



ICNAAM 2017
The Met Hotel, Thessaloniki, Greece,
25-30 September 2017

25 September 2017		
The 12th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer		
Numerical Fluids 2017		
CHAIR: Ashoke De (ROOM 1)		
09:30 – 09:50	<i>Maciej Marek</i>	CFD analysis of Gas Flow Maldistribution in Random Packed beds of Rings and Cylinders
09:50 – 10:10	<i>Alpar Matyas</i>	Large eddy simulation of flow around a cylinder with fractional step lattice Boltzmann methods
10:10 – 10:30	<i><u>Jayakrishnan</u> Rajasekharan and Shaligram Tiwari</i>	Effect of an Air Stream along Concave Interface on Flow and Heat Transfer Characteristics in Liquid Bridges
10:30 – 10:50	<i>Yaroslav M. Beltukov</i>	A Numerical Study of the Thermal Conductivity in Amorphous Systems
10:50 – 11:10	<i><u>R. Sheldon Herbst,</u> Charis Harley and Dia Zeidan</i>	Testing of Mathematica in the Computation of Two-Phase Flow Equations



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25 September 2017		
MS 24: Recent Advances in Numerical Methods and Simulations in Statics and Dynamics of Structures		
CHAIR: Juraj Králik, Martin Krejsa		
(ROOM 2)		
09:00 – 09:30	<u>J.Králik</u>	Risk Assessment of NPP Safety due to Technology Accident and Extreme Climatic Actions
09:30 – 10:00	<u>J.Králik</u>, <u>J.Králik,jr.</u>	Probabilistic Nonlinear Analysis of the Extreme Wind Impact to the Steel Hall Collapse
10:00 – 10:30	<u>M.Krejsa</u>, <u>J.Brožovský</u>, <u>P.Lehner</u>,<u>S. Seitl</u>, <u>Z.Kala</u>	Stochastic analysis for short edge cracks under selected loads
10:30 – 11:00	<u>M.Krejsa</u>, <u>J.Brožovský</u>, <u>O.Mikolášek</u>, <u>P.Pařenica</u>, <u>L.Koubová</u>	Influence of initial imperfections on the behaviour of the welded joint
11:00 – 11:30	Coffee Break	



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25 September 2017		
SESSION: Symposium 43) 5th Symposium on Decision Support Systems in Construction Management		
CHAIR: Edyta Plebankiewicz and Dariusz Skorupka (ROOM 3)		
09:00 – 09:20	<i>Artur Duchaczek, Dariusz Skorupka, Agnieszka Waniewska, Dorota Kuchta</i>	Application of Portfolio Methods for the Classification of Unmanned Aerial Vehicles
09:20 – 09:40	<i>Agnieszka Leśniak, Monika Górka</i>	Evaluation of Selected Lightweight Curtain Wall Solutions Using Multi Criteria Analysis
09:40 – 10:00	<i>Dariusz Skorupka, Agnieszka Waniewska, Józef Ledzianowski, Artur Duchaczek</i>	Statistical Methods for Classification of Unmanned Aerial Vehicles
10:00 – 10:20	<i>Damian Wieczorek</i>	Fuzzy Risk Assessment in the Life Cycle of Building Object - Selection of the Right Defuzzification Method
10:20 – 10:40	<i>Rafał Siczek, Andrzej Dobrucki</i>	Models of Acoustic Field in Rooms
10:40 – 11:00	<i>Jarosław Malara</i>	The Use of Modern Technologies in Conducting Research on the Performance of Construction Workers
11:00 – 11:30	Coffee Break	



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25 September 2017		
SESSION: Recent Advances and Current Research on the Difference Equations and its Applications		
CHAIR: Seifedine Kadry (ROOM 4)		
09:00 – 09:30	<i>Gennady Alferov, Gennady Ivanov, and Artem Sharlay</i>	About Stability of Selector Linear Differential Inclusions
09:30 – 10:00	<i>Gennady Alferov, Gennady Ivanov, and Artem Sharlay</i>	Stabilization of the program motion of control object with elastically connected elements
10:00 – 10:30	<i>Felix Kulakov, Gennady Alferov, Boris Sokolov, and Artem Sharlay</i>	Bilateral remote control over space manipulators
10:30 – 11:00	<i>Felicja Okulicka-D lu`zewska</i>	The analysis of the Augmented Lagrangian Method for Symmetric Saddle Point Problem by Generalized SVD
11:00 – 11:30	Coffee Break	



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25 September 2017 SESSION: General Session CHAIR: Vladislav N. Kovalnogov (ROOM 5)		
09:00 – 09:30	<i>Ruslan V. Fedorov, <u>Vladislav N. Kovalnogov</u> and Aleksandr. N. Zolotov</i>	Development and Study of Technical Solutions for Turbine Blades Cooling
09:30 – 10:00	<i><u>Vladislav N. Kovalnogov</u>, Mikhail S. Boyarkin, Maxim G. Korniliev and Ruslan V. Fedorov</i>	Mathematical Simulation of Technology of Enrichment of Low-Grade Solid Fuels by Recirculated Exhaust Gases for Boiler Plants
10:00 – 10:30	<i>Theodore E. Simos, Ruslan V. Fedorov and <u>Vladislav N. Kovalnogov</u></i>	Features of the Research of the Efficiency of Thermal Protection of Complex-profile Surfaces Streamlined by High- speed Disperse Flow
10:30 – 11:00	<i><u>Vladislav N. Kovalnogov</u>, Ruslan V. Fedorov, Dmitry V. Suranov and Andrey V. Chukalin</i>	Mathematical Modeling of Convective Heat Transfer and Friction of a Plate at Harmonic Pressure Oscillations of a Homogeneous Flow
11:00 – 11:30	Coffee Break	



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SESSION: Mathematical Optimization in Modern Medicine and Engineering		
CHAIR: Flavius Pater		
(ROOM 6)		
09:00 – 09:30	<u>Justyna Orwat and</u> <u>Ryszard Mielimęka</u>	Smoothing Parameter as Shape Parameter of Function Approximating the Average Course of Terrain Surface Subsidence
09:30 – 10:00	<u>Simona Roatesi,</u> <u>Amado Stefan,</u> <u>Dragos Cretoiu,</u> <u>Tudor Savopol, Sanda</u> <u>Cretoiu</u>	Semi-analytical Solution of Telopodes Elongation in the Case of Behavior Modeling of Living Cells of Telocytes Type
10:00 – 10:30	<u>Iulia ROATEȘI,</u> <u>Simona ROATEȘI</u>	Numerical FEM Model in Dental Implant Prosthetics
10:30 – 11:00	<u>Alexandru Szabo,</u> <u>Tudor Binzar, Sorin</u> <u>Nadaban and Flavius</u> <u>Pater</u>	Some properties of fuzzy bounded sets in fuzzy normed linear spaces
11:00 – 11:30	Coffee Break	



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SESSION: High Performance Computing for Advanced Modeling and Simulation of Building Virtual Reactor		
CHAIR: Prof. Dr. Changjun Hu (ROOM 7)		
09:00 – 09:30	<i>Prof. Dr. Wen Yang</i>	Keynote Speech
09:30 – 10:00	Discussion	
10:00 – 10:30	<i>Prof. Dr. Zhonghua Lu</i>	An Efficient Parallel Chimera Grid Flow Solver Based On Implicit Hole Cutting Method
10:30 – 11:00	<i>Dr. Jue Wang</i>	Performance Analysis of Parallel Replica Molecular Dynamics
11:00 – 11:30	Coffee Break	



