHAIR: Thomas Vougiouklis (ROOM 2)		
15:00 – 15:30	<i>S.S. Wazalwar (Presenting Speaker), V.M. Tangde and A.A. Bhalekar</i>	Study of Combustion of Coal with Magnegas as Additive for Improved Combustion Efficiency: A Review of present Scenario and Future Scope
15:30 – 16:00	<i>C. P. Pandhurnekar</i>	Studies on the new fuels with Santilli magnecular structure and their industrial applications
16:00 – 16:30	<i>S.P. Zodape</i>	Novel Chemical Species of Santilli's Magnegas in Hadronic Chemistry
16:30 – 17:00	<i>V. M. Tangde</i>	A comprehensive Review of Hadronic Chemistry and its Applications
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: Seventh Symposium on Recent Trends in the Numerical Solution of Differential Equations CHAIR: Luigi Brugnano (ROOM 3)		
15:00 – 15:30	<i>Jana Burkotova</i>	Analytical and numerical treatment of singular linear BVPs with unsmooth inhomogeneity
15:30 – 16:00	<i>Giuseppina Settanni</i>	Whispering gallery modes in oblate spheroidal cavities: calculations with a variable stepsize
16:00 – 16:30	<i>Yaroslav Sergeyev</i>	Numerical infinitesimals for solving ODEs given as a Black-Box
16:30 – 17:00	<i>Vaclav Finek</i>	A note on preconditioning for singularly perturbed problems discretized by wavelets

23 September 2014 SESSION: Numerical simulations of fluid systems CHAIR: Stefano Ubertini e Andrea Facci (ROOM 4)		
15:00 – 15:25	<i>A. L. Facci</i>	Three dimensional numerical simulation of water entry problem
15:25 – 15:50	<i>S. Ubertini</i>	Front-tracking lattice Boltzmann simulation of a wedge water entry
15:50 – 16:15	<i>G. Falcucci</i>	Lattice Boltzmann Investigation of Ferrofluid Jet Evolution in External Magnetic Fields
16:15 – 16:40	<i>G. Falcucci</i>	Fluid-structure interaction during the water entry of flexible cylinders
16:40 – 17:00	<i>P. Manciola</i>	Hydraulic Control of Culvert on Floodplain Simulation



23 September 2014 SESSION: No. 102, The 2nd Symposium on Computational and Analytical Techniques for Solving Coupled Multiphysics Problems CHAIR: Huadong Yong (ROOM 5)		
15:00 – 15:30	<i>Haomiao Zhou, Xiaole Cui</i>	Numerical Simulation of Nonlinear Thermo-Magneto-Electric Coupling Effect in ME Laminates
15:30 – 16:00	<i>Yuzhou Sun, Yanzhi Zhu, Dongxia Li</i>	The Compressive Buckling and Size Effect of Single-Walled Carbon Nanotubes
16:00 – 16:30	<i>Yunpeng Jiang, Kun Qiu</i>	A Micromechanics-based Incremental Damage Model for Carbon Black Filled Rubbers
16:30 – 17:00	<i>Chenguang Huang, Youhe Zhou</i>	Study of The Influence of Soft Ferromagnet Location and Dimensions on The Levitation Performance for Maglev Systems

23 September 2014 SESSION (Part A2): Workshop on Numerical and Symbolic Computation in Surface and Curve Modeling CHAIR: Ryszard KOZERA (ROOM 6)		
15:00 – 15:30	<i><u>R. Kozera</u>, L. Noakes and P. Szmielew</i>	Convergence orders in length estimation for exponential parameterization & e-uniform samplings
15:30 – 16:00	<i>A. Cariow, G. Cariowa & <u>P. Malewicz</u></i>	An algorithm for multiplication of biquaternions
16:00 – 16:30	<i>W. Rybnik, W. Homenda & <u>A. Jastrzebska</u></i>	Automatic harmonization model using expert systems with fuzzy knowledge & supervised learning
16:30 – 17:00	<i><u>D. Peszor</u>, A. Polanski & K. Wojciechowski</i>	Estimation of marker placement based on the fiducial points for automatic facia recognition



23 September 2014 SESSION: Computational Modeling and Experimental Assessment of Transport Processes in Building Materials and their Multi-Layered Systems CHAIR: Tomáš Krejčí (ROOM 7)		
15:00 – 15:30	<u>J. Kruis</u> , <i>T. Koudelka and J. Maděra</i>	Moisture and salt transport coupled with damage Mechanics
15:30 – 16:00	<u>T. Koudelka</u> , <i>J. Kruis, S. Sysala and M. Vokáč</i>	Modeling of damage due to shrinkage in autoclaved aerated concrete
16:00 – 16:30	<u>M. Kuraz</u>	Boussinesq and kinematic wave equation based catchment transport model

23 September 2014 SESSION: Modeling, Simulation and Optimization of Transportation Networks CHAIR: Habib Haj-Salem (ROOM 8)		
15:00 – 15:30	<i>Luc Charansonney_ and Vincent Aguiléra</i>	Real-time dynamic information to road-users: new challenges for urban road network management strategies
15:30 – 16:00	<i>Zhi-Yang Lin, Peng Zhang, Li-Yun Dong, S.C. Wong and Keechoo Choi</i>	Traffic flow on a road network using a conserved higher-order model
16:00 – 16:30	<i>Khelifi Asma, Haj-Salem Habib, Lebacque Jean-Patrick, Nabli Lotfi, Ouni Khaled</i>	Lagrangian discretization of Generic Second Order Model: Simulation results
16:30 – 17:00	<i>Antonina A. Chechina, Natalia G. Churbanova and Marina A. Trapeznikova</i>	Two-Dimensional Hydrodynamic Model for Traffic Flow Simulation Using Parallel Computer Systems



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014		
SESSION: Numerical Optimization and Applications		
CHAIR: Ana I Pereira and M. Fernanda Costa		
(ROOM 9)		
15:00 – 15:20	<i>M. F. Teodoro, J. N. Garcia , L. M. Coelho and M. G. Carvalho</i>	Relating air Pollution and Respiratory Diseases Occurrences
15:20 – 15:40	<i>Gabriela Guevara, Ana I. Pereira, Adriano Ferreira, José Barbosa and Paulo Leitão</i>	Genetic Algorithm for Flexible Job Shop Scheduling Problem - a Case Study
15:40 – 16:00	<i>G. Gulletta, S. M. Araújo, E. Costa e Silva, M. F. Costa, W. Erlhagen and E. Bicho</i>	Nonlinear optimization for human-like synchronous movements of a dual arm-hand robotic system
16: 00 – 16:20	<i>José Barbosa, Paulo Leitão, Emmanuel Adam and Damien Trentesaux</i>	Improving the ADACOR2 Supervisor Holon Scheduling Mechanism with Genetic Algorithms
16:20 – 16:40	<i>Lino Costa, Isabel A.C.P. Espírito Santo and Pedro Oliveira</i>	Bootstrap Performance Profiles in Stochastic Algorithms Assessment
16:40 – 17:00	<i>Rogério B. Francisco, M. Fernanda P. Costa and Ana Maria A.C. Rocha</i>	A Firefly Dynamic Penalty Approach for Solving Engineering Design Problems
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014		
SESSION: 4th Symposium on Distribution Theory, Estimation and Inference		
CHAIR: Filipe J. Marques/Carlos A. Coelho (ROOM 10)		
15:00 – 15:30	<i>M. Ivette Gomes</i>	Further Results on Order Statistics and Products of Functions of Independent Generalized Beta Random Variables
15:30 – 16:00	<i>M. Fátima Brilhante</i>	On the Proportion of Non Uniform Reported p-Values
16:00 – 16:30	<i>José M. Fernandes</i>	On a Spread Model for Portfolio Credit Risk Modeling
16:30 – 17:00	<i>Dora P. Gomes</i>	Computer intensive methods for improving the extremal index estimation
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: Exponential product and quantum analysis CHAIR: Prof. N. Hatano (ROOM 11)		
15:00 – 15:30	<i>Masuo Suzuki</i>	Historical remarks on exponential product and quantum analysis (including preface)
15:30 – 16:00	<i>David. P. Landau</i>	S-T transformation in spin dynamics
16:00 – 16:30	<i>Hans- G. Matuttis</i>	Synergies from using higher order symplectic decompositions both for ordinary differential equations and quantum Monte Carlo methods
16:30 – 17:00	<i>Sei Suzuki</i>	Quantum annealing: a base of quantum computation

23 September 2014 SESSION: Exponential product and quantum analysis CHAIR: Prof. D. P. Landau (ROOM 11)		
17:30 – 18:00	<i>Naomchi Hatano</i>	Eigenvalue problem of the Liouville operator of open quantum systems
18:00 – 18:30	<i>Hiroaki Matsueda</i>	Exact Mapping from Singular Value Spectrum of a Class of Fractal Images to Entanglement Spectrum of One-Dimensional Free Fermions
18:30 – 19:00	<i>Ken Umeno</i>	Correlation between exponential product formula and super efficient chaotic Monte Carlo computation
19:00 – 19:30	<i>Yoichiro Hashizume</i>	Quantum analysis applied to thermo field dynamics on dissipative systems



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>23 September 2014 SESSION: Symposium on High Performance Computing in Engineering and Environmental Sciences CHAIR: Tomas Karasek (ROOM 12)</p>		
15:00 – 15:30	<i>T. Brzobohatý, L. Říha, T. Karásek, T. Kozubek</i>	Performance Evaluation of OpenFOAM on Many-Core Architectures
15:30 – 16:00	<i>A. Ronovský, V. Vondrák, M. Podhoranyi</i>	Improving efficiency of hydrodynamical modelling using adaptive mesh refinement
16:00 – 16:30	<i>R. Blaheta, M. Hasal, Z. Michalec</i>	Hydromechanical modelling with application in sealing for underground waste deposition
16:30 – 17:00	<i>R. Vavrik, M. Theuer, M. Golasowski, S. Kuchar, V. Vondrak</i>	Automatic calibration of rainfall-runoff models and its parallelization strategies

<p>23 September 2014 SESSION: Border Zones Between Experimental and Numerical Application Including Solution Approaches by Extensions of Standard Numerical Methods CHAIR: Sigrun Ortleb, Christian Seidel (ROOM 13)</p>		
15:00 – 15:30	<i><u>Christian Seidel</u></i>	Border Zones between Numerical and Experimental Investigations by the Modelling of Rain-Wind Induced Vibrations
15:30 – 16:00	<i><u>Tobias Gleim</u></i>	Thermal Fluid-Structure-Interaction - Experimental and Numerical Analysis
16:00 – 16:30	<i><u>Lars Ostermann</u></i>	The Shallow Water Equations as a Hybrid Flow Model for the Numerical and Experimental Analysis of Hydro Power Stations



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014

SESSION: Mathematical Modelling of Economic Systems II

CHAIR: Ladislava Issever Grochova

(ROOM 14)

15:00 – 15:20	<u>Sedlacik Marek,</u> <u>Odehnal Jakub, Foltin</u> <u>Pavel</u>	Classification of Terrorism Risk by Multidimensional Statistical Methods
15:20 – 15:40	<u>Issever Grochova</u> <u>Ladislava, Myskova</u> <u>Katerina, Zak Jaroslav</u>	Ecology versus economic growth in Europe: How to reach the efficiency?
15:40 – 16:00	<u>Pavel Kolman</u>	Time minimizing transportation problems with partial limitations of transported amount for transport participants
16:00 – 16:20	<u>Doudova Lucie,</u> <u>Hampel David</u>	Testing equality of selected parameters in particular nonlinear models
16:20 – 16:40	<u>Lubos Strelec</u>	Notes on power of normality tests of error terms in regression models
16:40 – 17:00	<u>Traskal Martin,</u> <u>Doudova Lucie, Bunka</u> <u>Frantisek</u>	Distribution of constrained maximum coordinates

23 September 2014

SESSION: The 3rd Symposium on Numerical Methods of Boundary Value Problems (BVPs): Analysis, Algorithms and Real World Applications

CHAIR: Ali Sayfy

(ROOM 15)

15:00 – 15:30	<u>Ali Sayfy</u>	Solution of Troesch's problem using Fixed-Point Iteration with Embedded Green's Functions
15:30 – 16:00	<u>M. S. Ismail</u>	ADI Method for Solving the Two-Dimensional Coupled Nonlinear Schrodinger Equation
16:00 – 16:30	<u>Pius Chin</u>	Stabilized and reliable numerical scheme for a fully discrete Allen-Cahn equation on a smooth domain
16:30 – 17:00	<u>Yang Yang</u>	Polynomial Extensions on a Pyramid in Three Dimensions



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: INVITED SPEAKER CHAIR: Max Gunzbuger (ROOM 1)		
17:30 – 18:30	Des Higham	Twitter Dynamics

23 September 2014 SESSION: INVITED SPEAKER CHAIR: Des Higham (ROOM 1)		
18:30 – 19:30	<u>Max Gunzburger,</u> Peter Jantsch, Aretha Teckentrup and Clayton Webster	A multilevel stochastic collocation method for SPDEs



<p align="center">23 September 2014 SESSION: Recent Mathematical Approaches & Applications in Geosciences CHAIR: Mohammed FARFOUR, PhD (ROOM 1)</p>		
19:35 – 20:05	<i>Seonghyung Jang and Taeyoun Kim</i>	Prestack reverse time migration for 3D marine reflection seismic data
20:05 – 20:35	<i>Seho Hwang, Byeongho Won, Jehyun Shin, and Jongman Kim</i>	Correction of Steel Casing Effect for Density Log using Numerical and Experimental Methods in the Slim Borehole
20:35 – 21:05	<i>Mohammed FARFOUR, Youngeun Jo, Dongshin KIM and Wang Jung YOON</i>	Seismic data are rich in information about subsurface formations and fluids
21:05 – 21:35	<i>Mohammed FARFOUR, Youngeun Jo, Dongshin KIM and Wang Jung YOON,</i>	Inverting Seismic Data for Rock Physical Properties; Mathematical Background and Application

<p align="center">23 September 2014 SESSION: Operational Research and Applications CHAIR: Flávio Ferreira (ROOM 2)</p>		
19:10 – 19:30	<i><u>Flávio Ferreira</u></i>	Privatization in an international mixed duopoly with environmental taxes
19:30 – 19:50	<i><u>Jakub Dokoupil, Milan Papez and Pavel Václavek</u></i>	Bayesian comparison of Kalman filters with known covariance matrices
19:50 – 20:10	<i><u>Yuji Yoshida</u></i>	A decision process with portfolios for value-at-risks
20:10 – 20:30	<i><u>Luís Vieira and Vasco Mano</u></i>	Generalized Krein parameters and some theorems on strongly regular graphs



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">23 September 2014 SESSION: Applied and Numerical Mathematics III CHAIR: Karel in 't Hout (ROOM 3)</p>		
19:35 – 20:05	<i>Norbert Maggi, Patrizio Arrigo and Carmelina Ruggiero</i>	Ribosomal DNA Analysis by Wavelet Transform
20:05 – 20:35	<i>Karel in 't Hout and Maarten Wyns</i>	Convergence of the Hundsdorfer-Verwer Scheme for Two-dimensional Convection-diffusion Equations with Mixed Derivative Term
20:35 – 21:05	<i>Christine Böckmann and Amornrat Rattana</i>	An Inverse Fourth Order Sturm-Liouville Problem
21:05 – 21:35	<i>Andrey V. Timofeev</i>	Accuracy of Lipschitz Classifier Ensemble: Confidence Sets Approach

<p align="center">23 September 2014 SESSION: Graph Theory and Statistics applied to Engineering problems CHAIR: Alessio Monti (ROOM 4)</p>		
19:35 – 20:00	<i>O. Giannini</i>	Fuzzy model for fluidized bed assisted drag finishing
20:00 – 20:25	<i>A. Donno</i>	Isomorphism classification of infinite Sierpiński carpet graphs
20:25 – 20:50	<i>A. Donno</i>	Optimal Water Distribution in a Sierpinski type Network
20:50 – 21:15	<i>F. Trovalusci</i>	Statistical Analysis of the Mechanical Properties of Injection molded photoluminescent polymers



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: Mathematical and Numerical Modelling CHAIR: Ewa Magnucka-Blandzi (ROOM 5)		
19:35 – 19:55	<i>E.Magnucka-Blandzi and <u>Z.Walczak</u></i>	Bending of five-layer beams with lengthwise corrugated main core
19:55 – 20:15	<i>E.Magnucka-Blandzi and <u>Z.Walczak</u></i>	Bending of five-layer beams with crosswise corrugated main core
20:15 – 20:35	<i><u>L.Wittenbeck</u>, M.Grygorowicz and P.Paczos</i>	Numerical Analysis of Sandwich Beam with Corrugated Core under Three – Point Bending
20:35 – 20:55	<i><u>M.Grygorowicz</u>, P.Paczos, L.Wittenbeck and P.Wasilewicz</i>	Experimental Three – Point Bending of Sandwich Beam with Corrugated Core
20:55 – 21:15	<i><u>E.Magnucka-Blandzi</u> and <u>Z.Walczak</u></i>	Mathematical modeling of three- layer circular plate under uniformly distributed load (pressure)
21:15 – 21:35	<i><u>B.Szyszk</u></i>	An Interval Version of Cauchy’s Problem for the Wave Equation