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SESSION: THE SEVENTH SYMPOSIUM ON ADVANCED COMPUTATION AND INFORMATION IN NATURAL AND APPLIED SCIENCES (Sess. 1)		
CHAIR: Dr. Claus-Peter Rückemann (ROOM 8)		
09:00 – 09:05	<u>Claus-Peter Rückemann</u>	Welcome Notes
09:05 – 09:50	<u>Claus-Peter Rückemann</u>	Keynote Lecture: Fostering the Knowledge Spectrum - From Facts to Computing
09:50 – 10:25	<u>Claus-Peter Rückemann</u>	Methodology Enabling Knowledge Mining Computation Based on Conceptual Knowledge and Verbal Description
10:25 – 11:00	<u>Oleg O. Iakushkin, Mikhail Yu. Balabanov, Vladimir A. Kozynchenko, Olga S. Sedova, Dmitrii A. Selivanov, and Anna S. Shaleva</u>	Examining Approaches for Regions of Interest Detection in Video Clips as a Service
11:00 – 11:30	Coffee Break	



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25 September 2017 SESSION: INVITED SPEAKER CHAIR: Carlotta Giannelli (ROOM 1)		
11:30 – 12:30	<u>Nelson Faustino</u>	Symmetry Preserving Discretization Schemes through Hypercomplex Variables

25 September 2017 SESSION: INVITED SPEAKER CHAIR: Nelson Faustino (ROOM 1)		
12:30 – 13:30	<u>Carlotta Giannelli</u>	Adaptivity in design and analysis with hierarchical splines



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13:30 – 15:00

Welcome Drink

25 September 2017 The 12th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer Numerical Fluids 2017 CHAIR: Michal Benes (ROOM 1)		
15:00 – 15:20	<i>Petr Svacek</i>	Numerical Approximation of Nonlinear Aeroelastic Problems by Stabilized Finite Element Method
15:20 – 15:40	<i>Arkadiusz Moskal, Rafal Przekop, Igor Majewski</i>	Modeling of Erythrocytes Transport in Blood Capillaries Using Spring –Based Model Combined with Lattice-Boltzmann Approach
15:40 – 16:00	<i><u>Pradeep K. Seshadri</u> and Ashoke De</i>	Assessment of Pressure Reconstruction Schemes in Sharp Interface Immersed Boundary Method
16:00 – 16:20	<i><u>Z.Chara</u> and B. Kysela</i>	Application of Macroscopic Particle Model to Simulate Motion of Large Particles
16:20 – 16:40	<i><u>Rony Touma</u> and Farah Kanbar</i>	Central Schemes for the SWE Systems with Wet and Dry States



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MS 24: Recent Advances in Numerical Methods and Simulations in Statics and Dynamics of Structures		
CHAIR: Jozef Melcer, Martin Krejsa		
(ROOM 2)		
15:00 – 15:30	<u>I.Kološ</u>, <u>L.Lausová</u>, <u>V. Michalcová</u>	Comparing Wind Flow Models over a Single Hill
15:30 – 16:00	<u>P.Lehner</u>, <u>P.Konečný</u>, <u>T.Ponikiewski</u>	Experimental and numerical evaluation of SCC concrete durability related to ingress of chlorides
16:00 – 16:30	<u>J.Koktan</u>, <u>R.Čajka</u>, <u>J.Brožovský</u>	FEA Solution of Foundation Slabs Based on Numerical Integration of Boussinesq Solution
16:30 – 17:00	<u>J.Melcer</u>	Influence of Road Unevenness on Vehicle Response
17:00 – 17:30	Coffee Break	



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25 September 2017 SESSION: Symposium 43) 5th Symposium on Decision Support Systems in Construction Management CHAIR: Edyta Plebankiewicz and Dariusz Skorupka (ROOM 3)		
15:00 – 15:15	Dariusz Skorupka, Artur Duchaczek and Magdalena Kowacka	Determining the Hierarchy of Selected Geodetic Risk Factors for Linear Ventures
15:15 – 15:30	Michał Juszczyk and Krzysztof Zima	Clustering of Sports Fields as Specific Construction Objects Aided by Kohonen's Neural Networks
15:30 – 15:45	Wojciech Drozd	Analysis of the Rate Accidents in Construction Using Decision Trees
15:45 – 16:00	Martin Tuscher , Oto Přebyl and Tomáš Hanák	Theoretical Model for Refining Flood Economic Loss Modelling on Buildings
16:00 – 16:15	Ewa Marchwicka	Using Fuzzy Modeling for Identification of Success and Failure Factors of Infrastructure Projects
16:15 – 16:30	Dariusz Skorupka, Mariusz Żytniewski, Stanisław Stanek	The Influence of Gossip and Reputation on a Business Process Oriented Multi-agent System
16:30 – 17:00	Vojtěch Biolek and Tomáš Hanák	Material Life Cycle Costing of Buildings: a Case Study
17:00 – 17:30	Coffee Break	



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25 September 2017		
SESSION#7: The 6th Symposium on Generating Functions of Special Numbers and Polynomials and their Applications (GFSNP2017)		
CHAIR: Ahmet YARDIMCI (ROOM 4)		
15:00 – 15:30	<u>Yilmaz SIMSEK</u>	Interpolation function for the families of numbers related to the Apostol-type numbers
15:30 – 16:00	<u>Eda YULUKLU</u>	On Hermite Base Apostol-Euler type polynomials and numbers
16:00 – 16:30	<u>Eda YULUKLU</u>	A Note on the Milne-Thomson Type Polynomials
16:30 – 17:00	<u>Erkan AGYUZ and Mehmet ACIKGOZ</u>	A Note on Bernstein Polynomials Based On (p,q) – Calculus
17:00 – 17:30	Coffee Break	



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25 September 2017 SESSION: Operational Research and Applications CHAIR: Fernanda A. Ferreira (ROOM 5)		
14:00 – 14:20	<i>Petr S. Martyshko, Igor V. Ladovskii, Denis D. Byzov, Alexander I. Chernoskutov</i>	Forward-modeling gravitational fields in curvilinear and cartesian rectangular coordinates
14:20 – 14:40	<i>Peter S. Martyshko, Natalia V. Fedorova, Alexey L. Rublev</i>	Numerical method for geological objects separating by depth using gravity and magnetic data
14:40 – 15:00	<i>Elena N. Akimova, Vladimir E. Misilov</i>	Optimization of gradient algorithm for solving the nonlinear inverse potential problem
15:00 – 15:20	<i>Elena N. Akimova, Arsel R. Muginov</i>	Gauss matrix sweep algorithm for solving linear systems with block-fivediagonal matrices on multiCore CPU
15:20 – 15:40	<i>Enrico Degregori, Michele Ferlauto</i>	Optimal Aerodynamic Design of Scramjet Facility Nozzles
15:40 – 16:00	<i>Oana R. Bode, Flávio Ferreira</i>	Comparison between different licensing schemes in a Stackelberg model when the follower is the innovator
16:00 – 16:20	<i>Fernanda A. Ferreira, Conceição Castro</i>	The impact of terrorism and corruption on tourism in Turkey – a regression analysis
16:20 – 16:40	<i>Teresa Pereira, Fernanda A. Ferreira</i>	An ERP selection using a hybrid methodology
16:40 – 17:00	<i>Luís Vieira</i>	Inequalities on the generalized Krein parameters of a strongly regular graph



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SESSION: High Performance Computing for Advanced Modeling and Simulation of Building Virtual Reactor		
CHAIR: Prof. Dr. Changjun Hu		
(ROOM 7)		
15:00 – 15:30	<i>Prof. Dr. Lei Wang</i>	Parallelization and Optimization on Replica Molecular Dynamics
15:30 – 16:00	Discussion	
16:00 – 16:30	<i>Xianmeng Wang</i>	Performance Analysis of Thermal Hydraulic Simulating Software Nekbone on Tianhe II and Era Supercomputers
16:30 – 17:00	Discussion	
17:00 – 17:30	Coffee Break	



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SESSION: Third Minisymposium on Mathematical Modelling of Hydrological Sciences		
CHAIR: Prof. Francesco Napolitano and Prof. Fabio Russo (VIRTUAL SYMPOSIUM)		
Skype Communication: francesco_napolitano1		
15:00 – 15:15	<u>F. Napolitano, F. Russo</u>	Introduction to the Third Minisymposium on Mathematical Modelling of Hydrological Sciences
15:15 – 15:45	<u>A. Neri, D. Orlando</u>	Evaluation of Inundation Maps Through One-Dimensional and Two-Dimensional Models in Acquicella River's Basin
15:45 – 16:15	<u>C. Mineo, F. Napolitano</u>	A technical note on short-duration rainfall in central Italy
16:15 – 16:45	<u>F. Russo, F. Lombardo</u>	Spatial-temporal model of rainfall calibrated by radar data
16:45 – 17:15	<i>G. Canan Hazar Güleç and M. Ali Sarigöl</i>	Summability Factor Relations Between Absolute Weighted and Nörlund
17:15 – 17:45	<u>Jamie Haddock</u>	



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25 September 2017 SESSION: Mathematical Optimization in Modern Medicine and Engineering CHAIR: Flavius Pater (ROOM 6)		
15:00 – 15:30	<u>Constantinescu Cristian, Herbei Mihai, Rujescu Ciprian, Sala Florin</u>	Characterization of the Interdependency Relations between the Spectral Information, Vegetation Indices and the Number of Classes for the Analyzed Territory
15:30 – 16:00	<u>Constantinescu Cristian, Herbei Mihai, Rujescu Ciprian, Sala Florin</u>	Model Prediction of Chlorophyll and Fresh Biomass in Cereal Grasses Based on Aerial Images
16:00 – 16:30	<u>Clara – Beatrice Vilceanu, Carmen Grecea and Cosmin Muşat</u>	Relevancy of Mathematical Support for Geophysics Determinations
16:30 – 17:00	<u>Remus-Daniel ENE, Camelia PETRISOR and Camelia POP</u>	Approximate Analytic Solutions for an Optimal Control System on the Lie Group $SO(3) \times \mathbb{R}^3 \times \mathbb{R}^3$
17:00 – 17:30	Coffee Break	

25 September 2017 SESSION: Mathematical Optimization in Modern Medicine and Engineering CHAIR: Flavius Pater (ROOM 6)		
17:35 – 18:05	<u>Miroslav Raicov, Ciprian Rujescu, Andrea Feher and Iuliana Merce</u>	The Determination and Ranking of Factors Bearing an Influence over the Ability to Absorb Rural Development Funds in Timis County, Romania



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25 September 2017 SESSION: THE SEVENTH SYMPOSIUM ON ADVANCED COMPUTATION AND INFORMATION IN NATURAL AND APPLIED SCIENCES (Sess. 2) CHAIR: Dr. Claus-Peter Rückemann (ROOM 8)		
15:00 – 15:35	<i>Lutz Schubert, Stephanie Metz, and Keith Jeffery</i>	Inverting Physics - a future for the past?
15:35 – 17:00	<i>Claus-Peter Rückemann, Oleg Yakushkin, Lutz Schubert, Birgit Gersbeck-Schierholz, and Friedrich Hülsmann (and audience)</i>	Delegates' Summit: Best Practice and Definitions of Data Sciences - Beyond Statistics

25 September 2017 SESSION: Multiscale, Multiphase, Multiphysics and Turbulent Flow Simulations CHAIR: Mine Çağlar (ROOM 9)		
15:00 – 15:30	<i>Serdar Beji</i>	<i>Applications of A Generalized Kadomtsev-Petviashvili Type Equation for Varying Water Depths</i>
15:30 – 16:00	<i>Mine Çağlar</i>	<i>Çinlar Model at Fully Developed Channel Flow for $Re = 2000$</i>
16:00 – 16:30	<i>Erke Arıbaş</i>	<i>Effects of Using Depletion Interaction Theory in Variable Hematocrit Levels of Bio-flows</i>
16:30 – 17:00	<i>Mine Çağlar</i>	<i>Planar Brownian Flows with Rank-Based Characteristics</i>
17:00 – 17:30	Coffee Break	



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25 September 2017 MS 24: Recent Advances in Numerical Methods and Simulations in Statics and Dynamics of Structures CHAIR: Eva Kormaníková, Kamila Kotrasová (ROOM 2)		
17:35 – 18:05	<u><i>E.Kormaníková</i></u>	Analysis of Laminated Composite Shells
18:05 – 18:35	<u><i>K.Kotrasová</i></u>	Simplified seismic analysis of rectangular tank considering fluid–structure–soil interaction
18:35 – 19:05	<u><i>E.Panulinová</i></u> <i>S.Harabinová,</i> <i>E.Kormaníková</i>	Extreme loads of subsoil and its impact on the optimization of structures
19:05 – 19:35	<u><i>S.Harabinová,</i></u> <i>E.Panulinová,</i> <i>K.Kotrasová</i>	Analysis of foundation failure due to changes soil parameters

25 September 2017 SESSION: Operator matrices, generalized inverses and applications CHAIR: Jianlong Chen (ROOM 3)		
17:35 – 18:05	<i>Yimin We</i>	Acute perturbation of the group inverse
18:05 – 18:35	<i>Dragana Cvetkovic Ilic</i>	Properties of $A+CX$ in the case when $A, C \in B(H)$
18:35 – 19:05	<i>Haifeng Ma</i>	Representations and properties of the W -Weighted Drazin inverse
19:05 – 19:35	<i>Tingting Li</i>	Characterization of core and dual core inverses in rings with involution



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25 September 2017 SESSION 69: Nonlinear Dynamics: Evolution Differential Equations in the Applied Sciences. CHAIR: Ángela Jiménez-Casas (ROOM 4)		
17:35 – 17:55	<i>Ángela Jiménez-Casas</i>	Asymptotic Behaviour of a Thermosyphon model with binary fluids.
17:55– 18:20	<i>A. Carpio, <u>Elena Cebrián</u> and P. Vidal</i>	Parameter fitting in models of biofilms resistance to antibiotics.
18:20– 18:45	<i>Lourdes Tello</i>	Influence of the continentality on a global climate energy balance model.
18:45– 19:10	<i>Juan Francisco Padial</i>	Modeling the car traffic flow in two lane. A uniqueness result.
19:10– 19:35	<i>Arturo Hidalgo</i>	A high order finite volume scheme for an atherosclerosis model

25 September 2017 SESSION: General Session CHAIR: Michele Ferlauto (ROOM 5)		
18:00 – 18:30	<i>Michele Ferlauto and Luca Zannetti</i>	A New Steklov-Poincare Numerical Technique for Solving Prandtl-Batchelor Flows
18:30 – 19:00	<i><u>Michele Ferlauto</u></i>	Active Flow Control in Supersonic Nozzles
19:00 – 19:30	<i><u>Sharif Uddin</u></i>	An Approach to Solve Multi-objective Transportation problem using Fuzzy Goal Programming and Genetic Algorithm