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">23 September 2014 SESSION (Part A3): Workshop on Numerical and Symbolic Computation in Surface and Curve Modeling CHAIR: Ryszard KOZERA (ROOM 6)</p>		
19:35 – 20:05	<i>W. Homenda, <u>A. Jastrzebska</u> & W. Pedrycz</i>	Automatic data understanding the tool for intelligent man-machine communication
20:05 – 20:35	<i>M. Kruk, <u>R. Kozera</u>, S. Osowski, P. Trzcinski, L. Sas-Paszt, B. Sumorok & B. Borkowski</i>	Computerized classification of the identification of soil microorganisms
20:35 – 21:05	<i>J.Z. Zawistowski, W. Szczesny & <u>B. Borkowski</u></i>	Alternative method of measuring the concentration
21:05 – 21:35	<i><u>F. Okulicka-Dluzewska</u></i>	An optimal coefficient in augmented Lagrangian method for saddle point problem

<p align="center">23 September 2014 SESSION: Initial Boundary Value Problems (IBVP) and Its Applications CHAIR: Serife Faydaoglu (ROOM 7)</p>		
19:35 – 20:05	<i>Olga S. Sedova and Yulia G. Pronina</i>	Initial boundary value problems for mechanochemical corrosion of a thick spherical member in terms of principal stress
20:05 – 20:35	<i>Serife Faydaoglu</i>	On spectral properties of a fourth-order boundary value problem with impulse



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014 SESSION: GRAPHS CHAIR: Vojislav Petrovic (ROOM 8)		
19:35 – 20:05	<i>S. B. Bozkurt Altindag and Durmus Bozkurt</i>	Bounds for the Distance Estrada Index of Graphs
20:05 – 20:35	<i>Midori Kobayashi, Keiko Kotani, Nobuaki Mutoh, Gisaku Nakamura</i>	Uniform Coverings of 2-paths in the Complete Bipartite Directed Graph
20:35 – 21:05	<i>Keiko Kotani</i>	Existence of Regular Factors in Star-free Graphs
21:05 – 21:35	<i>Vojislav Petrovic</i>	Kings in Bipartite Hypertournaments

23 September 2014 SESSION: 4th Symposium on Distribution Theory, Estimation and Inference CHAIR: Filipe J. Marques/Carlos A. Coelho (ROOM 10)		
19:35 – 20:05	<i>Frederico Caeiro</i>	Extreme Value Analysis of the Sea Levels in Venice
20:05 – 20:35	<i>Inês J. Sequeira</i>	Finite sample behaviour of Classical and Quantile Regression Estimators for the Pareto distribution
20:35 – 21:05	<i>Carlos A. Coelho</i>	On sharp and highly manageable asymptotic approximations for instances of the Meijer G function
21:05 – 21:35	<i>Filipe J. Marques</i>	The sphericity versus equivariance-euicorrelation test



23 September 2014

**SESSION: Computational Intelligence: Theory and applications on
mathematical**

modeling, optimization and control

**CHAIR: Alex Alexandridis, Ioannis Th. Famelis
(ROOM 9)**

19:30 – 19:55	<i>Ch. Tsitouras</i>	Evolutionary derivation of Quadratic Symplectic Runge–Kutta–Nyström methods
19:55 – 20:20	<i>I. Th. Famelis</i>	Differential Evolution methods in the construction of Runge Kutta pairs.
20:20 – 20:45	<i>Ch. G. Massouros</i>	On the enumeration of rigid hypercompositional structures
21:10 – 21:35	<i>A. Alexandridis</i>	Long-Term Time-Series Prediction Using Radial Basis Function Neural Networks

23 September 2014

**SESSION: Symposium on High Performance Computing in Engineering and
Environmental Sciences**

**CHAIR: Vit Vondrak
(ROOM 12)**

19:35 – 20:00	<i>A. Portero, S. Kuchar, R. Vavrik, M. Golasowski, G. Massari, W. Fornaciari, <u>V. Vondrak</u></i>	Framework for scheduling and resource management in time-constrained HPC application
20:00 – 20:25	<i><u>P. Strakoš</u>, T. Karásek</i>	Adaptive Model Predictive Control as a Prospect for Control of Machine Tools with Significant Flexibility
20:25 – 20:50	<i><u>S. Böhm</u></i>	Implementation of Collective Communication in Kaira
20:50 – 21:15	<i><u>M. Čermák</u>, M. Merta, J. Zapletal</i>	A Novel Boundary Element Library with Applications
21:15 – 21:40	<i>V. Šátek, M. Jarošová, R. Kučera, <u>T. Kozubek</u></i>	Efficient methods for the solution of the Stokes problems with friction



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014		
SESSION: Analytical Approaches for Nonlinear Differential Equations Modeling Complex Natural Phenomena & Advanced Technological Processes		
CHAIR: Shi Jun Liao and Hang Xu (ROOM 13)		
19:35 – 20:05	<i>Jifeng Cui, Shijun Liao and Zhiliang Lin</i>	Sub-harmonic resonances of periodic parameter excited oscillators with the absolute value items
20:05 – 20:35	<i>Xiaochen Li, Dali Xu and Shijun Liao</i>	The experimental study on the standing solitary waves
20:35 – 21:05	<i>Ammarah Raees, Hang Xu and Shijun Liao</i>	Analytic investigation of bioconvection in an unsteady squeezing flow of nanofluid between parallel plates
21:05 – 21:35	<i>Qingkai Zhao, Hang Xu and Longbin Tao</i>	Analysis of free convection in the stagnation point of a three- dimensional body immersed in a nanofluid
21:35 – 22:05	<i>Subir Das</i>	Phase synchronization between fractional order chaotic systems with uncertainties and external disturbances



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014		
SESSION: Mathematical Modelling of Economic Systems II		
CHAIR: Lubos Strelec		
(ROOM 14)		
19:35 – 19:50	<i>Dobesova Anna, <u>Klepac Vaclav</u>, Kolman Pavel, Bednarova Petra</i>	Modelling of Volatility in Monetary Transmission Mechanism
19:50 – 20:05	<i>Kolman Pavel, Nchor Dennis, Hampel David, Zak Jaroslav</i>	Minimization of Number of Setups for Mounting Machines
20:05 – 20:15	<i>Plachy Jan, Vysoka Jana, Vejmelka Radek, Petranek Vit, Petricek Tomas, Kalousek Lubor, Bednarova Petra</i>	The Statistical Evaluation of Thermal Resistance and Price of Bitumen Waterproofing Sheets
20:15 – 20:25	<i>Bednarova Petra, Subrt Roman, Chladek Petr</i>	Influence of Outside Air Relative Humidity on Interior Humidity including Economical Aspects



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

23 September 2014		
SESSION: The 3rd Symposium on Numerical Methods of Boundary Value Problems (BVPs): Analysis, Algorithms and Real World Applications		
CHAIR: Suheil Khoury		
(ROOM 15)		
19:35 – 20:05	<u>Jianming Zhang</u>	The Convergence of the h - p Version of the Finite Element Method with Quasi-uniform Meshes in Three Dimensions
20:05 – 20:35	<u>M. Abushammala and H. Kafri</u>	Numerical Solutions of a Class of Second Order Boundary Value Problems with Robin conditions
20:35 – 21:05	<u>Thomas Wunderli</u>	On Total Variation Flow in L^1 with L^∞ Exponent and Neumann Boundary conditions
21:05 – 21:35	<u>Suheil Khoury</u>	Third-Order BVPs: Fixed-Point Iteration Scheme
21:35 – 22:05	<u>Diana Bistran</u>	Reconstruction of Perturbed Pressure Field in a Hydraulic Turbine by Reduced Order Modeling Techniques

END OF THE 2ND DAY



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>24 September 2014</p> <p>SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014</p> <p>CHAIR: Sinisa Krajnovic (ROOM 1)</p>		
<p>9:00 – 10:00</p>	<p>Invited lecture</p> <p>Professor Professor Paul Tucker</p> <p>Eddy Resolving Simulations in Aerospace</p>	
<p>10:00 – 10:20</p>	<p><i>K. Farber, P. Farber, <u>J. Grabel</u>, S. Krick, J. Reitz and P. Ueberholz</i></p>	<p>A hybrid Navier-Stokes/DSMC simulation for rarefied gas flow for the deposition of nano layers for OLEDs</p>
<p>10:20 – 10:40</p>	<p><i>N. P. Karagiannakis, G. C. Bourantas, A. N. Kalarakis, <u>E. D. Skouras</u>, and V. N. Burganos</i></p>	<p>Meshless Local Petrov-Galerkin Method with Moving Least Squares Approximation for Transient Thermal Conduction Applications with Variable Conductivity</p>
<p>10:40 – 11:00</p>	<p><i>D. Pena, T. Deloze, E. Laurendeau and <u>Y. Hoarau</u></i></p>	<p>Icing modelling in NSMB with Chimera overset grids</p>
<p>Lunch Break</p>		



<p align="center">24 September 2014 SESSION: Santilli Isodual Theory of Antimatter CHAIR: Christian Corda (ROOM 2)</p>		
08:30 – 09:00	<i>R. M. Santilli</i>	<i>The mystery of Antimatter</i>
09:00 - 09:30	<i>A. Nas</i>	<i>The apparent detection of antimatter galaxies with Santilli telescope with concave lenses</i>
09:30 – 10:30	<i>S. Beghella-Bartoli</i>	<i>Trajectories of antimatter asteroids in our solar system</i>
10:30 - 11:00	<i>P. M. Bhujbal</i>	Santilli's Detection of Antimatter Galaxies: An Introduction and Experimental Confirmation
11:00 - 11:30	Coffee Break	
11:30 - 12:00	<i>T. R. Shelke</i>	Fundamental Conception of Santilli Isorelativity and its Isodual
12:00 - 12:30	<i>R.L. Kohale</i>	Mathematical, Theoretical and Experimental confirmations of IRS and IBS by R. M. Santilli
12:30 - 13:00	<i>S.J. Dhoble</i>	New experimental support to Santilli's mechanism of IsoRedShift (IRS) in "heavy ions and dust free" medium



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Seventh Symposium on Recent Trends in the Numerical Solution of Differential Equations CHAIR: Felice Iavernaro (ROOM 3)		
09:00 – 09:30	<i>Pamela Burrage</i>	Populations of Models for Stochastic Differential Equations
09:30 – 10:00	<i>Ilona Kosiuk</i>	Multiple time scale dynamics and geometry of a model for bipolar disorders
10:00 – 10:30	<i>Raffaella Pavani</i>	Numerical simulation of nonlinearities in elastic beam differential models
10:30 – 11:00	<i>Irena Rachunkova</i>	Fixed point problem associated with state-dependent impulsive boundary value problems

24 September 2014 SESSION: Mathematics applied to Electromagnetism CHAIR: Laura Tribioli (ROOM 4)		
09:00 – 09:20	<i>M. Barbuto</i>	Design and realization of MTM-inspired absorbers using graphite resistive sheets
09:20 – 09:40	<i>A. Monti</i>	Broadband Enhanced Transmission through a Single Aperture based on Actively Loaded SRR
09:40 – 10:00	<i>V. Duraccio</i>	An activity based costing model for evaluating effectiveness of RFID technology in pallet reverse logistics system



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">24 September 2014 SESSION: Mathematical models for structural analysis CHAIR: Oliviero Giannini (ROOM 4)</p>		
10:00 – 10:20	<i>P. Fanelli</i>	Modelling Spot Welded Joints in elastic-plastic field
10:20 – 10:40	<i>P. Fanelli</i>	Influence of Non-Axisymmetric Material Anisotropy on FSSW Static Strength
10:40 – 11:00	<i>F. Nerilli</i>	Numerical Modeling of Failure Modes in Bolted Composite Laminates

<p align="center">24 September 2014 SESSION: No. 102, The 2nd Symposium on Computational and Analytical Techniques for Solving Coupled Multiphysics Problems CHAIR: Yunpeng Jiang (ROOM 5)</p>		
09:00 – 09:30	<i>Zhaoxia Zhang, Wen Chena, Xiaofan Gou</i>	A New Boundary Integral Equation for Crack Problems of the Superconducting Bulk in Applied Magnetic Field
09:30 – 10:00	<i>Ze Jing, Huadong Yong, Youhe Zhou</i>	Thermomagnetic Instability and Correlated Deformation in the Type-II Superconducting Films
10:00 – 10:30	<i>Guang Zhu, Xiaofan Gou</i>	Modeling of the Reversible Effect of the Axial Strain on the Critical Current of Superconducting REBCO Films
10:30 – 11:00	<i>Huadong Yong, Youhe Zhou</i>	The investigation of electromechanical behaviors in type II superconductors



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014

SESSION (Part B1): Workshop on Numerical and Symbolic Computation in Surface and Curve Modeling

**CHAIR: Ryszard KOZERA
(ROOM 6)**

09:00 – 09:30	<u>A. Szczesna</u>	Blobby quaternion model of human joint limits
09:30 – 10:00	<u>A.Switonski</u> , H. Josinski, H. Zghidi & K. Wojciechowski	Selection of pose configurations of motion capture data based on Dynamic Time Warping
10:00 – 10:30	<u>D. Peszor</u> , A. Polanski & K. Wojciechowski	Pre-processing of 3D scanned image for facia animation on the basis of realistic acquisition
10:30 – 11:00	<u>P. Skurowski</u> & M. Pawlyta	Functional body mesh representation – a simplified kinematic model

24 September 2014

SESSION: Modeling, Simulation and Optimization of Transportation Networks

**CHAIR: Habib Haj-Salem
(ROOM 7)**

09:00 – 09:30	<i>I.K. Nikolos, A.I. Delis and M.Papageorgiou</i>	Relaxation approximations to second-order traffic flow models by high-resolution schemes
09:30 – 10:00	<i>Dihya Atmania, Jean-Patrick Lebacque, Neila Bhourri ,Habib Haj-Salem</i>	A simulation-based model for dynamic traffic assignment on guided vehicles
10:00 – 10:30	<i>Habib Haj-Salem, Nadir Farhi and Jean-Patrick Lebacque</i>	Application of Multi-Objective Nonlinear Optimization Technique For Coordinated Ramp-Metering

24 September 2014

SESSION: Fractals analysis and harmonic analysis

**CHAIR: Yueping Zhu
(ROOM 7)**

10:30 – 11:00	<i>Hua Qiu</i>	Pseudo-differential operator and pseudo-differential equations over p-Adic fields
11:00 – 11:30	<i>Weiyi Su</i>	Fractal calculus on local fields



24 September 2014 SESSION: Environmental Impact on the Degradation of Historical Masonry: Computational Simulations and Experimental Measurements CHAIR: Oldřich Zmeškal (ROOM 8)		
09:00 – 09:20	<i><u>Kamil Ďurana, Jiří Maděra and Robert Černý</u></i>	Online Climatic Database for In-depth Numerical Analysis of Building Performance: Design of the Code and Example of Application
09:20 – 09:40	<i><u>Jiří Maděra, Kamil Ďurana, Jan Kočí, Václav Kočí and Robert Černý</u></i>	Software for service life assessment of historical buildings: implementation of coupled heat, moisture and salt transport model
09:40 – 10:00	<i><u>Zbyšek Pavlík, Milena Pavlíková, Lukáš Balík and Robert Černý</u></i>	In-Situ Analysis of Hygric Performance of Piaristic Monastery Building
10:00 – 10:20	<i><u>J. Vala and P. Jarošová</u></i>	Identification of material characteristics in non-stationary heat and mass transfer
10:20 – 10:40	<i><u>L. Škripková</u></i>	Capillary transfer coefficient in diffusion equation derived from a known solution
10:40-11:00	<i><u>Monika Čáchová, Dana Koňáková, Eva Vejmelková, Pavel Reiterman and Robert Černý</u></i>	Thermal insulating plasters and their hygric properties
11:00 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014		
SESSION: "Boundary value problems and integral equations with applications"		
CHAIR: Alexey Setukha		
(ROOM 9)		
09:00 – 09:30	<i>Bertrand Thiery, Xavier Antonie, Chokri Chniti, Hasan Alzubaidi</i>	μ-diff: a Matlab toolbox for multiple scattering problems by disk
09:30 – 10:00	<i>Chokri Chniti</i>	Optimized Interface Conditions in Domain Decomposition Methods to Solve Reaction-Diffusion Problems with Strong Heterogeneity in the Coefficients in a Sectorial Domain
10:00 – 10:30	<i>Tomoaki Okayama</i>	Improvement of a Sinc-collocation Method for Fredholm Integro-differential Equations
10:30 – 11:00	<i>Tiziana Durante</i>	Accumulation effect for water-waves mode trapped in a canal



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Mathematical Optimization in Modern Medicine and Engineering Symposium CHAIR: Flavius Pater, Serban Rosu (ROOM 10)		
09:00 – 09:30	<u>Flavius PATER</u>	On some cosine type functional equations
09:30 – 10:00	<u>Adrian Alionescu, Ioan Sorin Herban, Clara-Beatrice Vilceanu and Cosmin Constantin Muşat</u>	Mathematic Interpolation Methods - Support for an Efficient 3D Modeling of Landslides in the Context of Displacements Monitoring
10:00 – 10:30	<u>Liana Pater and Nicolae Cociu</u>	The Evolution of the Market Share of Competing Brands Modeled with Markov Chains
10:30 – 11:00	<u>Amedeu Pîrvulescu, Florin Sala and Marius Boldea</u>	Variation of Chlorophyll Content in Sunflower under the Influence of Magnetic Nanofluids