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25 September 2017 SESSION: Recent Advances and Current Research on the Difference Equations and its Applications CHAIR: Seifedine Kadry (ROOM 4)		
19:35 – 20:05	<i>Felicja Okulicka-D lu'zewska</i>	The analysis of the Augmented Lagrangian Method for Symmetric Saddle Point Problem by Generalized SVD

25 September 2017 SYMPOSIUM#96 : Statistical Modelling, Stochastic Processes and Applications CHAIR: Teresa Oliveira (ROOM 6)		
18:05 – 18:35	<u><i>Dário Ferreira,</i></u> <i>Sandra S. Ferreira,</i> <i>Célia Nunes and</i> <i>João T. Mexia</i>	Segregation and intrinsic restrictions on canonic variance components
18:35 – 19:05	<u><i>Sandra S. Ferreira,</i></u> <i>Dário Ferreira, Célia</i> <i>Nunes and João T.</i> <i>Mexia</i>	Estimation of Variance Components in Models with Positive Commutativity Orthogonal Block Structure
19:05 – 19:35	<u><i>Pereira J.L., Morais</i></u> <i>C., Mendes L., and</i> <i>Oliveira, T.A.</i>	Comparison of averages through statistical models an application in Dental Medicine
19:35 – 20:05	<u><i>Carla Francisco,</i></u> <i>Teresa A. Oliveira,</i> <i>Amílcar Oliveira and</i> <i>Luís Grilo</i>	Hadamard Matrices and links to Information Theory
20:05 – 20:35	<u><i>M. Filomena</i></u> <u><i>Teodoro, Sofia S.</i></u> <i>Teles, Marta C.</i> <i>Marques and</i> <i>Francisco G.</i> <i>Guerreiro</i>	Barotraumatism Occurrence and Hyperbaric Oxygen Therapy, a Preliminary Analysis



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25 September 2017 SESSION: Sixth Symposium on Statistical Inference in Linear Models CHAIR: Francisco Carvalho (ROOM 8)		
17:35 – 18:05	<u>Cristina Andrade,</u> <i>João Corte-Real</i>	Preliminary assessment of flood hazard in Nabão river basin using an Analytical Hierarchy Process
18:05 – 18:35	<u>Aníbal Areia, João T. Mexia</u>	ANOVA like analysis with limit distributions for large samples
18:35 – 19:05	<u>Cristina Dias, Carla Santos, João T. Mexia</u>	Model Validation and Vec Operators
19:05 – 19:35	<u>Francisco Carvalho,</u> <i>João T. Mexia,</i> <i>Ricardo Covas</i>	TBA



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SESSION: Statistical Inference in Copula Models and Markov Processes II		
CHAIR: V.A. González-López		
University of Campinas, Brazil		
(ROOM 9)		
17:35 – 18:05	<i>M. Fernández, Jesús E. García, <u>V. A. González-López</u> and N. Romano</i>	Bayesian Sensitivity Analysis for Asymmetric Copulas with Cubic Sections
18:05 – 18:35	<i>M. Fernández, Jesús E. García, <u>V. A. González-López</u>, N. Romano and J. F. Tessler</i>	Foreign exchange dependence through different copula models
18:35 – 19:05	<i><u>Jesús E. García</u>, V. A. González-López and F. H. Kubo de Andrade</i>	Inspecting Discrepancies between Industrial Processes
19:05 – 19:35	<i><u>Jesús E. García</u> and <u>V. A. González-López</u></i>	Open Problems



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25 September 2017 MS 24: Recent Advances in Numerical Methods and Simulations in Statics and Dynamics of Structures CHAIR: Juraj Králik, Martin Psočný (ROOM 2)		
19:35 – 20:05	<u>M.Psočný</u>	Snap-Through of a Shallow Cylindrical Shell under External Pressure
20:05 – 20:35	<u>J.Valeš, Z. Kala</u>	Mesh Convergence Study of Solid FE model for Buckling Analysis
20:35 – 21:05	<u>P.Pařenica, M.Rosmanit, O.Sucharda</u>	Resistance capacity of connection of thin-walled roof components
21:05 – 21:35	<u>J.Králik, P.Roško, J.Králik,jr.</u>	Effectiveness of Probabilistic Methods to Analyse Probability of Structural Failure Using Ansys Software

25 September 2017 SESSION: Operator matrices, generalized inverses and applications CHAIR: Yimin Wei (ROOM 3)		
19:35 – 20:05	Jianlong Chen	Some progress on relative EP elements in rings
20:05 – 20:35	Dejan Ilic	Partial metric fixed point theory: variations on a theorem of Fisher
20:35 – 21:05	Chunyuan Deng	On generalized invertibility of operators



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25 September 2017 SYMPOSIUM#96 : Statistical Modelling, Stochastic Processes and Applications CHAIR: Teresa Oliveira (ROOM 6)		
20:05 – 20:35	<i><u>Jerzy K. Filus</u> and Lidia Z. Filus</i>	Bivariate Probability Distributions, A Universal Form
20:35 – 21:05	<i>Abdujabar S. Rasulov, Matyakub T. Bakoyev and Makhmadrasul Y. Rahmatov</i>	Monte Carlo Method for the Calculation the Price of Multi-Asset Options

END OF THE 1ST DAY



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26 September 2017 The 12th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer Numerical Fluids 2017 CHAIR: Jiri Felcman (ROOM 1)		
09:00 – 10:00	Invited lecture Professor Eric Goncalves Modelling and Simulation of Compressible Two-Phase Flows	
10:00 – 10:20	<u><i>Adrian Stuparu,</i></u> <i>Alexandru Baya, Alin</i> <i>Bosioc, Liviu Anton,</i> <i>Daniel Mos</i>	Modelling the operation curves of two similar high power centrifugal pumps
10:20 – 10:40	<i>Michal Benes</i>	Upscaling for a degenerate and coupled parabolic system arising from fluid and heat transport in heterogeneous media
10:40 – 11:00	<u><i>Petr Louda and</i></u> <i>Jaromir Pridoda</i>	On the modelling shock wave – boundary layer interaction in turbine cascades



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26 September 2017		
SESSION: 10th Symposium on Recent Trends in the Numerical Solution of Differential Equations		
CHAIR: Alexey Eremin (ROOM 2)		
09:00 – 09:30	<u>A.Aimi, M.Diligenti,</u> <u>C.Guardasoni</u>	Energetic BEM for the numerical solution of 2D damped waves propagation exterior problems
09:30 – 10:00	<u>S.Avgerinos, G.Russo</u>	Numerical methods for multi scale hyperbolic problems, with application to multi-fluid and sedimentation
10:00 – 10:30	<u>L.Brugnano,</u> <u>G.Gurioli, F.lavernaro</u>	Predictor-corrector implementation of EQUIP methods
10:30 – 11:00	<u>L.Desiderio</u>	An H-matrix based Direct Solver for the Boundary Element Method in 3D Elastodynamics
11:00 – 11:30	Coffee Break	



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26 September 2017		
SESSION: 13th Symposium on Clifford Analysis and Applications		
CHAIR: Sören Kraußhar (ROOM 3)		
09:00 – 09:30	<u><i>Klaus Gürlebeck</i></u>	Boundary projections in discrete quaternionic analysis
09:30 – 10:00	<u><i>Sebastian Bock</i></u>	On Generalized Kolosov Muskekishvili Formulae for the finite Cylinder
10:00 – 10:30	<u><i>Anastasiia Legatiuk</i></u>	Methods of discrete potential theory for an induction heating problem
10:30 – 11:00	<u><i>Zainab Al-Yasiri</i></u>	A discrete p-Dirac operator and a discrete function theory
11:00 – 11:30	Coffee Break	