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>24 September 2014 SYMPOSIUM: Applied Problems in Probability Theory and Mathematical Statistics Related to Modeling of Information Systems CHAIR: Alexander Zeifman (ROOM 11)</p>		
09:00 – 09:20	<u>V. Kuzmin, A. Gorshenin, D. Ostroumov, M. Uglitskaya</u>	Application of GPU and Parallel Programming on Grid Methods
09:20 – 09:40	<u>A. Gorshenin, V. Belousov, P. Shnourkoff, A. Ivanov</u>	Numerical Research of the Optimal Control Problem in the Semi-Markov Inventory Model
09:40 – 10:00	<u>A. Gorshenin</u>	On Implementation of EM-type Algorithms in the Stochastic Models for a Matrix Computing on GPU
10:00 – 10:20	<u>S. Shorgin, K. Samouylov, I. Gudkova, E. Markova, E. Sopin</u>	Approximating Performance Measures of Radio Admission Control Model for Non Real-Time Services with Maximum Bit Rates in LTE
10:20 – 10:40	<u>S. Shorgin, A. Pechinkin, K. Samouylov, Y. Gaidamaka, I. Gudkova, E. Sopin</u>	Threshold-Based Queuing System for Performance Analysis of Cloud Computing System with Dynamic Scaling
10:40 – 11:00	<u>A. Grusho, N. Grusho, E. Timonina</u>	Statistical Decision Functions Based on Bans
11:00 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">24 September 2014</p> <p align="center">SESSION: Symposium on Computational Methods for Stochastic Models</p> <p align="center">CHAIRS: Tuan PHUNG-DUC and Wouter ROGIEST (ROOM 12)</p>		
09:00 – 09:30	<u>K. Van Hautegeem</u> , W. Rogiest and H. Bruneel	Void-Creating Algorithm in OBS/OPS: Mind the Gap
09:30 – 10:00	<u>W. Rogiest</u> and H. Bruneel	Stability Analysis of a Two-Stage Optical Buffer
10:00 – 10:30	<u>W. Mélange</u> , J. Walraevens, D. Claeys, B. Steyaert and H. Bruneel	Boundary Problem in a System with Global FCFS and Presorting
10:30 – 11:00	J. Hu and <u>T. Phung-Duc</u>	Power Consumption Analysis for Data Centers with Independent Setup Times and Threshold Controls

<p align="center">24 September 2014</p> <p align="center">SESSION: High Accuracy Solution of Ordinary and Partial Differential Equations</p> <p align="center">CHAIR: Murli M. Gupta (ROOM 13)</p>		
09:00 – 09:30	<u>Givi Berikelashvili</u> , Murli M. Gupta and Bidzina Midodashvili	On the improvement of convergence rate of difference schemes with high order differences for a convection-diffusion equation
09:30 – 10:00	<u>Omer ACAN</u> and Yıldıray KESKİN	Approximate Solution of Kuramoto–Sivashinsky Equation Using Reduced Differential Transform Method
10:00 – 10:30	Jiten C. Kalita, Parikshit Upadhyaya and <u>Murli M. Gupta</u>	GPU accelerated flow computation by the streamfunction-velocity ($\psi-v$) formulation



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014		
SESSION: Development and Application of High-order Methods for Computational Fluid Dynamics		
CHAIR: Ping Lu		
(ROOM 14)		
09:00 – 09:30	<i>William F. Mitchell and Marjorie A. McClain</i>	Performance of hp-Adaptive Strategies for Elliptic Partial Differential Equations
09:30 – 10:00	<i>Marc Gerritsma</i>	Mimetic Spectral Element Methods
10:00 – 10:30	<i>K. Guerlebeck and W. Sproessig</i>	Galpern-Sobolev type equations with methods of quaternionic analysis
10:30 – 11:00	<i>Shudao Zhang, Zupeng Jia, Jun Liu, Jun Xiong, Haibing Zhou and Ruili Wang</i>	An Effective Three Dimensional MMALE Method for Compressible Fluid Dynamics

24 September 2014		
SESSION: 11-th Symposium Clifford Analysis and Applications		
CHAIR: Klaus Guerlebeck and Wolfgang Sproessig		
(ROOM 15)		
09:00 – 09:30	<i>Sirkka-Liisa Eriksson, Heikki Orelma and Vesa Vuojamo</i>	Generalized Hyperbolic Harmonic Functions in the Plane
09:30 – 10:00	<i>Wolfgang Sproessig</i>	Fluid problems in porous media
10:00 – 10:30	<i>Klaus Gürlebeck</i>	Representation formulas in linear elasticity



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: INVITED SPEAKER CHAIR: Francesca Mazzia (ROOM 1)		
11:30 – 12:30	Kevin Burrage	TBA

24 September 2014 SESSION: INVITED SPEAKER CHAIR: Kevin Burrage (ROOM 1)		
12:30 – 13:30	<u>Francesca Mazzia</u> and Jeff R. Cash	A Fortran Test Set for Boundary Value Problem Solvers



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>24 September 2013</p> <p>SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014</p> <p>CHAIR: Eugene Skouras</p> <p>(ROOM 1)</p>		
15:00 – 15:20	<i>J. Halama</i>	Three Different Models for Non-Equilibrium Condensation of Steam in a Nozzle
15:20 – 15:40	<i>A.F. Totorean, S. I. Bernad, R. F. Susan-Resiga</i>	A Helical Pipe Investigation from a Cardiovascular Perspective
15:40 – 16:00	<i>M. Zareh and M. Ghorbani Heidari</i>	The Metastable Flow through Adiabatic and Diabatic Coiled Capillary Tubes
16:00 – 16:20	<i>J. Hu, C. Liu, N.-M. Zhang and M.-J. Ni</i>	Optimal Linear Growth of MHD Flow in a Square Duct
<p>Coffee Break</p>		

<p>24 September 2014</p> <p>SESSION: Second Symposium on Numerical Calculations on Theoretical Magnetism</p> <p>CHAIR: H. Şevki MERT</p> <p>(ROOM 1)</p>		
16:30 – 17:00	<i>Gülistan Mert and H. Şevki Mert</i>	Numerical Calculations for Heisenberg Ferromagnet on Honeycomb Lattice Using Oguchi's Method
17:00 - 17:30	<i>Ioannis Velonakis</i>	Monte Carlo Renormalization Group studies of the Baxter-Wu model in the presence of an external magnetic field.



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Other Applications of Hadronic Mathematics CHAIR: Christian Corda (ROOM 2)		
14:30 – 15:00	<i>A. A. Bhalekar</i>	<i>Binding energies in Hadronic Chemistry based on Santilli-Shillady IsoElectronium</i>
15:00 - 15:30	<i>N. Schmidt, R. Katebi, C. Corda</i>	<i>Launching the chaotic realm of iso-fractals: a short remark</i>
15:30 – 16:00	<i>A. L. Kholmetskii, T. Yarman, M. Arik and O.V. Missevitch</i>	<i>Novel Mössbauer Experiment in a Rotating System: Extra Energy Shift Confirmed</i>
16:00 - 16:30	Coffee Break	
16:30 - 17:00	<i>N. Schmidt</i>	A brief note on the magneucle order parameter upgrade hypothesis
17:00 - 17:30	<i>Organizers and Participants</i>	Conclusion remarks



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Seventh Symposium on Recent Trends in the Numerical Solution of Differential Equations CHAIR: Pamela Burrage (ROOM 3)		
15:00 – 15:30	<i>Alexey Eremin</i>	Efficient accurate non-iterative break point detection and computation for state-dependent delay differential equations
15:30 – 16:00	<i>Gennadi Vainikko</i>	Inversion of the Riemann-Liouville integral operator and solving Abel type equations
16:00 – 16:30	<i>Arvet Pedas</i>	Numerical solution of nonlinear fractional boundary value problems
16:30 – 17:00	<i>Rosamaria Mininni</i>	TBA



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>24 September 2014</p> <p>SESSION: No. 102, The 2nd Symposium on Computational and Analytical Techniques for Solving Coupled Multiphysics Problems</p> <p>CHAIR: Linli Zhu</p> <p>(ROOM 5)</p>		
15:00 – 15:30	<i>Xiaomin Wang, Jizeng Wang, Youhe Zhou</i>	Wavelet Method for Viscoelastic Fractional Derivative Model
15:30 – 16:00	<i>Xia Tian</i>	Investigations on the Mechanical Behavior of Nanowires with Twin Boundaries by Atomistic Simulations
16:00 – 16:30	<i>Lei Zhang, Youhe Zhou, Jizeng Wang</i>	Solution of Second Order Quasi-linear Boundary Value Problems by a Wavelet Method

<p>24 September 2014</p> <p>SESSION (Part B2): Workshop on Numerical and Symbolic Computation in Surface and Curve Modeling</p> <p>CHAIR: Ryszard KOZERA</p> <p>(ROOM 6)</p>		
15:00 – 15:30	<i>H. Josinski, A. Switonski, A. Michalczuk & K. Wojciechowski</i>	Phase space reconstruction & estimation of the largest Lyapunov Exponent for gait kinematic data
15:30 – 16:00	<i>P. Matus, R. Kozera, A. Paradzinska & A. Schadinskii</i>	Discrete analogs of the comparison theorem and two sided estimates of solution of parabolic equations
16:00 – 16:30	<i>J. Kapusta & R. Smarzewski</i>	A broad encryption protocol based on hierachical secret sharing scheme



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Modeling, Simulation and Optimization of Transportation Networks CHAIR: Nadir Farhi (ROOM 7)		
15:00 – 15:30	<i>K.S. Sossoe_ and J-P. Lebacque</i>	A multiclass vehicular dynamic traffic flow model for main roads and dedicated lanes/roads of multimodal transport network
15:30 – 16:00	<i>N. Guerrouahane, N. Farhi, D. Aissani and L. Bouallouche-Medjkoune</i>	A Queuing Model for Road Traffic Simulation
16:00 – 16:30	<i>A. M. Yaroshenko</i>	On discrete model of particle migration on regular networks

24 September 2014 SESSION: Robotic Control, Decomposition Method and Numerical Analysis in Applied Mathematics CHAIR: Dr. Mahmoud Najafi M. Taeibi, M. Beheshti and H. Massah (ROOM 7)		
16:30 – 17:00	<u><i>M. Alizadeh</i></u>	Applicability of Lattice Boltzmann Method in Simulation of Drops and Bubbles Formation and Transport
17:00 – 17:30	<u><i>M. Ramezanizadeh</i></u>	Analysis of a Non-linear Parabolic ODE via Decomposition



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Environmental Impact on the Degradation of Historical Masonry: Computational Simulations and Experimental Measurements CHAIR: Zbyšek Pavlík (ROOM 8)		
15:00 – 15:20	<i><u>Oldřich Zmeškal,</u> Lucie Trhlikova and Lenka Dohnalova</i>	Study of thermal properties of insulating materials
15:20 – 15:40	<i><u>Miloš Jerman</u> and Robert Černý</i>	Moisture Diffusivity of Wood
15:40 – 16:00	<i><u>Tereza Kulovaná,</u> Zbyšek Pavlík, Jan Fořt, Milena Pavlíková, Jaroslav Pokorný, Lukáš Balík and Robert Černý</i>	Applicability of Contemporary Ceramic Bricks for the Reconstruction of Historical Masonry
16:00 – 16:20	<i><u>Dana Koňáková,</u> Monika Čáchová, Eva Vejmelková, Martin Keppert and Robert Černý</i>	Hygric properties of sandstones as a function of porosity
16:20 – 16:40	<i><u>Miroslav Sykora</u> and Milan Holicky</i>	Compressive Strength of Deteriorated Historic Masonry Based on Measurements

24 September 2014 SESSION: Symposium on Theoretical and Computational Modeling of Biomembranes CHAIR: Krystian Kubica (ROOM 5)		
16:30 – 17:00	<i>Krystian Kubica</i>	The Network Model of Electroporation



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: "Boundary value problems and integral equations with applications" CHAIR: Alexey Setukha (ROOM 9)		
15:00 – 15:30	<u>Vladimir Frolov</u>	Development of Numerical-Analytical Method (NAM) and Discrete Vortices Method (DVM) for Calculating Potential Flow around 2-D Body
15:30 – 16:00	<u>Gleb Ryzhakov</u>	On Some Numerical Scheme of Solving Diffraction Problem on Open and Closed Screens
16:00 – 16:30	<u>Sofhia Daeva</u> <u>Alexey Setukha,</u>	Numerical Simulation of Scattering of Acoustic Waves by Inelastic Bodies using Hypersingular Boundary Integral Equation
16:30 – 17:00	<u>V. Markov,</u> <u>Grigory Sizykh</u>	Generalized Helmholtz's Theorem
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014		
SESSION: Mathematical Optimization in Modern Medicine and Engineering Symposium		
CHAIR: Flavius Pater, Serban Rosu (ROOM 10)		
15:00 – 15:30	<i>Hamzeh Rawashdeh, Florin Sala and Marius Boldea</i>	Mathematical and Statistical Analysis of the Effect of Boron on Yield Parameters of Wheat
15:30 – 16:00	<i>Georgiana Rusu, Ioan Sorin Herban, Alina Corina Bălă, Carmen Grecea</i>	Mathematical Support for three-dimensional transformation points from geocentric reference system in local reference system
16:00 – 16:30	<i><u>Anca-Maria Moscovici, Floarea Maria Brebu, Maria- Roberta Gridan, Viorica David</u></i>	Mathematical Cartography based on Georeferencing Maps
16:30 – 17:00	<i><u>Mihai Valentin Herbei, Florin Sala and Marius Boldea</u></i>	Relation of Normalized Difference Vegetation Index with Some Spectral Bands of Satellite Images
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SYMPOSIUM: Applied Problems in Probability Theory and Mathematical Statistics Related to Modeling of Information Systems CHAIR: Alexander Zeifman (ROOM 11)		
15:00 – 15:20	<u>A. Zeifman,</u> <u>V. Korolev,</u> <u>A. Chertok,</u> <u>S. Shorgin</u>	On Ergodicity Bounds for an Inhomogeneous Birth-Death Process
15:20 – 15:40	<u>A. Zeifman,</u> <u>A. Korotysheva,</u> <u>G. Shilova,</u> <u>V. Korolev, V. Bening</u>	On Perturbation Bounds for a Queueing Model with Group Services
15:40 – 16:00	<u>A. Chertok</u>	On Order Flow Toxicity
16:00 – 16:20	<u>M. Grigoryeva,</u> <u>V. Korolev,</u> <u>A. Zeifman</u>	Limit Theorems for Statistics with Random Sample Sizes
16:20 – 16:40	<u>V. Bening, V. Korolev,</u> <u>V. Savushkin,</u> <u>A. Zeifman</u>	On the Deficiency of Some Estimators Constructed from Samples with Random Sizes
16:40 – 17:00	<u>A. Pechinkin,</u> <u>R. Razumchik,</u> <u>I. Caracci</u>	On Joint Stationary Distribution in Exponential Multiserver Reordering Queue
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Mathematical Methods in Economics and Engineering CHAIR: Ludovic Dan Lemle (ROOM 12)		
15:00 – 15:30	<u>Nicoleta Bularda,</u> <i>Teodor Heput</i>	Mathematical Modeling Concerning the Influence of Chemical Composition of the 6082 Aluminum Alloy on Physical and Mechanical Characteristics
15:30 – 16:00	<u>Nicoleta Bularda,</u> <i>Francisc Weber,</i> <i>Eugen Crisan</i>	Mathematical Modeling Concerning the Cumulative Influence of the Alloying Elements for Aluminum Alloy 6082 on the Physical and Mechanical Characteristics
16:00 – 16:30	<u>Alina Lăscuțoni,</u> <i>Erika Ardelean,</i> <i>Teodor Heput</i>	Thermal Optimization of Steel at Continuous Casting
16:30 – 17:00	<u>Liviu Pascu,</u> <i>Ana Socalici,</i> <i>Erika Popa,</i> <i>Eugen Crisan</i>	The Influence of Chemical Composition upon the Hardness of Brake Shoes Meant for Rolling Stock
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">24 September 2014 SESSION Title: II Mini Symposium on Symmetry Methods and Applications for Differential Equations CHAIR: Maria Luz Gandarias (ROOM 13)</p>		
15:00 – 15:30	<i>Roman Kozlov</i>	On first integrals of ODEs admitting λ -symmetries
15:30 – 16:00	<i>Georgy I. Burde</i>	Classification of evolution equations possessing two-soliton solutions and Lax pairs by direct methods
16:00 – 16:30	<i><u>Hynek Baran</u></i>	Five-Dimensional Lax-Integrable Equation, Its Reductions and Recursion Operator
16:30 – 17:00	<i>Petr Vojčák</i>	Symmetry reductions and exact solutions of some 3-dimensional Lax integrable systems

<p align="center">24 September 2014 Symposium: Statistical Modelling and Biometrical Applications CHAIR: Teresa Oliveira (ROOM 14)</p>		
15:00 – 15:30	<i><u>Paper 1: Raquel Oliveira</u></i>	
15:30 – 16:00	<i><u>Paper 3: Carla Francisco</u></i>	
16:00 – 16:30	<i><u>Paper 4: J.A. Macias</u></i>	
16:30 – 17:00	<i><u>Paper 7: J.A. Pereira</u></i>	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: INVITED SPEAKER CHAIR: Lidia Aceto (ROOM 1)		
17:30 – 18:30	Karline Soetaert	TBA

24 September 2014 SESSION: INVITED SPEAKER CHAIR: Ruggero Santilli (ROOM 1)		
18:30 – 19:30	Christian Corda	Bohr-like black holes



24 September 2014 SESSION: 105 Title: State of the Art of Mathematical Modeling, Numerical Analysis, Optimization and Control of Hybrid Renewable Energy Systems (Wind Power / Photovoltaic Energy) CHAIR: Alexandru DUMITRACHE Florin FRUNZULICA (ROOM 1)		
19:35 – 20:05	<i>Florin FRUNZULICA,</i> <i>Alexandru DUMITRACHE,</i> <i>Bogdan SUATEAN</i>	Numerical Investigations on Dynamic Stall Control with Passive Elements
20:05 – 20:35	<i>Aurelian Crăciunescu,</i> <i>Laurențiu Pătularu,</i> <i>Gloria Ciumbulea,</i> <i>Valentin Olteanu,</i> <i>Cristina Pitorac,</i> <i>Elena Drugan</i>	The Use of Experimental Design to Find the Operating Maximum Power Point of PEM Fuel Cells
20:35 – 21:05	<i>Aurelian Crăciunescu,</i> <i>Claudia Popescu,</i> <i>Mihai Popescu,</i> <i>Marin-Leonard Florea,</i> <i>Elena Drugan,</i> <i>Gabriel Colț</i>	The Analyze of the Dynamic Performances of Two Maximum Power Point Tracking Algorithms for Photovoltaic Systems



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">24 September 2014 SESSION: Free Surface Flow CHAIR: Mohammad Javad Ketabdari (ROOM 2)</p>		
19:35 – 19:55	<i>Shahryar Abtahia, Hassan Ghasemi, Elnaz Arbabizaboli</i>	Comparative Investigation of Different Numerical Features of SPH Method for Simulation of Free Surface Flow
19:55 – 20:15	<i>Aliakbar Safaei, Hassan Ghasemi, Elnaz Arbabizaboli</i>	Inclination of Submerge Breakwater effects on free surface subject to wave by SPH
20:15 – 20:35	<i>Mojtaba Kamarloueia, Hassan Ghassemi, Aliakbar Safaei</i>	Performance Prediction of the River Craft Using Numerical Approach
20:35 – 21:05	<i>Mohammad Javad Ketabdari, Amin Ilia, Mehdi Karimi</i>	A Model Study of Wind-Induced Sea Level Fluctuations in the Persian Gulf and the Gulf Of Oman
21:05 – 21:35	<i>Madjid Ghodsi Hasanabad</i>	Free surface modeling in OWC chamber with parabolic side walls using 3D BEM
21:35 – 22:05	<i>Mohammad Javad Ketabdari, Narges Kamani, Mehdi Heidari Moghaddam</i>	WCSPH Simulation of Solitary Wave Interaction With a Curtain-Type Breakwater



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014		
SESSION: Engineering Problems of Plasticity		
CHAIR: Rostislav Nepershin, Ljudmila Maksimova		
(ROOM 3)		
19:35 – 20:05	<u>A.A. Bukhhanko,</u> <i>A.Yu. Loshmanov,</i> <i>A.I. Khromov</i>	Limit State of Plastic Materials
20:05 – 20:35	<u>L.A. Maksimova</u>	Limit State of Plastic Layer Compressed by Rigid Dies
20:35 – 21:05	<u>R.I. Nepershin</u>	Ideal Plastic Deformation of Thick-Walled Tubes
21:05 – 21:35	<u>R.I. Nepershin</u>	Thin-Walled Tube Plastic Crash in Bending



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">24 September 2014 SESSION: Second Symposium on Highlights in Copula Modeling CHAIR: V. A. González-López (ROOM 4)</p>		
19:35 – 20:05	<u>M. Fernández</u> and V. A. González-López	Bounds for the cumulative conditional expectation function
20:05 – 20:35	<u>Jesús E. García</u>	Combining multivariate Markov chains
20:35 – 21:05	M. C. C. Bianchi, F. Fernandes-Svartman, M. Fernández and <u>V. A. González-López</u>	Confidence Bands in Kendall Plots
21:05 – 21:35	<u>V. A. González-López</u> (chair)	Open Problems

<p align="center">24 September 2014 SYMPOSIUM: Dynamics of Complex Systems & Networks: Modelling, Computational Analysis and Control CHAIR: Constantinos Siettos (ROOM 5)</p>		
19:30 – 19:55	<u>Konstantinos Spiliotis</u> , and <u>Elias C. Aifantis</u>	A Bifurcation Analysis of Dislocation Patterning in the One-Dimensional Finite Domain
19:55 – 20:20	<u>Foteini Protopapa</u> , <u>Ioannis N. Evangelidis</u> , <u>Ivan Myatchin</u> , <u>Lieven Lagae</u> , and <u>Constantinos Siettos</u>	Non Parametric Granger Causality EEG Analysis of a Visual 1-Back-Matching Discrimination Task in Children
20:20 – 20:45	<u>Lucia Russo</u> , and <u>Erasmus Mancusi</u>	Mapping Resonance Regions in Loop Networks with Spatio-Temporal Symmetry
21:10 – 21:35	<u>Ioannis N. Evangelidis</u> , <u>Constantinos Siettos</u> , <u>Paola Russom</u> and <u>Lucia Russo</u>	Complex Network Theory Criterion to Distribute Fuel Breaks for the Hazard Control of Fire Spread in Forests



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Theory and Application of Matrix Equations CHAIR: Athanasios A. Pantelous (ROOM 6)		
19:35 – 20:05	Athanasios A. Pantelous	Higher order matrix differential equations with singular coefficient matrices

24 September 2014 SESSION: Higher Dimensional Splines: Variations of a Theme CHAIR: Massopust, Peter (ROOM 6)		
20:35 – 21:05	<i>C. de Visser</i>	TBA
21:05 – 21:35	<i>A. Weinmann</i>	Subdivision Schemes with Irregular Combinatorics and with Values in Manifolds
21:35 – 22:05	<i>P. Van Fleet</i>	(s+1)-dimensional Fractional Cone Splines and Box Splines on s-dimensional Meshes

24 September 2014 SESSION: Fractals analysis and harmonic analysis CHAIR: Weiyi Su (ROOM 7)		
19:35 – 20:05	<i>P. Massopust</i>	On local fractal functions in Banach spaces
20:05 – 20:35	<i>Yueping Zhu</i>	The boundedness of some integral operators on function spaces with variable exponents
20:35 – 21:05	<i>Donglei Tang</i>	The scaling factor on the lever 3 Sierpinski gasket via Δ -Y transform
21:05 – 21:35	<i>Yin Li</i>	Some conclusions of random net fractals and p -adic groups



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>24 September 2014 SESSION: Environmental Impact on the Degradation of Historical Masonry: Computational Simulations and Experimental Measurements CHAIR: Jiří Vala (ROOM 8)</p>		
19:35 – 19:55	<i><u>Kamil Ďurana, Jan Kočí, Jiří Maděra, Jaroslav Pokorný and Robert Černý</u></i>	Modification of the computational model of coupled heat and moisture transport: the transition between the liquid and gaseous phases of water
19:55 – 20:15	<i><u>Jan Fořt, Zbyšek Pavlík, Milena Pavlíková, Lukáš Fiala, and Robert Černý</u></i>	Parameters Describing the Coupled Water and Nitrate Transport and Storage in Materials of Historical Masonry
20:15 – 20:35	<i><u>Jana Markova and Milan Holicky</u></i>	Reliability of Existing Clay Masonry Structures

<p>24 September 2014 SESSION: “Boundary value problems and integral equations with applications” CHAIR: Alexey Setukha (ROOM 9)</p>		
19:35 – 20:05	<i><u>Sharefa EISA ALI ALHAZMI</u></i>	Numerical Solution of Volterra Fredholm Integral Equation with Singular Kernels
20:05 – 20:35	<i>Discussion</i>	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 SESSION: Mathematical Optimization in Modern Medicine and Engineering Symposium CHAIR: Flavius Pater, Serban Rosu (ROOM 10)		
19:35 – 20:05	<u><i>Flavius PATER</i></u>	On some interpolation properties in locally convex spaces
20:05 – 20:35	<i>Liana Pater and Nicolae Cociu</i>	Adjustment of Time-Series Using the Modified Exponential for Turnover Forecast
20:35 – 21:05	<u><i>Mihai Valentin Herbei, Florin Sala and Marius Boldea</i></u>	Using Mathematical Algorithms for Classification of LANDSAT 8 Satellite Images

24 September 2014 SESSION: Robotic Control, Decomposition Method and Numerical Analysis in Applied Mathematics CHAIR: Dr. Mahmoud Najafi M. Taeibi, M. Beheshti and H. Massah (ROOM 11)		
19:35 – 20:05	<u><i>R. Abbasi</i></u>	Modeling and stability analysis of HIV-1 as a Time Delay Fuzzy T-S system via LMIs
20:05 – 20:35	<u><i>D. Fincher</i></u>	An Inquiry into Analytical Solutions of Nonlinear Oscillatory Systems
20:35 – 21:05	<u><i>D. Fincher</i></u>	An Approximation Technique for Jet Impingement Flow
21:05 – 21:35	<u><i>H. Hamidian</i></u>	Designing a fractional order PID controller based on active queue management for TCP network



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">24 September 2014 SESSION: Mathematical Methods in Economics and Engineering CHAIR: Yiwen Jiang (ROOM 12)</p>		
19:35 – 20:05	<u><i>Mihaela Vătăşescu,</i></u> <i>Mihail Vătăşescu,</i> <i>Gabriel D. Vasilescu,</i> <i>Ludovic Dan Lemle</i>	Evaluating the Safety Risk in Relation to the Energetic Field
20:05 – 20:35	<u><i>Mihaela Vătăşescu</i></u>	Software for the Occupational Health and Safety Integrated Management System
20:35 – 21:05	<u><i>Mihail Vătăşescu,</i></u> <i>Mihaela Vătăşescu,</i> <i>Gabriel D. Vasilescu,</i> <i>Ludovic Dan Lemle</i>	Advanced Research in the Field of Instruments for Use in the Probabilistic Study of Security
21:05 – 21:35	<u><i>Mihail Vătăşescu</i></u>	Risk Assessment of Demolition Activity with the Help of Explosives

<p align="center">24 September 2014 SESSION: II Mini Symposium on Symmetry Methods and Applications for Differential Equations CHAIR: Maria Santos Bruzon and Maria Luz Gandarias (ROOM 13)</p>		
19:35 – 20:05	<u><i>Maria Luz Gandarias</i></u>	Symmetry analysis of a generalized Fisher equation
20.05-20.35	<u><i>Maria Santos Bruzon</i></u>	Analysis of the Symmetries and Conservation Laws of a Gardner Equation
20:35 – 21:05	<u><i>Rita Tracina</i></u>	(pending to confirm)



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

24 September 2014 Symposium: Statistical Modelling and Biometrical Applications CHAIR: Teresa Oliveira (ROOM 14)		
19:35 – 20:05	<u>Paper 10: Luis Grilo</u>	
20:05 – 20:35	<u>Paper 11: Teresa Oliveira</u>	
20:35 – 21:05	<u>Paper 12: Aldina Correia</u>	
21:05 – 21:35	<u>Paper 13: Karl Moder</u>	

24 September 2013 (15:00 - 17:00) Statistical Modelling and Biometrical Applications - Poster Session	
Papers 2,5,6,8,9,14 : poster presentation	

END OF THE 3RD DAY



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

25 September 2014 SESSION: INVITED SPEAKER CHAIR: Bob Russel (ROOM 1)		
10:00 – 11:00	Steve Ruuth	Spatially Partitioned Embedded Runge-Kutta Methods

25 September 2014 SESSION: INVITED SPEAKER CHAIR: Ernst Hairer (ROOM 1)		
11:00 – 12:00	Gerhard Wanner	On the discovery of Lagrange multipliers and Lagrange mechanics



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

25 September 2014

12:30

Photo of the Conference

25 September 2014

13:00

Excursion



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

25 September 2015

20:30

Central Dinner

- **Introduction by Professor Dr. Theodore E. Simos**
- **Honouring Professor Dr. Jeff Cash on the occasion of his 67th birthday. Introduction by Prof. Dr. John Butcher**
- **Presentation of the Honorary Fellowship Awards of the European Society of Computational Methods in Sciences, Engineering and Technology**
- **Dinner**

END OF THE 4TH DAY



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014 CHAIR: Zdzislaw Jaworski (ROOM 1)		
9:00 – 10:00	Invited lecture Professor Evgeniy Romenski Multiphase Flow Modelling Based on the Hyperbolic Thermodynamically Compatible Systems Theory	
10:00 – 10:20	<i>Z. Chara, B. Kysela, J. Konfrst and I. Fort</i>	Experimental Study of Flow in a Tank Stirred by a Rushton Impeller
10:20 – 10:40	<i>K. Wittig, P.A. Nikrityuk, A. Richter and B. Meyer</i>	Modelling of Pore Growth in Char Particles by an Octree-based 3D PLIC method
10:40 – 11:00	<i>V. K. Sin and I. K. Wong</i>	Model validation of Rayleigh's problem for oscillating finite plate
Lunch Break		



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 Symposium 55 Adaptive Materials, Devices and Systems Towards Unconventional Computing and Robotics: Modeling and Implementation SESSION: Bioelectronics CHAIR: Salvatore Iannotta (ROOM 2)		
09:00 – 09:15	<u>Salvatore Iannotta</u>	Welcome notes
09:15 – 10:00	<u>George Malliaras</u>	Interfacing with the brain using organic transistors
10:00 – 10:30	<u>Tatiana Berzina</u>	Hybrid Slime Mold - Containing Systems for Unconventional Computing
10:30 – 11:00	<u>Martin Klimo</u>	Phoneme discrimination using a pair of neurons built from CRS fuzzy logic gates
11:00 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 SESSION: Modelling and Simulation in Computer Sciences and Engineering CHAIR: Karla Quintero and K. Kaliyeva (ROOM 3)		
09:00 – 09:30	<i>Urs Eppelt and Toufik Al Khawli</i>	Metamodeling of Laser Cutting
09:30 – 10:00	<i>Torsten Hermanns, Ulrich Thombansen and Stoyan Stoyanov</i>	Modelling for Self- Optimization in Laser Cutting
10:00 – 10:30	<i>Daniel Figueiredo, Claudio Fuentes and Manuel A. Martins</i>	A Fuzzy Neural Network for <i>E. coli</i> Metabolism
10:30 – 11:00	<i>Diana Costa, Patricio Fuentes, Claudio Fuentes and Manuel A. Martins</i>	Classical Principles in Molecular Logic
11:00 – 11:30	Coffee Break	



26 September 2014 SESSION: Dependable Mechatronic Systems CHAIR: José Machado (ROOM 4)		
09:00 – 09:15	<i>Carla Barros, Celina Pinto Leão, Filomena Soares, José Machado</i>	QR Codes and Java applied to physiological data acquisition in biomedical engineering education
09:15 – 9:30	<i>Mário Silva, Filipe Pereira, Filomena Soares Soares, Celina P. Leão, José Machado, Vitor Carvalho</i>	Industrial Controlling Process Using The Remote Industrial Automation Trainer PAIR
09:30 – 09:45	<i>Orlando Lopes, Tiago Martins ,Vítor Carvalho, Demétrio Matos, Filomena Soares, José Machado</i>	Design and development of a portable projection and natural interface device for virtual games applied to physiotherapy
09:45 – 10:00	<i>Sorin Sorea, Anca Atanasescu, Paul-Nicolae Ancuța, Horia Alexandru Mănescu</i>	Non Contact Measurement of Thread's Holes Using Video Systems
10:00 – 10:15	<i>Adrian-Cătălin Voicu, Gheorghe I. Gheorghe, Liliana-Laura Badita</i>	Studies and Researches on the Measurement and 3D Integrated Control of Complex Components from Automotive Industry by Laser Scanning
10:15 – 10:30	<i>Constantinescu Alexandru</i>	Mechatronic Architectures
10:30 – 10:45	<i>Anghel Constantin</i>	Telemaintenance and Teleservice Oriented Design of Dependable Mechatronic System in Automotive Industry



26 September 2014 SESSION: Modern Methods for Solving Problems of Control and Modeling of Physical, Biological and Socio-Economic Processes CHAIR: Alexander Nikolaevich Kvitko (ROOM 5)		
09:00 – 09:30	<i>A. N. Kvitko</i>	<i>A Method for Solving a Local Boundary Problem for Nonlinear Controlled System</i>
09:30 – 10:00	<i>S. N. Andrianov</i>	<i>Control of Simulation of a Particle Accelerator as a Spatially Distributed System</i>
10:00 – 10:30	<i>Valentina Chashnikova</i>	<i>Identifiability and Controllability of a Dynamic System under Restriction on Measuring Errors</i>
10:30 – 11:00	<i>S.M. Khryashchev</i>	<i>On Control of Continuous Dynamical Polysystems in Discrete Times</i>
11:00 – 11:30	Coffee Break	