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26 September 2017 SESSION: 2nd Symposium on mathematical modeling and numerical simulation of physical and chemical phenomena in porous materials CHAIR: Jaroslav Kruis (ROOM 4)		
09:00 – 09:20	<i>Václav Kočí, Monika Čáchová, Eva Vejmelková, <u>Robert Černý</u></i>	Cumulative Damage Assessment of Concrete Exposed to Environmental Effects
09:20 – 09:40	<i><u>Václav Kočí</u>, Robert Černý</i>	Physical and Mathematical Models of Sound Attenuation in Porous Materials
09:40 – 10:00	<i><u>Jan Kočí</u>, Jiří Maděra</i>	Optimization Procedure for Design of Geometrical Configuration of Acoustic Bricks
10:00 – 10:20	<i><u>Miloš Jerman</u>, Igor Medved', Jiří Maděra, Václav Kočí, Robert Černý</i>	Effect of Moisture Variations on Damage Cumulation in Surface Layers of Building Structures
10:20 – 10:40	<i>Michaela Petříková, <u>Lukáš Fiala</u>, Igor Medved', Robert Černý</i>	Hygro-Thermo-Electrical Modeling of Transport Phenomena in Aluminosilicate Composites
10:40 – 11:00	<i><u>Igor Medved'</u>, Robert Černý</i>	Varying coefficients of diffusion of $^{133}\text{Ba}^{2+}$ and $^{137}\text{Cs}^{+}$ in granite
11:00 – 11:30	Coffee Break	



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26 September 2017 MS 95: Open Challenges in Seismic Design of New Structures and Vulnerability Reduction of Existing Buildings CHAIR: Gabriele MILANI, Antonio FORMISANO, Francesco FABBROCINO (ROOM 5)		
09:00 – 09:15	<i>Antonio Formisano, Mohammad Reza Sheidaii and Hadi Monsef Ahmadi</i>	Numerical calibration of experimental tests on perforated Steel Plate Shear Walls: influence of the tightening torque in the plate-frame members bolted connections
09:15 – 09:30	<i>Antonio Formisano, Giovanni Chiumiento and Raffaele Landolfo</i>	Leeb hardness experimental tests on carpentry steels: stress state effect and empirical correlation with strength
09:30 – 09:45	<i>Ahmad Bassofi Habieb, Gabriele Milani, Tavio, Federico Milani</i>	Performance of different low cost rubber isolation systems in new masonry buildings
09:45 – 10:00	<i>Simone Tiberti, Gabriele Milani, Lorenzo Macorini</i>	A new pixel limit analysis homogenization model for random masonry
10:00 – 10:15	<i>Rafael Shehu, Gabriele Milani, Marco Valente</i>	Simple limit analysis approach for the optimal strengthening of existing masonry towers
10:15 – 10:30	<i>Roberta Fonti</i>	Title to be confirmed
10:30 – 10:45	<i>Francesco Fabbrocino, Gian Piero Lignola, Andrea Prota</i>	Theoretical Assessment of Reinforced Concrete T-shaped beam-column joints)



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26 September 2017		
SESSION: 1st Symposium on “Hypercompositional Algebra – new Developments and Applications (HANDA)”		
CHAIR: Christos Massouros and Irina Cristea		
(ROOM 6)		
09:00 – 09:05	<i>Christos Massouros</i>	Welcome Notes
09:05 – 09:30	<i>Constantinos Yatras</i>	Types of polysymmetrical hypergroups
09:30 – 10:00	<i>Irina Cristea, Sanja Jančić-Rašović, Sohrab Ostadhadi-Dehkordi</i>	How to Define Tensor Products of Hypermodules
10:00 – 10:30	<i>H. Shojaei, R. Ameri, S. Hoskova-Mayerova</i>	Some Properties of Pre-semihyperadditive Categories
10:30 – 11:00	<i>N. Assimakis, M. Adam, Ch. Massouros, M. Etairidis</i>	Enumeration of the Roots of Boolean Matrices
11:00 – 11:30	Coffee Break	



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26 September 2017 SESSION: Symposium on High Performance Computing in Engineering and Environmental Sciences CHAIR: Jaroslav Haslinger (ROOM 7)		
09:00 – 09:15	<i>M .Pecha , V .Hapla, D.Horák , <u>M. Čermák</u></i>	Notes on the Preliminary Results of a Linear Two-Class Classifier in the PERMON Toolbox
09:15 – 09:30	<i>J. Tomčala, <u>M. Čermák</u>, M. Pecha, D. Horák</i>	The Fatigue Damage Software Parallelization
09:30 – 09:45	<i><u>J. Haslinger</u>, R. Kučera, V. Šátek, F. Pochylý</i>	Numerical Modelling of the Stokes Flow with Coulomb Slip Boundary Conditions
09:45 – 10:00	<i><u>R. Kučera</u>, K. Motyčková, J. Pacholek, T. Sassi</i>	The Semi-Smooth Newton Method for Solving the Stokes Problem with the Stick-Slip Boundary Condition
10:00 – 10:15	<i>G. Nečasová, <u>V. Šátek</u>, J. Kunovský</i>	Numerical Solution of Wave Equation Using Higher Order Methods
10:15 – 10:30	<i>P. Veigend, G. Nečasová, P. Raffai, <u>V. Šátek</u>, J. Kunovský</i>	Gas Flow Through the Piston Ring Pack
10:30 – 10:45	<i>P. Veigend, <u>V. Šátek</u>, J. Kunovský</i>	System Control Using the Modern Taylor Series Method
10:45 – 11:00	<i>L. Malý, J. Zapletal, M. Merta, <u>M. Čermák</u></i>	Xeon Phi Acceleration of Domain Decomposition Iterations via Heterogeneous Active Messages
11:00 – 11:30	Coffee Break	



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26 September 2017 SESSION: 66 Iterative Procedures for Solving Nonlinear Problems CHAIR: Alicia Cordero (ROOM 8)		
09:00 – 09:30	<u><i>Alberto Magreñán</i></u>	Toward a general theory of point to point iterative processes free of derivatives with quadratic convergence
09:30 – 10:00	<u><i>Juan R. Torregrosa</i></u>	Stability of different families of iterative methods with memory
10:00 – 10:30	<u><i>Á. Alberto Magreñán</i></u>	On a Newton-type family of high-order iterative methods for some matrix functions
10:30 – 11:00	<u><i>Eulalia Martínez</i></u>	Local convergence study for multiple roots. Estimating the multiplicity
11:00 – 11:30	Coffee Break	

26 September 2017 SESSION: General Session CHAIR: Pasquale De Simone (ROOM 8)		
11:00 – 11:30	<i>Pasquale De Simone</i> <i>Naples University-Italy</i>	Pile Foundations of Noise Barriers and Highway Signs
11:30 – 12:00	<i>Jwujenq Chen and</i> <u><i>Chialiang Lin and</i></u> <i>Chenglian Liu</i>	The Efficiency and Performance Detection Algorithm and System Development for Photovoltaic System through use of Thermal Image Processing Technology