26 September 2014 SESSION: 2nd. Symposium on Theoretical and Numerical Modeling of Systems with long range Interactions CHAIR: Sergio Curilef (ROOM 6)		
09:00 – 09:30	<u><i>Sergio Curilef</i></u>	Analytical solutions for a family of Vlasov equations within relaxation time approximation
09:30 – 10:00	<u><i>Camila Ordenes</i></u>	Thermo-statistics of rotating 2D non-screened plasma under an imperfect magnetic confinement
10:00 – 10:30	<u><i>Boris Atenas</i></u>	Anomalous States from a Classical Hamiltonian: Electric Dipole in a Magnetic Field
10:30 – 11:00	<u><i>Dianela Herrera</i></u>	Numerical Study of a Vlasov Equation for Systems with Interacting Particles



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 SESSION: Computational Modeling and Experimental Assessment of Transport Processes in Building Materials and their Multi-Layered Systems CHAIR: Jaroslav Kruis (ROOM 7)		
09:00 – 09:30	<i>Marcel Jogl, Reiterman Pavel, Holčapek Ondřej and Kořátková Jaroslava</i>	Influence of Metakaolin Additive and Basalt Fibers on the Mechanical Properties of Fire Resistant Composites
09:30 – 10:00	<i>Tomáš Krejčí and J. Šejnoha</i>	Coupled Thermo-Mechanical Analysis of Charles Bridge
10:00 – 10:30	<i>O. Holčapek, P. Reiterman, M. Jogl, J. Kořátková and P. Konvalinka</i>	Experimental Analysis of Fire Resistant Composite Containing Fine Ceramic Powder

26 September 2014 SESSION: Applied and Numerical Mathematics CHAIR: George Pelekanos (ROOM 7)		
10:30 – 11:00	<i>Koung Hee Leem, George Pelekanos and Vassilios Sevrouglou</i>	A Singular Perturbation Technique for the Reconstruction of Elastic Objects
11:00 – 11:30	<i>Fermín S. V. Bazán, Juliano B. Francisco, Koung Hee Leem and George Pelekanos</i>	An Improved Maximum Product Criterion for Three Dimensional Reconstructions in Electromagnetics



26 September 2014 SESSION: Application of Fuzzy Logic and Neural Networks in Construction Management CHAIR: Edyta Plebankiewicz (ROOM 8)		
09:00 – 09:20	<i>Nabi Ibadov and Janusz Kulejewski</i>	Evaluation of The Project Timeliness with Fuzzy Constraints
09:20 – 09:40	<i>Barbara Gładysz, Dorota Kuchta, Skorupka Dariusz, Duchaczek Artur</i>	Fuzzy analysis of project duration in situations of risk
9:40 – 10:00	<i>Andrzej Szarata</i>	Defining Shape of Membership Function for Mamdani's Fuzzy Inference System within Park & Ride share modelling
10:00 – 10:20	<i>Michał Krzemiński</i>	The selection of construction sub-contractors using the fuzzy sets theory
10:20 – 10:40	<i>Agnieszka Leśniak</i>	Bid Assessment With The Use Of Fuzzy Sets Theory
10:40 – 11:00	<i>Grzegorz Ginda, Renata Kozik and Mariusz Maślak</i>	Application of fuzzy expert opinions to intensity evaluation and direction identification of cause – effect relations between factors organized by influence network
11:00 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">26 September 2014 SESSION: Mathematical Problems in Engineering (Oral) CHAIR: Calogero Orlando (ROOM 9)</p>		
09:00 – 09:30	<i>Salvatore Tirrito</i>	Intelligent Shoe System: a Self-Powered Wearable Device for Personal Localization
09:30 – 10:00	<i>Giuliana Alderisi</i>	An Approach towards Adaptivity in Wireless Sensor Networks
10:00 – 10:30	<i>Mangiameli Michele</i>	Laser Scanner Data Processing and 3D Modeling Using a Free and Open Source Software
10:30 – 11:00	<i>Gaetano Giunta</i>	A static analysis of three-dimensional functionally graded beams through hierarchical one-dimensional finite elements

<p align="center">26 September 2014 SESSION: Advances in Iterative/Semi-Analytical Methods for Ordinary Differential Equations and Their Applications in Engineering Problems CHAIR: Mehmet Tarık ATAY (ROOM 10)</p>		
09:00 – 09:30	<i>Baris Kendirli</i>	Evaluation of Some Convolution Sums
09:30 – 10:00	<i>Sure Kome</i>	Magnus Expansion Method for Solving Singularly Perturbed Turning Point Problems Having Boundary Layers
10:00 – 10:30	<i>Cahit Kome</i>	Numerical Solutions of Linear and Nonlinear Lane-Emden Type Equations By Using Magnus Expansion Method
10:30 – 11:00	<i>Baris Kendirli</i>	Representation Numbers of Some Quadratic Forms of Discriminant – 75



<p align="center">26 September 2014</p> <p align="center">SESSION: Analysis and Design of Multifunctional Composite Structures</p> <p align="center">CHAIR: Ramesh Gupta Burela (ROOM 11)</p>		
09:00 – 09:30	<i>Shashank Agrawal, Dineshkumar Harursampath</i>	Modeling of an initially twisted piezo-composite beam using Variational Asymptotic Method
09:30 – 10:00	<i>Maqsood M. Ameen, Dineshkumar Harursampath</i>	Analysis of Transverse Shear Strains in Pre-Twisted Moderately Thick Beams using Variational Asymptotic Method
10:00 – 10:30	<i>Alap Kshirsagar, Dineshkumar Harursampath, Ramesh Gupta Burela</i>	VAM applied to dimensional reduction of nonlinear multifunctional film-fabric laminates
10:30 – 11:00	<i>Hemaraju Pollayi, Dineshkumar Harursampath</i>	Unified Continuum Damage Model for Matrix Cracking in Composite Rotor Blades
11:00 – 11:30	Coffee Break	

<p align="center">26 September 2014</p> <p align="center">SESSION: Multi-Scale Mathematical and Numerical Analysis of Involution-Constrained PDES</p> <p align="center">CHAIR: Alexander A. Lukyanov, Hadi Hajibeygi, Evgeny Romenski (ROOM 12)</p>		
10:00 – 10:20	<i>D. Shaposhnikov, <u>N. Lebedeva</u>, and A. Starostin</i>	Slug Capturing Scheme for Gas-Liquid Pipe Flows Based on Two-Pressure Two-Fluid Model
10:20 – 10:40	<i><u>B. Krasnopolsky</u>, A.A. Lukyanov and A. Starostin</i>	Application of the Jacobian-Free Newton-Krylov Method for Multiphase Pipe Flows
10:40 – 11:00	<i>Matei Tene and <u>Hadi Hajibeygi</u></i>	Algebraic Multiscale Solver for Compressible Flow in Heterogeneous Porous Media (C-AMS)



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 SESSION: INVITED SPEAKER CHAIR: Willem Hundsdorfer (ROOM 1)		
11:30 – 12:30	Weizhang Huang	Computation of Eigenvalue Problems with Anisotropic Diffusion Operators

26 September 2014 SESSION: INVITED SPEAKER CHAIR: Weizhang Huang (ROOM 1)		
12:30 – 13:30	Willem Hundsdorfer	Multirate Schemes for Conservation Laws with Cell- or Flux-Based Partitionings



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 SESSION: Neural Modeling CHAIR: Jue Wang (ROOM 12)		
11:00 – 11:30	<u><i>Xin Tian</i></u>	Functional Connectivity in Low-dimensional Spike Network during Working Memory Task in Rats
11:30 – 12:00	<u><i>Feng Zhang</i></u>	High-Frequency Combination Coding-Based Steady-State Visual Evoked Potential for Brain Computer Interface
12:00 – 12:30	<u><i>Jue Wang</i></u>	Preparation of a electrochemical sensor for the detection of neurotransmitter dopamine
12:30 – 13:00	<u><i>Yong Xie</i></u>	Mixed-Mode Oscillations in Wang Model



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>26 September 2014</p> <p>SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014</p> <p>CHAIR: Hoi Dick Ng (ROOM 1)</p>		
<p>14:30 – 15:30</p>	<p>Invited lecture</p> <p>Professor Maria Vittoria Salvetti</p> <p>Large-Eddy Simulation of Heavy Particle Dispersion in Wall-Bounded Turbulent Flows</p>	
<p>15:30 – 15:50</p>	<p><i>S.V. Bogovalov, V.D. Borisevich, V.D. Borman, V.A. Kislov, I.V. Tronin and V.N. Tronin</i></p>	<p>Verification of the numerical codes for modelling of gas dynamics in strong centrifugal field</p>
<p>15:50 – 16:10</p>	<p><i>B. Kalpakli, M. Onur Ozturkmen and I. Sinan Akmandor</i></p>	<p>Turbulent Combustion Modeling with Fully Coupled Fully Implicit Compressible Solver</p>
<p>16:10 – 16:30</p>	<p><i>X. Ku, T. Lovas, M. van Sint Annaland and R. Hagmeijer</i></p>	<p>Effect of Drag Models on the Accumulation of Heavy Particles in a Circular Bounded Vortex Flow</p>
<p>Coffee Break</p>		



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>26 September 2014 Symposium 55 Adaptive Materials, Devices and Systems Towards Unconventional Computing and Robotics: Modeling and Implementation SESSION: Smart systems for unconventional computing CHAIR: Salvatore Iannotta (ROOM 2)</p>		
15:00 – 15:30	<u><i>Julie Grolier</i></u>	Neuroinspired computing with emerging nanodevices
15:30 – 16:00	<u><i>Petra Ritter</i></u>	The Virtual Brain - Knowledge inference and application
16:00 – 16:30	<u><i>Svetlana Erokhina</i></u>	Nanoengineered Polymeric Capsules for Bio-Computing
16:30 – 17:00	Vyacheslav Demin	Electrochemical Model of Polyaniline-Based Memristor with Mass Transfer Step

<p>26 September 2014 SESSION: Modelling and Simulation in Computer Sciences and Engineering CHAIR: Karla Quintero and K. Kaliyeva (ROOM 3)</p>		
15:00 – 15:30	<i>Alexandre Madeira, Renato Neves, Manuel A. Martins and Luís S. Barbosa</i>	A Logic for Robotics?
15:30 – 16:00	<u><i>Karla Quintero, Eric Niel and José Aguilar</i></u>	(Max,+) Model for Alignment Selection and Schedule Optimization in a Flow Network
16:00 – 16:30	<i>Mario Collotta, Giovanni Pau, Dario Ticali and Salvatore Tirrito</i>	A Comparison Among Scheduling Algorithms in Order to Improve the Air Traffic Control
16:30 – 17:00	<u><i>K. Kaliyeva</i></u>	Energy Conservation Law for the Turbulent Motion in the Free Atmosphere



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">26 September 2014 SESSION: Some New Trends in Nonlinear Differential Equations CHAIR: Prof. Dr. Necdet Bildik (ROOM 4)</p>		
15:00 – 15:30	<i>İdris Dağ</i>	<i>Numerical solution of Generalized Burgers-Fisher Equation by exponential cubic B-Spline collocation method</i>
15:30 – 16:00	<i>Hasan Bulut</i>	<i>An Application of the New Function Method to the Generalized Double sinh-Gordon Equation</i>
16:00 – 16:30	<i>Murat Şat</i>	<i>Inverse problem for the quadratic pencil of the Sturm-Liouville equations</i>
16:30 – 17:00	<i>Necdet Bildik</i>	<i>On the Solutions of Nonlinear Boussinesq Differential Equations</i>

<p align="center">26 September 2014 SESSION: Modern Methods for Solving Problems of Control and Modeling of Physical, Biological and Socio-Economic Processes CHAIR: Alexander Nikolaevich Kvitko (ROOM 5)</p>		
15:00 – 15:30	<i>Yakusheva</i>	<i>On one boundary Problem for Nonlinear Control System</i>
15:30 – 16:00	<i>Nikiforov</i>	<i>Mathematical Model and Software Complex for Computer Simulation of Field Emission Electron Sources</i>
16:00 – 16:30	<i>Nikiforov</i>	<i>Informational sensitivity as algorithm's complexity function characteristic</i>
16:30 – 17:00	<i>Prasolov, Lukina</i>	<i>A Mathematical Model of Economic Growth Connecting Demographic Setting with Controlled Migration</i>



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 SESSION: SCLIT 2014 4th Symposium on Computer Languages, Implementations and Tools CHAIR: Jaroslav Porubän (ROOM 6)		
15:00 – 15:20	<i>Mirjana Ivanovic, Zoran Budimac and Djura Paunic</i>	Educational Influences of Choice of First Programming Language
15:20 – 15:40	<i>Spyros Xanthopoulos and Stelios Xinogalos</i>	Mobile app development in HTML5
15:40 – 16:00	<i>Tomas Skersys, Saulius Pavalkis, and Lina Nemuraite</i>	Implementing Semantically Rich Business Vocabularies in CASE tools
16:00 – 16:20	<i>Oksana Nikiforova, Uldis Sukovskis and Konstantins Gusarovs</i>	Application of the Two- Hemisphere Model Supported by BrainTool: Football Game Simulation
16:20 – 16:40	<i>Ivan Pribela, Doni Pracner and Zoran Budimac</i>	Bringing Together Manual and Automated Code Assessment
16:40 – 17:00	<i>Arsen Kurti, Igli Tafa and Aldi Disha</i>	Improvement of load balancing mechanism in multi-core architectures over High Availability technique
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>26 September 2014</p> <p>SESSION: Computational Modeling and Experimental Assessment of Transport Processes in Building Materials and their Multi-Layered Systems</p> <p>CHAIR: Tomáš Koudelka</p> <p>(ROOM 7)</p>		
15:00 – 15:30	<u><i>P. Jarošová and S. Št'astník</i></u>	Numerical prediction of energy consumption in buildings with controlled interior temperature
15:30 – 16:00	<u><i>Pavel Beran</i></u>	The Impact of Air Flow to the Distribution of Heat Transfer Coefficient on Circular Cylinder
16:00 – 16:30	<i>Pavel Reiterman, Ondřej Holčapek, Marcel Jogl, Dagmar Jandeková and Petr Konvalinka</i>	Long-term Resistance of HPC to Action of Deicing Salts

<p>26 September 2014</p> <p>SESSION: Application of Fuzzy Logic and Neural Networks in Construction Management</p> <p>CHAIR: Edyta Plebankiewicz</p> <p>(ROOM 8)</p>		
15:00 – 15:20	<i>Michał Juszczyk</i>	Application of Committees of Neural Networks for Conceptual Cost Estimation of Residential Buildings
15:20 – 15:40	<i>Edyta Plebankiewicz</i>	Different Methods of Determination of the Fuzzy Value in Contractor Prequalification Model
15:40 – 16:00	<i>Krzysztof Zima</i>	The Use of Fuzzy Case-Based Reasoning in Estimating Costs in The Early Phase of The Construction Project



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 SESSION: Mathematical Problems in Engineering CHAIR: Calogero Orlando (ROOM 9)		
15:00 – 15:30	<i>Calogero Orlando</i>	Mathematical Methods for Rotorcraft DC Engine-Propeller Characterization
16:30 – 17:00	<i>Vincenzo Maniscalco</i>	GA application with hybrid encoding for QoS routing
15:30 – 16:00	<i>Mauro De Marchis</i>	Large Eddy Simulation of turbulent channel flow with realistic rough walls
15:30 – 16:00	<i>Mangiameli Michele</i>	A Gimbal Platform Stabilization For Topographic Applications

26 September 2014 SESSION: Mathematical Modeling of Nonhomogeneous Complex Systems CHAIR: Dr. Olga Salieva (ROOM 10)		
15:00 – 15:30	<i>Galakhov E.</i>	On Blow-Up for a Generalized Heat Inequality
15:30 – 16:00	<i>Uvarova L.</i>	Blow-Up Time for a Problem of Heat Transfer with Coefficients Depending on Their Formation Mechanisms
16:00 – 16:30	<i>Budnyi K.</i>	Modeling of Interaction of Electromagnetic Waves with Small Non-spherical Particles Having Fractal Surface
16:30 – 17:00	<i>Zabolotin V.</i>	Simulation of the Interaction of Electromagnetic Waves with Dispersed Particles in the Propagation of Breather in the Surface Layer of a Liquid Medium



<p align="center">26 September 2014</p> <p align="center">SESSION: Analysis and Design of Multifunctional Composite Structures</p> <p align="center">CHAIR: Ramesh Gupta Burela (ROOM 11)</p>		
15:00 – 15:30	<i>Himanshu Pathak, Ramesh Gupta Burela, Akhilendra Singh, Indra Vir Singh</i>	Thermo-elastic failure simulation of 3-D orthotropic composites by XFEM
15:30 – 16:00	<i>Srikant Sekhar Padhee</i>	Homogenization and micromechanical analysis of piezo-fiber reinforced composites
16:00 – 16:30	<i>Mayank N. Ajugia, G. Bharat and Yogesh M. Desai</i>	Micromechanical Analysis of Unidirectional Fiber-reinforced Composites