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26 September 2017 SESSION: INVITED SPEAKER CHAIR: Xinyuan Wu (ROOM 1)		
11:30 – 12:30	<u>Michael Gunther</u>	nanoCOPS nanoelectronic COupled Problems Solutions: methods and applications

26 September 2017 SESSION: INVITED SPEAKER CHAIR: Michael Gunther (ROOM 1)		
12:30 – 13:30	<u>Xinyuan Wu</u>	ERKN integrators solving multi-frequency highly oscillatory systems with applications



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26 September 2017		
SESSION: 2nd Symposium on mathematical modeling and numerical simulation of physical and chemical phenomena in porous materials		
CHAIR: Jaroslav Kruis (ROOM 4)		
11:30 – 11:50	<u>Anton Trník</u> , Jan Kočí, Jiří Maděra	Water Thermoporometry of Aerated Autoclaved Concrete
11:50 – 12:10	<u>Jiří Maděra</u> , Miloš Jerman, Monika Čáchová, Magdaléna Doleželová, Jan Kočí	Computational Modelling of Degradation Processes in Exterior Renders
12:10 – 12:30	<u>Jaroslav Kruis</u>	Primal and Dual Numerical Framework for Description of Material Interface Degradation
12:30 – 12:50	<u>Tomáš Koudelka</u> , Tomáš Krejčí, Jaroslav Kruis	Time Integration of Hypoplastic Model for Expansive Clays
12:50 – 13:10	<u>Jiří Němeček</u> , Tomáš Koudelka, Tomáš Krejčí	Numerical Modeling of Accelerated Chloride Transport in Concrete



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26 September 2017		
SESSION: 1st Symposium on “Hypercompositional Algebra – new Developments and Applications (HAnDA)”		
CHAIR: Christos Massouros and Irina Cristea		
(ROOM 6)		
11:30 – 12:00	<i>Michal Novak, Kyriakos Ovaliadis, Stepan Krehlik</i>	A Hyperstructure Model of Underwater Wireless Sensor Network (UWSN) Design
12:00 – 12:30	<i>Sanja Jančić-Rašović, Irina Cristea</i>	A note on near-rings and hypernear-rings with a defect of distributivity
12:30 – 13:00	<i>Nathan Bowler</i>	Matroids over Hyperfields
13:00 – 13:30	<i>Spyridon Vossos, Elias Vossos</i>	Euclidean Closed Linear Transformations of Complex Spacetime endowed with the Corresponding Metrics and Applications to Microcosmos and Megacosmos.
13:30 – 14:00	<i>Christos G. Massouros, Gerasimos G. Massouros</i>	On Open and Closed Hypercompositions



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26 September 2017		
The 12th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer		
Numerical Fluids 2017		
CHAIR: R. Sheldon Herbst		
(ROOM 1)		
15:00 – 15:20	<u>Jiri Felcman,</u> <u>V. Dolejsi and P.</u> <u>Kubera</u>	Discontinuous Galerkin Method for the Pedestrian Flow Problem
15:20 – 15:40	<u>Stanford Shateyi</u>	On a numerical approach of MHD mixed convection flow of a nanofluid due to an exponentially stretching sheet with viscous dissipation and chemical reaction
15:40 – 16:00	<u>A. Cable, K.</u> <u>Chetehouna, N.</u> <u>Gascoin, K Van</u> <u>Herpe, and J-F. Marco</u>	Numerical Study of the Transient Two-phase Flow within Sprinkler Fire Protection Systems
16:00 – 16:20	<u>Jens Gabel, Dia</u> <u>Zeidan, Pacal Bahr,</u> <u>Peter Farber and Peer</u> <u>Ueberholz</u>	Simulation of Mach 3 Wind Tunnel Flow with a Step by a Two-Phase Flow Model
16:20 – 16:40	<u>Aniraj</u> <u>Cheruputhenpurakal</u> <u>Rajendran, Shaligram</u> <u>Tiwari b, Maiya</u> <u>Manoor Prakash</u>	Numerical study on subcooled flow boiling in a serpentine tube using VOF multiphase model



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26 September 2017		
SESSION: 10th Symposium on Recent Trends in the Numerical Solution of Differential Equations		
CHAIR: Luigi Brugnano (ROOM 2)		
15:00 – 15:30	<u><i>A.S.Eremin</i></u>	Diagonally Implicit Functional Continuous Methods
15:30 – 16:00	<u><i>F.Iavernaro, F.Mazzia</i></u>	Simplecticity properties of Euler–Maclaurin methods
16:00 – 16:30	<u><i>A.Pedas, E.Tamme, M.Vikerpuur</i></u>	Numerical solution of fractional integro-differential equations with non-local boundary conditions
16:30 – 17:00	<u><i>GROUP PHOTO</i></u>	
17:00 – 17:30	Coffee Break	



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26 September 2017		
SESSION: 13th Symposium on Clifford Analysis and Applications		
CHAIR: Klaus Gürlebeck (ROOM 3)		
15:00 – 15:30	<i>Helmuth Malonek</i>	Combinatorial ideas in the context of hypercomplex function theory
15:30 – 16:00	<i>Rolf Sören Kraußhar</i>	On the growth type of entire solutions to higher dimensional polynomial Cauchy-Riemann equations
16:00 – 16:30	<u><i>Thomas Fink</i></u>	Analysis of the Edge Geometry using the Tylorlet transform
16:30 – 17:00	<u><i>TBA</i></u>	TBA
17:00 – 17:30	Coffee Break	



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26 September 2017		
SESSION#7: The 6th Symposium on Generating Functions of Special Numbers and Polynomials and their Applications (GFSNP2017)		
CHAIR: Yilmaz SIMSEK (ROOM 4)		
15:00 – 15:30	<i><u>Buket SIMSEK and Ahmet YARDIMCI</u></i>	Mathematical models for deformed and undeformed human hands associated with the Bernstein polynomials and the Bezier curves
15:30 – 16:00	<i><u>Irem KUCUKOGLU and Yilmaz SIMSEK</u></i>	Relations Arising From A Family Of Combinatorial Numbers And Bernstein Type Basis Functions
16:00 – 16:30	<i><u>Rahime DERE</u></i>	q-Hermite Base Euler Polynomials based upon the q-umbral algebra
16:30 – 17:00	<i><u>Gulsah OZDEMIR and Yilmaz SIMSEK</u></i>	A note on generalized Humbert Type Numbers and Polynomials
17:00 – 17:30	Coffee Break	



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26 September 2017		
SESSION: Applied Mathematics/Statistics in Economics, Management & Finance		
CHAIR: Esmail Abounoori (ROOM 5)		
15:00 – 15:30	Mansour Tour	Stock Market Interactions among Iran, USA, Turkey, and UAE
15:30 – 16:00	Alireza Kashefi	Banking Efficiency Effect on Economic Growth of Provinces in Iran
16:00 – 16:30	Alireza Masoudian	Impact of Oil Price on Money Cost of the Bank in Iran: Case of Sepah Bank
16:30 – 17:00	Mohammadreza Talebian	Estimation of the Contraction Type Effect on Delayed Repayments (Case Study: Melli Bank in Semnan Province)
11:00 – 11:30	Coffee Break	



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26 September 2017 SESSION: Statistics and Modelling CHAIR: Luboš Střelec (ROOM 6)		
15:00 – 15:30	<i><u>Jiří Neubauer</u>, <u>Jakub Odehnal</u></i>	Security and Economic Determinants of the Demand for Czech Military Expenditure: ARDL Approach
15:30 – 16:00	<i><u>Jakub Odehnal</u>, <u>Marek Sedlačík</u></i>	Political Stability as Determinant of Terrorist Attacks in Developed and Developing Countries: an Empirical Multivariate Classification Analysis
16:00 – 16:30	<i><u>Martina Čampulová</u>, <u>Ladislava Issever Grochová</u>, <u>Jaroslav Michálek</u></i>	Outlier detection in PM10 aerosols by generalised linear model
16:30 – 17:00	<i><u>Milan Stehlík</u>, <u>Luboš Střelec</u>, <u>Gerhard Holzknicht</u></i>	Analysis of ECB Consolidated Banking Data
17:00 – 17:30	Coffee Break	



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26 September 2017 SESSION: IV Mini Symposium on Symmetry Methods and Applications for Differential Equations CHAIR: M.L. Gandarias (ROOM 7)		
15:00 – 15:30	<i>R. Tracina</i>	Group methods applied to a reaction diffusion system
15:30 – 16:00	<i>M.L. Gandarias</i>	Symmetry analysis for some equations that admit compacton solutions.
16:00 – 16:30	<i><u>M. Khalique</u></i>	Conservation laws and solutions for a (2 + 1)-dimensional generalized breaking soliton system
16:30 – 17:00	<i><u>I. Mhalanga</u></i>	Exact solutions and conservation laws for a coupled Benjamin-Bona-Mahony equations}
17:00 – 17:30	Coffee Break	

26 September 2017 SESSION: 66 Iterative Procedures for Solving Nonlinear Problems CHAIR: Juan R. Torregrosa (ROOM 8)		
15:30 – 16:00	<i>Alicia Cordero</i>	High-order extension of an efficient iterative method for solving nonlinear problems
16:00 – 16:30	<i><u>Á. Alberto Magreñán</u></i>	Local convergence and the dynamics of a family of high convergence order method for solving nonlinear equations



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26 September 2017 SESSION: General Session CHAIR: Marek Dvorak (ROOM 9)		
15:00 – 15:30	<i>Marek Dvorak</i>	Time Series Convolution Kernel Estimation
15:30 – 16:00	<i>David Lehký and Ondřej Slowik</i>	Inverse Reliability-based Optimization
16:00 – 16:30	<i>Vladimír Holý</i>	How Big Is the Rounding Error in Financial High-Frequency Data?
16:30 – 17:00	<i>Tatiana Polonyankina</i>	Does Immigrant Status Matter in Spanish Labour market? Logit Model Application
17:00 – 17:30	Coffee Break	

26 September 2017 SESSION: 13th Symposium on Clifford Analysis and Applications CHAIR: Helmuth Malonek (ROOM 3)		
17:35 – 18:05	<i>Wolfgang Sprößig</i>	The Darcy-Brinkman-Oberbeck-Boussinesq system in quaternionic calculus
18:05 – 18:35	<i>Yuri Grigorev</i>	Quaternionic formulation of a Cauchy problem for the Lamé equation
18:35 – 19:05	<u>TBA</u>	TBA
19:05 – 19:35	<u>TBA</u>	TBA



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26 September 2017 SESSION: The Second Symposium in Recent Developments in Differential and Integro-Differential Equations and Their Applications (Session # 14) CHAIR: Muhammed I. Syam (ROOM 4)		
17:35 – 17:50	<u><i>Muhammed I. Syam</i></u>	Numerical computation of fractional second-order Sturm-Liouville problems
17:50 – 18:05	<u><i>Qasem M. Al-Mdallal</i></u>	EFFICIENCY OF FRACTIONAL-BERNSTEIN FUNCTIONS FOR SOLVING HIGHER-ORDER NONLINEAR FRACTIONAL DIFFERENTIAL EQUATIONS
18:05 – 18:20	<u><i>M S Ismail</i></u>	Numerical solution of 4- CNLS equation
18:20 – 18:35	<u><i>Bothayna S. Kashkari,</i></u> <i>Sharefah Saleh</i>	Variational Homotopy Perturbation Method for Solving Riccati Type Differential Problems
18:35 – 18:50	<u><i>Urszula Ostaszewska, Ewa</i></u> <u><i>Schmeidel and</i></u> <u><i>Małgorzata Zdanowicz</i></u>	Leader-following consensus on discrete time scales
18:50 – 19:05	<i>Anh Pham The,</i> <i>Piotr Jurga's, Michał</i> <u><i>Niezabitowski and</i></u> <i>Tuan Hoang The</i>	A lower bound on the separation between two solutions of a scalar Riemann-Liouville fractional differential equation



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26 September 2017 SESSION: Applied Mathematics/Statistics in Economics, Management & Finance CHAIR: Masoud Shamani (ROOM 5)		
17:35 – 18:05	Maryam Sadeghi	Relationship between Monetary Policy and Its Impact on Lucrative Business in Iran
18:05 – 18:35	Hamed Ziyaoddin	The Relationship between Oil Prices and Stock Indices in Iran Using VARX-DCC-GARCH
18:35 – 19:05	Neda Miri	The Effect of Age Structure of the Population on Economic Growth in Iran using the ARDL Approach
19:05 – 19:35	Hossein Safari	The Impact of Exchange Rate Uncertainty on Pistachio Export Demand from Iran using Panel GARCH Model

26 September 2017 SESSION: Statistics and Modelling CHAIR: Oldřich Beneš (ROOM 6)		
17:35 – 18:05	<i><u>Lenka Viskotová,</u></i> <i>Martin Tláškal, Luboš Střelec</i>	Neighbouring Plant Varieties Problem in the Damage Resistant Alpha Design
18:05 – 18:35	<i><u>Martina Zámková,</u></i> <i>Veronika Blašková,</i> <i>Ladislava Issever</i> <i>Grochová</i>	Identification of Factors Affecting the Aircraft Delay in Popular Greek Destinations
18:35 – 19:05	<i><u>Oldřich Beneš,</u></i> <i>Veronika Blašková,</i> <i>Luboš Střelec</i>	Verifying Timber Price Stability for the Reforestation Optimal Control Model



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26 September 2017 SESSION: General Session CHAIR: Petra Tomanova (ROOM 9)		
17:35 – 18:05	<i>Petra Tomanova</i>	A Note on Time-Varying Quantiles
18:05 – 18:35	<i><u>Neeraj Paul M and Shaligram Tiwari</u></i>	Transient Analysis Of Flow Past Sphere Performing Streamwise Rotational Oscillation Using Hilbert-Huang Transformation
18:35 – 19:05	<i><u>HyoJu Kim and Hyun Sik Yoon</u></i>	The characteristics of vortex shedding from an asymmetric wavy cylinder at low Reynolds number
19:05 – 19:35	<i><u>Min Il Kim and Hyun Sik Yoon</u></i>	Three-dimensional characteristics of the vortex shedding frequency from a wavy cylinder at a low Reynolds number

26 September 2017 SESSION: Fifth Symposium on Computational Mathematics and its applications CHAIR: Waheed Zahra and Shanshan Wang (ROOM 6)		
19:35 – 20:05	<i>Shanshan Wang</i>	Split-step Modified Cubic B-Splines Collocation Methods for Nonlinear schrodinger Equations with Dirichlet Boundary Conditions