<p align="center">26 September 2014</p> <p align="center">SESSION: Multi-Scale Mathematical and Numerical Analysis of Involution-Constrained PDES</p> <p align="center">CHAIR: Alexander A. Lukyanov, Hadi Hajibeygi, Evgeny Romenski (ROOM 12)</p>		
15:00 – 15:20	<i><u>O. V. Sadovskaya</u> and V. M. Sadovskii</i>	Analysis of Elastic Waves in Blocky Media Using the Equations of Cosserat Continuum
15:20 – 15:40	<i><u>V. M. Sadovskii</u> and O. V. Sadovskaya</i>	Mathematical Modeling of a Metal Foam as an Elastic-Plastic Continuum with Changing Resistance
15:40 – 16:00	<i><u>A.A. Lukyanov</u> and N. Chugunov</i>	Uncertainty Analysis for Hydraulic Fracturing Modeling in Porous Media Containing Oil and Gas



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014		
SESSION: Symposium 174 Title: Numerical Solution of Differential Equations and their Applications		
CHAIR: Z. Kalogiratou, Th. Monovasilis		
(ROOM 12)		
16:00 – 16:30	<i>Josef Rebenda and Zdenek Šmarda</i>	A new iterative method for linear and nonlinear partial differential equations
16:30 – 17:00	<i>Phang Pei See and Zanariah Abdul Majid</i>	Solving Boundary Layer Problem Using Fifth Order Block Method
17:00 – 17:30	<i>Higinio Ramos</i>	Some efficient one-point variants of Halley's method, with memory, for solving nonlinear equations
17:30 – 18:00	<i>Zanariah Abdul Majid and Nurul Huda Abdul Aziz</i>	Multistep Block Method For Solving Vanishing Delay Differential Equations



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 SESSION: INVITED SPEAKER CHAIR: Klaus Gürlebeck (ROOM 1)		
17:30 – 18:30	<u>Karel in 't Hout</u> and Tinne Haentjens	Efficient pricing of American-style options by ADI schemes

26 September 2014 SESSION: INVITED SPEAKER CHAIR: Ewa Weinmueller (ROOM 1)		
18:30 – 19:30	<u>Lidia Aceto,</u> Cecilia Magherini and Paolo Novati	Short-term recursions for Fractional Differential Equations



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>26 September 2014 SESSION: 105 Title: State of the Art of Mathematical Modeling, Numerical Analysis, Optimization and Control of Hybrid Renewable Energy Systems (Wind Power / Photovoltaic Energy) CHAIR: Alexandru DUMITRACHE Florin FRUNZULICA (ROOM 1)</p>		
19:35 – 20:05	<p><u><i>A.R. Isac</i></u> <i>Daniel E. Crunteanu</i> <i>Florin Frunzulica</i></p>	<p>Aerodynamic Study Of Active Flow Control Using Blowing Jets Over Some Trailing Edge Configurations</p>
20:05 – 20:35	<p><u><i>Stefan Bogos</i></u> <i>Alexandru Dumitrache</i> <i>Florin Frunzulica</i></p>	<p>Turbulence Models in CFD Simulation of Low-Reynolds Number Airfoils Flow</p>
20:35 – 21:05	<p><u><i>Alexandru Dumitrache</i></u> <i>Florin Frunzulica</i> <i>Daniel E. Crunteanu</i></p>	<p>Influence of Unsteady Flow on the Aerodynamics and Aeroacoustics of Vertical Axis Wind Turbines</p>

<p>26 September 2014 SESSION: Modelling and Simulation in Computer Sciences and Engineering CHAIR: Karla Quintero and K. Kaliyeva (ROOM 3)</p>		
19:35 – 20:05	<p><i>Fábio D. Baptista,</i> <i>Ariel Guerreiro, Luís</i> <i>A. Gomes and <u>Paulo</u></i> <u><i>Caldas</i></u></p>	<p>Simulation of Long Period Fibre Gratings and Applications</p>
20:05 – 20:35	<p><i>Luca Cassano,</i> <i>Daniel Cesarini and</i> <i>Marco Avvenuti</i></p>	<p>Using Stochastic Activity Networks to Study the Energy Feasibility of Automatic Weather Stations</p>
20:35 – 21:05	<p><u><i>Pedro Pinto,</i></u> <i>António Pinto and</i> <i>Manuel Ricardo</i></p>	<p>Reducing WSN Simulation Runtime by using Multiple Simultaneous Instances</p>
21:05 – 21:35	<p><u><i>Carlos Abreu,</i></u> <i>Francisco Miranda</i> <i>and Paulo Mateus</i> <i>Mendes</i></p>	<p>Estimating the Impact of Adding Sensor Nodes to Biomedical Wireless Sensor Networks</p>



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>26 September 2014 SESSION: Some New Trends in Nonlinear Differential Equations CHAIR: Prof. Dr. Duygu Dönmez Demir (ROOM 4)</p>		
19:35 – 20:05	<i>Özlem Ersoy</i>	<i>The Extended B-Spline Collocation Method for Numerical Solutions of Fisher Equation</i>

<p>26 September 2014 SESSION: Mathematical Modeling of Nonhomogeneous Complex Systems CHAIR: Dr. Olga Salieva (ROOM 10)</p>		
19:35 – 20:05	<i>Rusinov M.</i>	Mathematical Model of Heterogeneous Structure of Stem Cells Dynamics
20:05 – 20:35	<i>Kulkova E.</i>	Computer Modeling of Properties of Complex Molecular Systems

<p>26 September 2014 SESSION: Symposium 174 Title: Numerical Solution of Differential Equations and their Applications CHAIR: Z. Kalogiratou, Th. Monovasilis (ROOM 12)</p>		
19:35 – 20:05	<i>Higinio Ramos, Z. Kalogiratou, Th. Monovasilis and T.E. Simos</i>	An optimized two-step hybrid block method for solving general second order initial-value problems of the form $y'' = f(x, y, y')$
20:05 – 20:35	<i>Higinio Ramos, Z. Kalogiratou, Th. Monovasilis and T.E. Simos</i>	A trigonometrically fitted optimized two-step hybrid block method for solving initial-value problems of the form $y'' = f(x, y, y')$ with oscillatory solutions
20:35 – 21:05	<i>Z. Kalogiratou, Th. Monovasilis, Higinio Ramos, T.E. Simos.</i>	Trigonometrically fitted two step hybrid methods for the numerical solution of the Schrödinger equation
21:05 – 21:35	<i>Th. Monovasilis, Z. Kalogiratou, T.E. Simos</i>	Exponentially Fitted Symplectic Runge-Kutta-Nystrom methods.



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

26 September 2014 (19:35 - 21:20) Mathematical Problems in Engineering - Poster Session	
<i>Mauro De Marchis</i>	On the influence of wall roughness in particle-laden flows
<i>Salvatore Tirrito</i>	A Preliminary Study to Increase Baggage Tracking by using a RFID Solution
<i>Salvatore Tirrito</i>	A Fuzzy Controller to Reduce Power Consumption in a Quadrotor Helicopter for Environmental Monitoring
<i>Calogero Orlando</i>	Genetic Algorithm applied to the stabilization control of a hexarotor
<i>Mangiameli Michele</i>	Real Time Transferring of Field Data into a Spatial DBMS For Management of Emergencies with a Dedicated GIS Platform
<i>Vincenzo Maniscalco</i>	Single and multi destinations trees for routing applications
<i>Mario Denaro</i>	Piezoelectric Energy Harvesting from raised crosswalk devices

26 September 2014 (19:35 - 21:20) Applied and Numerical Mathematics - Poster Session	
<i>Miso Jang, Geon-Hui Lee, Dong-Chul Park and Soo-Young Min</i>	Pedestrian Detection and Tracking using Modified SURF Algorithm

END OF THE 5TH DAY



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

27 September 2013 SESSION: The 9th International Symposium on Numerical Analysis of Fluid Flow and Heat Transfer - Numerical Fluids Symposium 2014 CHAIR: Zdenek Chara (ROOM 1)		
9:00 – 9:20	<i><u>N. Arya, R.K. Soni</u> and A. De</i>	Identification of Coherent Structures in a Supersonic Flow Past Backward Facing Step
9:20 – 9:40	<i><u>V. K. Sin</u> and I. K. Wong</i>	Model validation of Rayleigh's problem for oscillating finite plate
9:40 – 10:00	<i><u>B. Li, Y. Jiang, L. Zhu</u> and L. Zheng</i>	The Effects of Variable Thermal Conductivity on Boundary Layer Flow Embedded in a Porous Cu-Nanofluid Medium
10:00 – 10:20	<i><u>A. Donini, R.J.M. Bastiaans, J.A. van Oijen</u> and L.P.H. de Goey</i>	A Five Dimensional Implementation of the Flamelet Generated Manifolds Technique for Gas Turbine Application
10:20 – 10:40	<i><u>R.K. Soni, N. Arya</u> and A. De</i>	Assessment of RANS Based Models in a Supersonic Flow
10:40 – 11:00	<i>D. Zeidan</i>	Drag Force Simulation in Explosive Volcanic Flows
Lunch Break		



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

27 September 2014		
Symposium 55 Adaptive Materials, Devices and Systems Towards Unconventional Computing and Robotics: Modeling and Implementation		
SESSION: Devices and Systems		
CHAIR: Salvatore Iannotta (ROOM 2)		
09:00 – 09:30	<u>Mirko Prezioso</u>	Pattern Classification by Memristive Crossbar Array
09:30 – 10:00	<u>Sandro Carrara</u>	Adaptive Materials/Devices for Biosensing Aim
10:00 – 10:30	<u>Mark Kieran Massey</u>	Alignment of Liquid Crystal / Carbon Nanotube Dispersions for Application in Unconventional Computing
10:30 – 11:00	<u>Giacomo Baldi</u>	Optimization of Synthesis Protocols to Control the Nanostructure and the Morphology of Metal Oxide Thin Films for Memristive Applications
11:00 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>27 September 2014</p> <p>SESSION: The 1st International Symposium on Artificial, Biological and Bio-Inspired Intelligence (ABBII)</p> <p>CHAIR: Andrew Adamatzky, Hiroshi Sato, Tomohiro Shirakawa (ROOM 3)</p>		
09:00 – 09:10	Opening Remarks	
09:10 – 09:35	<u><i>Victor Erokhin</i></u>	Polymeric Systems for Bio-Inspired Information Processing
09:35 – 10:00	<u><i>Jeff Jones</i></u>	Exploiting Environmental Computation in a Multi-Agent Model of Slime Mould.
10:00 – 10:25	<u><i>Masaki Yamachiyo, Andrew Adamatzky and Yukio Gunji</i></u>	Physarum Plasmodium Perceives Ambiguous Stimulus as either Attractant or Repellent
10:25 – 10:50	<u><i>Nikolaos Dourvas, Georgios Ch. Sirakoulis and Philippos Tsalides</i></u>	GPU Implementation of Physarum Cellular Automata Model
10:50 – 11:15	<u><i>Andrew Schumann</i></u>	Reversible Logic Gates on Physarum Polycephalum
11:15 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

27 September 2014 SESSION: Some New Trends in Nonlinear Differential Equations CHAIR: Prof. Dr. İdris Dağ (ROOM 4)		
09:00 – 09:30	<i>Necdet Bildik</i>	<i>Implementation of Taylor Collocation and Adomian Decomposition Method for Systems of Ordinary Differential Equations</i>
09:30 – 10:00	<i>Hasan Bulut</i>	<i>The Analysis of the Exact Solutions of the Space Fractional Coupled KD Equations</i>
10:00 – 10:30	<i>F. Berna Benli</i>	<i>A Tumor-Macrophage Interaction Model with Fuzzy Initial Values</i>

27 September 2014 SESSION: Mathematics Applied to Computer Science CHAIR: Jose C. Valverde (ROOM 6)		
09:30 – 10:00	<u><i>Jose C. Valverde</i></u>	Presentation of the session
10:00 – 10:30	<u><i>Eugene A Barkovsky</i></u>	Some Problems of Optimal Control of Two Parallel FIFO-queues
10:30 – 11:00	<u><i>Andrew V. Drac.</i></u>	The circular representation of 2 FIFO-queues in single level memory
11:00 – 11:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

27 September 2014 SESSION: Mathematical Problems in Engineering CHAIR: Calogero Orlando (ROOM 5)		
09:00 – 09:30	<i>Salvatore Tirrito</i>	A Fuzzy Controller to Reduce Power Consumption in a Quadrotor Helicopter for Environmental Monitoring
09:30 – 10:00	<i>Calogero Orlando</i>	Mathematical Methods for Rotorcraft DC Engine-Propeller Characterization
10:00 – 10:30	<i>Giuliana Alderisi</i>	An Approach towards Adaptivity in Wireless Sensor Networks
10:30 – 11:00	<i>Vincenzo Maniscalco</i>	Single and multi destinations trees for routing applications

27 September 2014 SESSION: Stochastic & Random Partial Differential Equations with Applications CHAIR: Maha A. Hassanein (ROOM 8)		
09:00 – 09:30	<i>Islam R. Kamel and Maha A. Hassanein</i>	Solving Multidimensional Nonlinear Perturbed Problems Using Interval Newton Methods
09:30 – 10:00	<i>Waleed S. Khedr</i>	Multi-Dimensional Explicit Solutions of the Diffusion-Absorption Equation

27 September 2014 SESSION: Applied and Numerical Mathematics CHAIR: Etibar S.Panakhov (ROOM 8)		
10:00 – 10:30	<i>I. Fedotov, A. Demidov and M. Shatalov</i>	Parameters Estimation of Equations of Chemical Kinetics and Mathematical Biology in the Case of Incomplete Experimental Data



27 September 2014 SESSION: Optimization Algorithms for Discrete Problems CHAIR: Dr. Joaquín Pérez (ROOM 7)		
09:00 – 09:30	<i>Joaquín Pérez Ortega, Rodolfo Pazos R., Miguel Hidalgo, Nelva Almanza, Ocotlán Díaz-Parra, René Santaolaya and Vitervo Caballero</i>	An Improvement to the K-means Algorithm Oriented to Big Data
09:30 – 10:00	<i>Joaquín Pérez, Hilda Castillo, Darnes Vilariño, José C. Zavala, Rafael De la Rosa and Jorge A. Ruiz-Vanoye</i>	A Hybrid Algorithm with Reduction Criteria for the Bin Packing Problem in One Dimension
10:00 – 10:30	<i>Mexicano A., Rodriguez R., Cervantes S., Ponce R., Bernal W.</i>	Fast Means: Enhancing the K-means Algorithm by Accelerating its Early Classification Version
10:30 – 11:00	<i>J. C. Zavala-Díaz, A. Mexicano-Santoyo, H. Castillo, de la Rosa-Flores, J.A. Hernández-Aguilar</i>	Application of the Lattice of the Power Set to Solve the 0/1 Knapsack Problem

27 September 2014 SESSION: Applied and Numerical Mathematics V CHAIR: Gordon R.J. Cooper (ROOM 9)		
09:00 – 09:30	<i>Gordon R.J. Cooper</i>	A New Semiautomatic Interpretation Technique for Aeromagnetic Data
09:30 – 10:00	<i>Pashchenko Fedor, Gulyaev Sergey and Pashchenko Alexander</i>	Adaptive Control System for Gas Producing Wells
10:00 – 10:30	<i>K. Kaliyeva</i>	Energy Conservation Law for the Turbulent Motion in the Free Atmosphere
10:30 – 11:00	<i>Young Joon Choi, Razzi Movassaghi Jorshari and Ned Djilali</i>	An Adaptive Extended Finite Element Method for the Analysis of Agglomeration of Colloidal Particles in a Flowing Fluid



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">27 September 2014 SESSION: Applied and Numerical Mathematics VI CHAIR: Jolanta Goldšteine (ROOM 10)</p>		
09:00 – 09:30	<i>Jevgenijs Carkovs and Jolanta Goldšteine</i>	On Reducibility of Linear Markov Switched Difference Equations
09:30 – 10:00	<i>Changfu Liu, Meiping Gao, Yan yan Li and Chuanjian Wang</i>	A Unified Formula of a Series of Breather Solitons for the Nonlinear Schrödinger Equation
10:00 – 10:30	<i>Peng Xiuyan, Niu Yi and Zhang Mingyou</i>	Quenching Time for Nonlinear Heat Transfer Model and its Simulation
10:30 – 11:00	<i>Zhang Lijian, Zhang Wenping and Niu Yi</i>	Global Well-posedness of Cauchy Problem for Damped Multidimensional Generalized Boussinesq Equations with Special Nonlinear Term
11:00 – 11:30	<i>Soo Jai Shin, Young In Kim, Seungyeob Ryu, Youngmin Bae and Keung Koo Kim</i>	Numerical Studies on the Performance of a Flow Distributor in Tank

<p align="center">27 September 2014 SESSION: Applied and Numerical Mathematics CHAIR: Etibar S.Panakhov (ROOM 11)</p>		
09:00 – 09:30	<i>Etibar S. Panakhov and Tuba Gulsen</i>	On Discontinuous Dirac Systems with Eigenvalue Dependent Boundary Conditions
09:30 – 10:00	<i>Etibar S. Panakhov and Mine Babaoglu</i>	Numerical Assessment of Dirac Equation System by Means of Homotopy Analysis Method
10:00 – 10:30	<i>Veronica Aimar, Sara Borlengo, Silvia Motto and Ezio Venturino</i>	Landscape Disruption Effects in a Meta-epidemic Model with Steady State Demographics and Migrations Saturation
10:30 – 11:00	<i>Abedallah Rababah</i>	Quartic approximation of circular error function



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

27 September 2014 SESSION: INVITED SPEAKER CHAIR: You-He Zhou (ROOM 1)		
11:30 – 12:30	Shijun Liao	Homotopy Analysis Method - a new analytic approach for highly nonlinear problems

27 September 2014 SESSION: INVITED SPEAKER CHAIR: Constantinos Siettos (ROOM 1)		
12:30 – 13:30	Elias Aifantis	TBA



27 September 2014 SESSION: Recent Advances in Statistics CHAIR: Nursel Koyuncu (ROOM 1)		
15:00 – 15:25	<i>Gamze Ozel</i>	Bivariate Kumaraswamy Distribution with an Application on Earthquake Data
15:25 – 15:50	<i>Magdalena Šmídová and Miroslav Vořechovský</i>	Performance Comparison of Methods for Design of Experiments for Analysis of Tasks Involving Random Variables
15:50– 16:15	<i>Esra Polat and Suleyman Gunay</i>	A Simulation Study for the Comparison of Two Popular Robust PLSR Methods: RSIMPLS and PRM with a Robust PCR Method in the Presence of Outliers
16:15– 16:40	<i>Nursel Koyuncu</i>	Exponential Estimators of Finite Population Variance in Simple Random Sampling
16:40 – 17:00	<i>Nursel Koyuncu</i>	A Class of Estimators of Finite Population Variance in Simple Random Sampling
	Posters	
17:00 – 17:30	<i>Cem Kadilar and Hatice O. Cekim</i>	Hartley-Ross Type Estimators in Simple Random Sampling
17:00 – 17:30	<i>Gamze Ozel and Cem Kadilar</i>	A New Kind Estimator for the population Mean in the Stratified Random Sampling



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>27 September 2014 Symposium 55 Adaptive Materials, Devices and Systems Towards Unconventional Computing and Robotics: Modeling and Implementation SESSION: Machine Learning in bio-inspired systems CHAIR: Salvatore Iannotta (ROOM 2)</p>		
15:00 – 15:30	<u>Luca Ascari</u>	Deep Learning models: Applications and Perspectives
15:30 – 16:00	<u>Fernando Corinto</u>	Physics of the Rupturing Mechanism for Williams Device Operated in Flux Mode
16:00 – 16:30	<u>Jeff Dale Jones</u>	Material-based Non-neural Analogues of Lateral Inhibition: A Multi-agent Approach
16:30 – 17:00	<u>Victor Erokhin</u>	Organic Memristive Device as Key Element for Neuromorphic Networks
17:00 – 17:30	Coffee Break	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>27 September 2014 SESSION: The 1st International Symposium on Artificial, Biological and Bio-Inspired Intelligence (ABBII) CHAIR: Andrew Adamatzky, Hiroshi Sato, Tomohiro Shirakawa (ROOM 3)</p>		
15:00 – 15:25	<p><u>Tomohiro Shirakawa,</u> <i>Naruhisa Sugiyama, Hiroshi Sato, Kazuki Sakurai and Eri Sato</i></p>	Gait Analysis and Machine Learning Classification on Healthy Subjects in Normal Walking
15:25 – 15:50	<p><u>Taha Alhersh,</u> <i>Brahim Belhaouari Samir and Hamada Al-Absi</i></p>	Species Identification Using Part of DNA Sequence: Evidence from Machine Learning Classification
15:25 – 15:50	<p><u>Hiroshi Sato,</u> <i>Tomohiro Shirakawa and Masao Kubo</i></p>	Play Style Classification of the Strong Mahjong Players
15:50 – 16:15	<p><u>Hidetaka Taniguchi,</u> <i>Kuratomo Oyo, Yu Kohno and Tatsuji Takahashi</i></p>	Causal Cognition and Spam Classifier
16:15 – 16:40	<p><u>Kuratomo Oyo,</u> <i>Naoto Noguchi and Tatsuji Takahashi</i></p>	Causal Cognition in Game Tree Search
16:40 – 17:30	Coffee Break	

<p>27 September 2014 SESSION: Some New Trends in Nonlinear Differential Equations CHAIR: Prof. Dr. Necdet Bildik (ROOM 4)</p>		
15:00 – 15:30	<p><i>Duygu Dönmez Demir</i></p>	<i>The Solution of a String Model by Adomian Decomposition Method</i>
15:30 – 16:00	<p><i>Karel Hasik</i></p>	<i>Traveling waves in the KPP-Fisher equation</i>



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

27 September 2014 SESSION: SCLIT 2014 4th Symposium on Computer Languages, Implementations and Tools CHAIR: Zoran Budimac (ROOM 6)		
15:00 – 15:20	<u>Jan Kollar</u>	Automated Language Symbolization and Conceptualization in Human - Computer Communication
15:20 – 15:40	<u>Jaroslav Porubän</u> and <u>Dominik Lakatoš</u>	Iterative Domain-Specific Language Development with YAJCo Parser Generator
15:40 – 16:00	<u>Melinda Toth,</u> <u>Attila Pater-Reszeg</u> and <u>Gordana Rakic</u>	Introducing Support for Erlang into SSQSA framework
16:00 – 16:20	<u>Viktória Fördös</u> and <u>Melinda Tóth</u>	Comprehensible presentation of clone detection results
16:20 – 16:40	<u>Vladimir Safonov,</u> <u>Dmitry Grigoriev,</u> <u>Adel Safonova</u> and <u>Anastasiya Grigorieva</u>	Configure and Refactor Cloud Applications with Enterprise Library Integration Pack for Windows Azure Using Aspect.NET
16:40 – 17:00	<u>Alejandro Sanchez,</u> <u>Luis Barbosa</u> and <u>Daniel Riesco</u>	Specifying structural constraints of architectural patterns in the Archery language



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">27 September 2014</p> <p align="center">SESSION: Optimization Algorithms for Discrete Problems</p> <p align="center">CHAIR: Dr. Joaquín Pérez</p> <p align="center">(ROOM 7)</p>		
15:00 – 15:30	<p><i>Rafael De la Rosa,</i> <i>Hilda Castillo, José</i> <i>C. Zavala, Alicia</i> <i>Martínez and Hugo</i> <i>Estrada</i></p>	<p>Application of Prime Numbers to Solve Complex Instances of the Bin Packing Problem</p>
15:30 – 16:00	<p><i>T. J. Barrón Llamas,</i> <i>R. Baltazar, M. A.</i> <i>Casillas Araiza, D.</i> <i>Cuesta Frau, V. M.</i> <i>Zamudio Rodríguez</i></p>	<p>Comparison study of Micro- Algorithms for Lighting Comfort</p>

<p align="center">27 September 2014</p> <p align="center">SESSION: Applied and Numerical Mathematics IV</p> <p align="center">CHAIR: Vaclav Skala</p> <p align="center">(ROOM 8)</p>		
15:00 – 15:30	<p><i>Georgios</i> <i>Giannoukos and</i> <i>Mart Min</i></p>	<p>Using Neural Networks to Model Self-immune Disease in Terms of the Alterations of the Dynamic Electrical Impedance</p>
15:30 – 16:00	<p><i>Georgios</i> <i>Giannoukos and</i> <i>Mart Min</i></p>	<p>Mathematical and Physical Modelling of the Dynamic Electrical Impedance of a Tooth</p>
16:00 – 16:30	<p><i>Vaclav Skala</i></p>	<p>A New Approach to Line – Sphere and Line – Quadrics Intersection Detection and Computation</p>
16:30 – 17:00	<p><i>Pikina Galina,</i> <i>Pashchenko Fedor</i> <i>and Pashchenko</i> <i>Alexander</i></p>	<p>Specifics of Plants Identification in Man- Machine Systems</p>



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

27 September 2014 SESSION: Applied and Numerical Mathematics CHAIR: Xindong Li (ROOM 5)		
15:00 – 15:30	<i>Xindong Li, Zongmin Hu and Zonglin Jiang</i>	A New Flux Splitting Scheme for Euler Equations of Gas Dynamics
15:30 – 16:00	<i>M. Benamour, E. Liberge, C. Béghein and A. Hamdouni</i>	Numerical Simulation of Flow Around Obstacles Using Lattice Boltzmann Method
16:00 – 16:30	<i>Azzi Abbès, Nemdili Fadéla, Ahmed Zineddine Dellil and Jubran Bassam Ali</i>	Numerical Study on Turbulent Mixing Process in Cross-Flow Type T-Junction
16:30 – 17:00	<i>Nemdili Fadéla, Azzi Abbès Dellil Ahmed Zineddine and Jubran Bassam Ali</i>	Effect of jet pulsation on film cooling effectiveness at the Leading Edge of a Symmetrical Turbine Blade Model

27 September 2014 SESSION: INVITED SPEAKER CHAIR: Shijun Liao (ROOM 1)		
17:30 – 18:30	You-He Zhou	A Wavelet-based Arithmetic of Closure Solutions to Nonlinear Differential Equations



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p>27 September 2014 Symposium 55 Adaptive Materials, Devices and Systems Towards Unconventional Computing and Robotics: Modeling and Implementation SESSION: Conclusions and Round Table CHAIR: Salvatore Iannotta (ROOM 2)</p>		
18:35 – 20:00	<i>Salvatore Iannotta</i>	Round Table and Conclusive Remarks

<p>27 September 2014 SESSION: The 1st International Symposium on Artificial, Biological and Bio-Inspired Intelligence (ABBII) CHAIR: Andrew Adamatzky, Hiroshi Sato, Tomohiro Shirakawa (ROOM 3)</p>		
18:30 – 18:55	<u><i>Theresa Schubert</i></u>	Growing Geometries (tattooing mushrooms)
18:55 – 19:20	<u><i>Moto Kamiura</i></u>	Boolean Logic Consisting of Unary Operations
19:20 – 19:45	<u><i>Hiroshi Sato,</i></u> <i>Tomohiro Shirakawa</i> <i>and Masao Kubo</i>	An Analysis of Course Evaluation Questionnaire by Machine Learning
19:45 – 20:10	<u><i>Mohammad Mahdi Dehshibi,</i></u> <i>Ali Shirmohammadi</i> <i>and Andy Adamatzky</i>	Pattern Formation Using L-Systems: A Case Study in Forming Neyname's Words

<p>27 September 2014 SESSION: Applied and Numerical Mathematics CHAIR: D. Sfetsioris (ROOM 5)</p>		
20:15 – 20:30	<i>D. Sfetsioris</i>	Limb Volume measurements for assessment of Lymphedema. Methodological Issues

END OF THE 6TH DAY



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: The 1st International Symposium on Artificial, Biological and Bio-Inspired Intelligence (ABBII) CHAIR: Andrew Adamatzky, Hiroshi Sato, Tomohiro Shirakawa (ROOM 1)		
09:00 – 09:25	<u>Hiroshi Sato,</u> <u>Tomohiro</u> <u>Shirakawa, Masao</u> <u>Kubo and Akira</u> <u>Namatame</u>	The Evolution of Ordering Strategies under Damaged Beer Game
09:25 – 09:50	<u>Yuta Ozawa, Yu</u> <u>Kohno and Tatsuji</u> <u>Takahashi</u>	Information Utilization in the Artificial Bee Colony Algorithm on Noisy Landscapes
09:50 – 10:15	<u>Yu Kohno and</u> <u>Tatsuji Takahashi</u>	A Satisficing Strategy with Variable Reference in the Multi-armed Bandit Problems
10:15 – 10:40	<u>Tomoko Sakiyama</u> <u>and Yukio Gunji</u>	Modulation Effect with Global Ambiguity in 2-Dimensional Random Walk
10:40 – 11:05	<u>Anri Mutoh and</u> <u>Yukio-Pegio Gunji</u>	Synchronization in Asynchronous Cellular Automata Evaluated by Local Active Information Storage
11:05 – 11:10	Closing Remarks	



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics VII CHAIR: S. J. Childs (ROOM 2)		
09:00 – 09:30	<i>Yanjin Wang and Yufeng Wang</i>	On Initial-boundary Value Problem for Nonlinear Viscoelastic Wave System with Damping and Source Terms
09:30 – 10:00	<i>S. J. Childs</i>	The Finite Element Implementation of a K.P.P. Equation for the Simulation of Tsetse Control Measures
10:00 – 10:30	<i>Marcin Pietras</i>	Error Analysis in the Hardware Neural Networks Applications using Reduced Floating-point Numbers Representation
10:30 – 11:00	<i>M. Pospíšil, J. Diblík and M. Feckan</i>	On relative controllability of delayed difference equations with multiple control functions

28 September 2014 SESSION: Applied and Numerical Mathematics VIII CHAIR: Vladislav N. Kovalnogov (ROOM 3)		
09:00 – 09:30	<i>Vladislav N. Kovalnogov, and Ruslan V. Fedorov</i>	Numerical Analysis of the Efficiency of Film Cooling of Surface Streamlined by Supersonic Disperse Flow
09:30 – 10:00	<i>Vladislav N. Kovalnogov, Ruslan V. Fedorov, and Dmitry A. Generalov</i>	Modeling, Research and Development the Technology of Cooling of Turbine Engine Blades



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics IX CHAIR: Wu Di (ROOM 4)		
09:00 – 09:30	<i>Wu Di, Yeo K.S. and Lim T.T.</i>	Applications of Generalized Finite Difference Method in Fluid-Rigid Body Interaction Problems
09:30 – 10:00	<i>Zhaohui Dai and Shanshan Jiang</i>	Compact Splitting Multisymplectic Scheme for the Coupled Nonlinear Schrödinger Equations on Unbounded Domains
10:00 – 10:30	<i>Ercan Altinisik and Serife Büyükköse</i>	A Proof of a Conjecture on Monotonic Behavior of the Largest Eigenvalue of a Number-theoretic Matrix
10:30 – 11:00	<i>Murat Altekin and R. Faruk Yükseler</i>	Axisymmetric Large Deflection Analysis of a Circular Plate with a Ring Support



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics X CHAIR: Jirí Kunovský (ROOM 5)		
09:00 – 09:30	<i>Filip Kocina, Jirí Kunovský, Martin Marek, Gabriela Necasová, Alexander Schirrer and Václav Šátek</i>	New Trends in Taylor Series Based Computations
09:30 – 10:00	<i>Jirí Kunovský, Václav Šátek, Jan Valdman and Václav Valenta</i>	Construction of P^1 Gradient from P^0 Gradient by Averaging
10:00 – 10:30	<i>Jan Chaloupka, Jirí Kunovský, Alžbeta Martinkovicová, Václav Šátek and Elvira Thonhofer</i>	Multiple Integral Computations using Taylor Series

28 September 2014 SESSION: Applied and Numerical Mathematics XI CHAIR: Lev Ryashko (ROOM 6)		
09:00 – 09:30	<i>Irina Bashkirtseva</i>	Approximation of Stochastic Equilibria for Dynamic Systems with Colored Noise
09:30 – 10:00	<i>Irina Bashkirtseva</i>	Control of Confidence Domains in the Problem of Stochastic Attractors Synthesis
10:00 – 10:30	<i>Lev Ryashko</i>	Numerical Analysis of Randomly Forced Glycolytic Oscillations
10:30 – 11:00	<i>Lev Ryashko</i>	Attainability Analysis in Stochastic Controlled Systems



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XIII CHAIR: Dawid Cokus (ROOM 7)		
09:00 – 09:30	<i>Anna Avramenko and Jari Hamalainen</i>	Two-dimensional Depth-averaged Model Simulation
09:30 – 10:00	<i>Qiang Zhao and Yina Shi</i>	Numerical Modeling of Pulsed Laser-material Interaction and of Laser Plume Dynamics
10:00 – 10:30	<i>Dawid Cokus and Pawel Warys</i>	Identification of Parameters of Discrete-Continuous Models
10:30 – 11:00	<i>Mattia Alioli, Pierangelo Masarati, Marco Morandini, Gian Luca Ghiringhelli, Trenton Carpenter and Roberto Albertani</i>	Nonlinear Membrane Inverse Finite Elements



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XIV CHAIR: Evgeny V. Shilnikov (ROOM 8)		
09:00 – 09:30	<i>Shudao Zhang, Zupeng Jia, Jun Liu, Jun Xiong, Haibing Zhou and Ruili Wang</i>	An Effective Three Dimensional MMALE Method for Compressible Fluid Dynamics
09:30 – 10:00	<i>Alexey Yu. Sakhnov</i>	Influence of Thermal Conditions on Accelerated Boundary Layer Subjected to a Wall Heating
10:00 – 10:30	<i>Alexander A. Davydov and Evgeny V. Shilnikov</i>	Program Complex for Fluid Dynamic Problems Simulation on GPU-Based Computer Systems
10:30 – 11:00	<i>Vladislav N. Kovalnogov, Ruslan V. Fedorov, Tamara V. Karpukhina and Ekaterina V. Tsvetova</i>	Numerical Analysis of the Temperature Stratification of the Disperse Flow

28 September 2014 SESSION: Applied and Numerical Mathematics XV CHAIR: Kerry Hourigan (ROOM 9)		
09:00 – 09:30	<i>Sebastian Uzny and Krzysztof Sokół</i>	The Bernoulli-Euler and Timoshenko Theories in the Context of Research on the Characteristic Curves of Column with Different Boundary Conditions
09:30 – 10:00	<i>Krzysztof Sokół and Sebastian Uzny</i>	Linear and Nonlinear Vibrations Control of a two Member Column by Means of Piezoceramic Element
10:00 – 10:30	<i>Pauline Assemat and Kerry Hourigan</i>	Large Deformations of Elastic Vessels under Atherosclerotic Conditions



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XXVI CHAIR: Ezio Venturino (ROOM 10)		
09:00 – 09:30	<i>Hafed Zghidi, Adam Świtoński and Grzegorz Drązek</i>	Multispectral Image Filtering using the Mean Shift Algorithm
09:30 – 10:00	<i>Xi Rao and Guowan Yan</i>	Incentive Mechanism Design for Knowledge Transfer in Alliance

28 September 2014 SESSION: Applied and Numerical Mathematics XXVII CHAIR: Dorota Aniszewska (ROOM 11)		
09:00 – 09:30	<i>Yang Li</i>	The Study on Knowledge Transferring Incentive for Information System Requirement Development
09:30 – 10:00	<i>Edison C. Ospina, Francisco J. Moreno and Jaime A. Guzmán</i>	Trajectory Reconstruction using Personalized Routing over a Graph
10:00 – 10:30	<i>Joanna Wróbel and Adam Kulawik</i>	Using the Artificial Neural Networks in the Modelling of the Induction Heating
10:30 – 11:00	<i>Dorota Aniszewska and Marek Rybaczuk</i>	Investigation of Influence of Fibres Layout in Composite Specimens on their Strength with Cellular Automata Method



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XVI CHAIR: Marcin Kubiak (ROOM 12)		
09:00 – 09:30	<i>María del Mar Rueda, Ismael Sánchez-Borrego and Antonio Arcos</i>	Kernel Methods in Dual Frame Surveys
09:30 – 10:00	<i>George E. Halkos and Kyriaki D. Tsilika</i>	A Framework for Stochastic Simulation of Distribution Practices for Hotel Reservations
10:00 – 10:30	<i>Tomasz Domański, Adam Bokota and Marcin Kubiak</i>	Simulations and Numerical Model of Steel Hardening Process
10:00 – 10:30	<i>Marcin Kubiak, Wiesława Piekarska, Tomasz Domański, Zbigniew Saternus and Sebastian Stano</i>	Numerical Estimation of Phase Transformations in Solid State during Yb:YAG Laser Heating of Steel Sheets

28 September 2014 SESSION: Applied and Numerical Mathematics XVII CHAIR: Elena N. Akimova (ROOM 1)		
11:30 – 12:00	<i>Elena N. Akimova, Peter S. Martyshko and Vladimir E. Misilov</i>	A Fast Parallel Gradient Algorithm for Solving Structural Inverse Gravity Problem
12:00 – 12:30	<i>Elena N. Akimova</i>	A Parallel Matrix Sweep Algorithm for Solving Linear Systems with Block-Fivediagonal Matrices
12:30 – 13:00	<i>Takanori Maehara</i>	Simultaneous Diagonalization of Various Size Matrices
13:00 – 13:30	<i>G.H. Cheng, T.Z. Huang and L. Li</i>	Convergence of two Relaxed Alternating Methods



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XVIII CHAIR: D. V. Alexandrov (ROOM 2)		
11:30 – 12:00	<i>D. V. Alexandrov and A. V. Britousova</i>	Interdendritic Spacing in Growth Processes with a Mushy Layer
12:00 – 12:30	<i>D. V. Alexandrov, A. P. Malygin and I. V. Alexandrova</i>	Mathematical Modeling of a Mushy Layer at the Inner Core Boundary of the Earth. Part 1. Analytical Solutions
12:30 – 13:00	<i>D. V. Alexandrov, A. P. Malygin and I. V. Alexandrova</i>	Mathematical Modeling of a Mushy Layer at the Inner Core Boundary of the Earth. Part 2. Theoretical Description
13:00 – 13:30	<i>D. V. Alexandrov, A. A. Ivanov and I. G. Nizovtseva</i>	The Role of Crystallite Withdrawal Rate and External Sources on Nucleation and Growth of Crystals

28 September 2014 SESSION: Applied and Numerical Mathematics XIX CHAIR: Inna Elyukhina (ROOM 3)		
11:30 – 12:00	<i>Adam Gnatowski, Marcin Golas and Renata Gnatowska</i>	Numeric Modelling of the Temperature Distribution of Moulded Piece in the Simulation of Injection Molding Process
12:00 – 12:30	<i>Inna Elyukhina</i>	Modeling the Experiments in an Oscillating Cylinder Viscometry
12:30 – 13:00	<i>Renata Gnatowska and Sylwia Sikora</i>	Numerical Analysis of Wind Flow and Erosion in Flow around the Bump Terrain
13:00 – 13:30	<i>Renata Gnatowska and Tobiasz Rybak</i>	Numerical Analysis of Heat Transfer around 2D Circular Cylinder in Pulsation Inflow



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XX CHAIR: Alexander P. Krishchenko (ROOM 4)		
11:30 – 12:00	<i>Wei Weng, Cheng Chen, Gang Rong and Shigeru Fujimura</i>	An Efficient Mathematical Model for a Generalized Production Process
12:00 – 12:30	<i>Adam Gnatowski, Agnieszka Ziewiec and Renata Gnatowska</i>	Impact Analysis Performance Injection in Polymer Composites Processing Shrinkage
12:30 – 13:00	<i>Ahmed Bekhti, Ouahiba Guerra and Tahar Rezoug</i>	Numerical Simulation of Fluid Flow Around Free Vibrating Wind Turbine Airfoil
13:00 – 13:30	<i>Alexey E. Golubev and Alexander P. Krishchenko</i>	Stabilizability of Planar Affine Systems with Control Singularities

28 September 2014 SESSION: Applied and Numerical Mathematics XXI CHAIR: Krzysztof Sokół (ROOM 5)		
11:30 – 12:00	<i>Janusz Szmidla , Ilona Cieślińska-Gąsior and Justyna Wiktorowicz</i>	The Stability of Geometrically Nonlinear Euler's Column at Stepped Variable of Flexural Rigidity
12:00 – 12:30	<i>Gabriele Milani, Thomas Hanel, Raffaella Donetti and Federico Milani</i>	Effective Closed form Mathematical Approach to Determine Kinetic Constants of NR Vulcanized with Sulphur and Accelerators at Different Concentrations
12:30 – 13:00	<i>Janusz Szmidla and Anna Jurczyńska</i>	Stability of Geometrically Nonlinear Pre-stressed Column Loaded by a Force Directed Towards the Positive Pole Partially Lying on Winkler Elastic Foundation



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XXII CHAIR: Alexander Vyatkin (ROOM 6)		
11:30 – 12:00	<i>Tomasz Bielaczyc and Katarzyna Horbacz</i>	Dimensions of Invariant Measures for Continuous Random Dynamical Systems
12:00 – 12:30	<i>Vladimir Shaydurov and Alexander Vyatkin</i>	The Semi-Lagrangian Algorithm Based on an Integral Transformation

28 September 2014 SESSION: Applied and Numerical Mathematics XXIII CHAIR: Vladimir Popov (ROOM 7)		
11:30 – 12:00	<i>Anna Gorbenko and Vladimir Popov</i>	The Problem of Robot Swarms Control with only Global Signals
12:00 – 12:30	<i>Anna Gorbenko and Vladimir Popov</i>	The Discrete Minimum Constraint Removal Motion Planning Problem
12:30 – 13:00	<i>Cristian Mojolic, Radu Hulea and Bianca Roxana Pârv</i>	Weight Optimization of Large Span Steel Truss Structures with Genetic Algorithm
13:00 – 13:30	<i>Bianca Roxana Pârv, Radu Hulea and Cristian Mojolic</i>	Conceptual Optimization using Genetic Algorithms For Tube in Tube Structures



28 September 2014 SESSION: Applied and Numerical Mathematics XXIV CHAIR: Lotfi Abdelhakim (ROOM 8)		
11:30 – 12:00	<i>Alpar Matyas, Sebastian Olajos, Zoltan Balint and Sigismund Jones</i>	Revised Ansatz for Ball-shape Valve Hydraulic Force Analysis
12:00 – 12:30	<i>N. Tala-Ighil, M. Fillon, A. Brick Chaouche and A. Mokhtari</i>	Numerical Study of Thermal Effects in the Hydrodynamic Behavior of Textured Journal Bearings
12:30 – 13:00	<i>Dawoud Hamane, Ouahiba Guerri and Salah Larbi</i>	Investigation of Flow around a Circular Cylinder in Laminar and Turbulent Flow using the Lattice Boltzmann Method
13:00 – 13:30	<i>Lotfi Abdelhakim</i>	Numerical Investigation of Heat Transfer in Air Cooled Permanent Magnet Electrical Machines

28 September 2014 SESSION: Applied and Numerical Mathematics XXV CHAIR: A.V. Karapetyan (ROOM 9)		
11:30 – 12:00	<i>Fabio Schneider, Michael Burger and Bernd Simeon</i>	A General Approach for Efficient Embedding of Flexible Structures in Multibody Dynamics
12:00 – 12:30	<i>Woo Geun Lee, Jae Yong Lim and Jung Seok Kim</i>	Numerical Evaluation of Equivalent Material Properties in the Extruded Aluminum Panel for Urban Railway Vehicle Car Bodies
12:30 – 13:00	<i>Hyuk-Jin Yoon, Jung-Seok Kim and Chan-Yong Choi</i>	Dynamic Analysis of Girder Bridge based on Electrical Sensor Data
13:00 – 13:30	<i>A.V. Karapetyan and M.A. Munitsyna</i>	The Dynamics of a Heavy Rigid Ellipsoid on a Horizontal Plane with Friction
13:30 – 14:00	<i>Ivan Kosenko and Kirill Gerasimov</i>	Omni Vehicle Dynamics Model: Object-Oriented Implementation and Verification



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">28 September 2014 SESSION: Applied and Numerical Mathematics XXVIII CHAIR: Joanna Wróbel (ROOM 10)</p>		
11:30 – 12:00	<i>Ahmet N. Eraslan and Ekin Varlı</i>	Elastic Response of Heat Generating Rod at a Variable Generating Rate
12:00 – 12:30	<i>Ahmet N. Eraslan and Busra Ciftci</i>	Analytical and Numerical Solutions to Rotating Variable Thickness Disks for a New Thickness Profile
12:30 – 13:00	<i>Adam Kulawik and Joanna Wróbel and Jerzy Winczek</i>	Computation of Phase Transformations, Strains and Stresses Fields during Multipass Superficial Hardening Process with Tempering
13:00 – 13:30	<i>Saad Akhtar, Jundika C. Kurnia, Mohammad Khan and Tariq Shamim</i>	A Three-Dimensional Computational Model of H ₂ -Air Premixed Combustion in a Circular Micro-channel for Thermo-photovoltaic (TPV) Application

<p align="center">28 September 2014 SESSION: Applied and Numerical Mathematics XXIX CHAIR: Longhua Zhao (ROOM 11)</p>		
11:30 – 12:00	<i>Longhua Zhao</i>	Analytical Study of Uniform Flow Past a Two-layer Spherical Obstacle
12:00 – 12:30	<i>Jan Kleinert and Bernd Simeon</i>	A Conical Interior Point Method for Nonsmooth Rigid Body Dynamics
12:30 – 13:00	<i>Souad Rafa, Najib Essounbouli and Abdelaziz Hamzaoui</i>	The Type-2 Fuzzy Logic Control of the Induction Motor



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XXX CHAIR: Wojciech Sochacki (ROOM 1)		
15:00 – 15:30	<i>Wojciech Sochacki and Marta Bold</i>	Effect of Structural Damping on Vibration of a Truck-mounted Telescopic Crane
15:30 – 16:00	<i>Agnieszka Ziemkowska</i>	On Linear Isometries on Non-Archimedean Generalized Power Series Spaces
16:00 – 16:30	<i>Trong N. T., D. Shyam Sundar, Lim T. T. and Yeo K. S.</i>	Towards a Realistic Fruitfly Wing Model with Flexibility
16:30 – 17:00	<i>Hamid Badri, Fahhad H. Alharbi and Raka Jovanovic</i>	Self-Consistent Approach to Solving the 1D Thomas-Fermi Equation using an Exponential Basis Set

28 September 2014 SESSION: Applied and Numerical Mathematics XXXI CHAIR: I.G. Nizovtseva (ROOM 2)		
15:00 – 15:30	<i>Mohd Kamarul Irwan Abdul Rahim and El-Houssaine Aghezzaf</i>	Effectiveness of Vendor Managed Inventory Approach in a Two-Stage Supply Chain when Demand Rates are Static
15:30 – 16:00	<i>Faryad Ali and Mohammed A. Al- Kadhi</i>	On the Janko Group J_4 Generated by $(2;3; t)$ Generators
16:00 – 16:30	<i>A.P. Malygin and I.G. Nizovtseva</i>	The Stefan Problem on Evaporation of a Volatile Component in the Gas-melt-solid System



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

<p align="center">28 September 2014 SESSION: Applied and Numerical Mathematics XXXII CHAIR: Hartmut Schwandt (ROOM 3)</p>		
15:00 – 15:30	<i>Denis Klauser, Günter Bärwolff and Hartmut Schwandt</i>	A TOF-based Automatic Passenger Counting Approach in Public Transportation Systems
15:30 – 16:00	<i>Marco Ramírez-Argáez, Enrique Jardón, A. N. Conejo and Carlos González-Rivera</i>	Experimental and Theoretical Study on Melting Kinetics of Spherical Aluminum Particles in Liquid Aluminum
16:00 – 16:30	<i>Oranit Panprasitwech</i>	A Combinatorial Proof of a Generalized Folding Lemma

<p align="center">28 September 2014 SESSION: Applied and Numerical Mathematics XXXIII CHAIR: A. Gupta (ROOM 4)</p>		
15:00 – 15:30	<i>Tugba SARISAHIN, Yildiray KESKIN and Bilender P. ALLAHVERDIEV</i>	Application Of Method Of Lines To Some Fifth Order KdV Equation
15:30 – 16:00	<i>A. Gupta, M. Sbragaglia, E. Foard and F. Bonaccorso</i>	Viscoelastic Multicomponent Fluids in confined Flow-Focusing Devices
16:00 – 16:30	<i>P. Harasim and J. Valdman</i>	Verification of Functional A Posteriori Error Estimates for an Obstacle Problem



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XXXIV CHAIR: Sergey Bezglasnyi (ROOM 5)		
16:00 – 16:30	<i>Guowan Yan</i>	The study on the Incentive Mechanism for Information Truth-Telling in Supply Chain
16:30 – 17:00	<i>Sergey Bezglasnyi</i>	Stabilization of Program Motion of a Gyrostat with Variable Inertia Moments
17:00 – 17:30	<i>Sergey Bezglasnyi</i>	About Stabilization of a Gyrostat with Cavity Filled with Viscous Fluid

28 September 2014 SESSION: Applied and Numerical Mathematics XXXV CHAIR: K. Malakpoor (ROOM 6)		
15:00 – 15:30	<i>Carlos Alberto Valentim Jr.a and Sergio Adriani Davida</i>	A Fractional PID Controller of an Oscillatory System
15:30 – 16:00	<i>Rani Basna, Astrid Hilbert and Vassili N. Kolokoltsov</i>	A $\frac{1}{N}$ Nash Equilibrium for Non-linear Markov Games of Mean-field-type on Finite State Space
16:00 – 16:30	<i>Gonzalez-Rivera C. , Morua M. and Ramirez-Argaez M.</i>	Experimental Determination of the Grain Growth Kinetics During Solidification of Eutectic Al-Ni Alloy Using a Simplified Mathematical Procedure
16:30 – 17:00	<i>K. Malakpoor, J.M. Huyghe</i>	Mixed finite element formulation of the compressible charged porous media



ICNAAM 2014

Hotel Rodos Palace, Rhodes, Greece, 22-28 September 2014

28 September 2014 SESSION: Applied and Numerical Mathematics XXXVI CHAIR: Ercan ALTINISIK (ROOM 7)		
15:00 – 15:30	<i>Serife BÜYÜKKÖSE, Ercan ALTINISIK, Feyza YALÇIN</i>	The Some Upper Bounds The Energy of Weighted Graphs
15:30 – 16:00	<i>Thanh Tung DUONG, Nobuyoshi TSUZUKI, Gaku HASHIMOTO, Hideki KAWAI, Hiroshige KIKURA</i>	Numerical Investigation of Molten Glass in a Square Cavity Using Finite Element Method
16:00 – 16:30	<i>Vladimir S. Aslanov</i>	Swing Principle of Tether Deployment System for Delivery of a Re-entry Capsule
16:30 – 17:00	<i>Vladimir S. Aslanov and Vadim V. Yudintsev</i>	Dynamics of Tethered Rigid Body with a Cavity partially Filled with a Liquid

28 September 2014 (09:00 - 13:00) Applied and Numerical Mathematics - Poster Session	
<i>Stamatis Kalogerakos, Mustapha Gourma and Ninghong Jia</i>	Use of OpenMP to Parallelise a One-dimensional Multiphase Flow Code
<i>Maizi Mohamed, Dizene Rabah</i>	Aerodynamic and aeroacoustic for wind turbine

END OF THE 7th DAY
END OF THE CONFERENCE