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26 September 2017		
SESSION: The Second Symposium in Recent Developments in Differential and Integro-Differential Equations and Their Applications (Session # 14)		
CHAIR: Muhammed I. Syam (ROOM 4)		
19:05 – 19:20	<u>Roman Kozlov, Sergey V. Meleshko, Pavel Winternitz</u>	Invariant solutions of delay differential equations
19:20 – 19:35	<u>Oleg A. Kazakov and Liudmila A. Uvarova</u>	Electromagnetic Field Boundary Conditions for Metam aterials with Magnetic Properties
19:35 – 19:50	<u>Yana S. Burenok and Liudmila A. Uvarova</u>	Asymptotic Solutions for Electromagnetic Waves in Optical Nonlinear Spherical Particle
19:50 – 20:05	<u>AHCENE MERAD</u>	A STUDY OF HYPERBOLIC EQUATION WITH SECOND KIND NONLOCAL CONSITION



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26 September 2017 SESSION: IV Mini Symposium on Symmetry Methods and Applications for Differential Equations CHAIR: M.L. Gandarias (ROOM 7)		
17:35 – 18:05	<i>T. Motsepa</i>	A study of the Bona-Smith system describing the two-way propagation of water waves in a channel
18:05 – 18:35	<i>G. Burde</i>	Partially Nonclassical Method and Conformal Invariance
18:35 – 19:05	<i>KANAGAWA Tetsuya</i>	Nonlinear Schrodinger Equation for a Fast Pressure Propagation in Bubbly Liquids.
18:05 – 19:35	<i>Hisao Taira and Tetsuya Kanagawa</i>	Cavitation Bubble Dynamics Based on Keller Equation in Human Joint

26 September 2017 SESSION: Applied Mathematics/Statistics in Economics, Management & Finance CHAIR: Esmail Abounoori (ROOM 5)		
19:35 – 20:05	Anita Abounoori	A Brief Small Area Estimation Survey concerning Socio-economic Indicators
20:05 – 20:35	Ismail Malkesh	The Effect of Subjective Interest Rates on Financial Performance: Case Study of Sepah Bank in Iran
20:35 – 21:05	Shekoofe Nagheli	The Effect of Political Institutions on Iranian Export using Spatial Econometric Approach (Case Study: Association of Southeast Asian Nations (ASEAN))



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26 September 2017		
SESSION: Optimal Homotopy Asymptotic Approach to Nonlinear Dynamical Systems in Engineering		
CHAIR: Nicolae Herisanu (ROOM 7)		
19:35 – 20:05	<i>Rashid Nawaz, Laiq Zada</i>	Solving Time Fractional Sharma-Tasso-Oleiver Equation by Optimal Homotopy Asymptotic Method
20:05 – 20:35	<i>Vasile Marinca, Nicolae Herisanu</i>	Analytic Solution of the Static Pull-in Instability in MEMS Considering Casimir Force
20:35 – 21:05	<i>Nicolae Herisanu, Vasile Marinca</i>	Viscous Flow of an Incompressible Fluid over a Curved Stretching Surface

END OF THE 2ND DAY



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27 September 2017 The 12th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer Numerical Fluids 2017 CHAIR: Maciej Marek (ROOM 1)		
09:30 – 09:50	<i>Jens Gabel, Dia Zeidan, Pacal Bahr, Peter Farber and <u>Peer Ueberholz</u></i>	Simulation of Mach 3 Wind Tunnel Flow with a Step by a Two-Phase Flow Model
09:50 – 10:10	<i><u>Alin-Florin Totorean,</u> Iuliana-Claudia Hudrea, Sandor Bernad, Dan Ion Gaita</i>	Anastomosis configuration influence on local hemodynamics in coronary bypass
10:10 – 10:30	<i><u>R.S. Herbst, C. Harley</u> and E. Momoniat</i>	Numerical Simulations of Molecular Cloud Collapse with "Soft" Isothermal Equations of State
10:30 – 10:50	<i><u>Ondrej Winter and</u> Petr Svacek</i>	Interaction of Incompressible Fluid Flow and a Vibrating Airfoil



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27 September 2017 SESSION: Metaheuristic and Numerical Analysis in Engineering CHAIR: Prof. Dr. Yusuf Cengiz Toklu, Dr. S. Melih Nigdeli and Asst. Prof. Baris Sayin (ROOM 2)		
09:00 – 09:15	Gebrail Bekdaş, Sinan Melih Nigdeli, Aylin Ece Kayabekir and Yusuf Cengiz Toklu	Minimization of Vertical Deflection of an Optimum I-Beam by Jaya Algorithm
09:15 – 09:30	Yusuf Cengiz Toklu, Gebraail Bekdaş and Sinan Melih Nigdeli	Analysis of under-constrained and unstable structures by the method TPO/MA
09:30 – 09:45	Sinan Melih Nigdeli and Gebraail Bekdaş	Live/Dead Load Factor on Optimum Design of Reinforced Concrete Continuous Beams
09:45 – 10:00	Gebraail Bekdaş and Sinan Melih Nigdeli	Vibration Absorber System for Adjacent Structures Subjected to Near-Fault Excitations
10:00-10:15	Aylin Ece Kayabekir, Barış Sayın, Sinan Melih Nigdeli and Gebraail Bekdaş	Jaya algorithm based optimum carbon fiber reinforced polymer design for reinforced concrete beams
10:15-10:30	Sinan Melih Nigdeli, Gebraail Bekdaş and Barış Sayın	The effect of usage of inertia function in particle swarm optimization
10:30-10:45	Gebraail Bekdaş and Rasim Temür	Grey Wolf Optimizer for Optimum Design of Reinforced Concrete Cantilever Retaining Walls
11:00 – 11:30	Coffee Break	



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27 September 2017 SESSION: Symposium 21 CHAIR: Maria Paola Speciale (ROOM 3)		
09:00 – 09:30	<i>Andrea Scapellato</i>	New perspectives in the theory of some function spaces and their applications
09:30 – 10:00	<i>G. Rita Cirmi</i>	To be defined
10:00 – 10:30	<i>Tiziana Durante</i>	Dirichet Laplacian in a perforated plane with semi-infinite inclusions
10:30 – 11:00	<i>M. Alessandra Ragusa</i>	Monitor of a natural park through the ESPI index
11:00 – 11:30	Coffee Break	

27 September 2017 SESSION: Symposium 21 CHAIR: Andrea Scapellato (ROOM 3)		
11:30 – 12:00	<i>Rebenda Josef</i>	A Numerical Approach for Solving of Fractional Emden-Fowler Type Equations
12:00 – 12:30	<i>Seyi Latunde-Dada</i>	The convolution method for estimating particle densities and mass shifts from resonant mass measurements
12:30 – 13:00	<i>Annamaria Barbagallo</i>	To be defined
13:00 – 13:30	<i>Marianna Ruggieri</i>	A coupled DEs model for localized disturbances in tropical forests



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27 September 2017 SESSION 44: 3rd Symposium on Computational Modeling and Experimental Assessment of Transport Processes in Porous Building Materials CHAIR: Oldřich Zmeškal and Zbyšek Pavlík (ROOM 4)		
09:00 – 09:20	<u>Oldřich Zmeškal,</u> Pavel Florian, Kateřina Valentová, Luáš Fiala	Correlation between Dielectric and Thermal Properties of Alkali-Activated Aluminosilicates with Carbon Fiber Admixture
09:20 – 9:40	<u>Jaroslav Pokorný,</u> Martina Záleská, Milena Pavlíková, Zbyšek Pavlík	Properties of Lightweight Composite Modified by Active Siliceous Admixture
9:40 – 10:00	<u>Lucie Zemanová,</u> Milena Pavlíková, Zbyšek Pavlík	Moisture Diffusivity of Hydrophobized Lime-Based Renders
10:00 – 10:20	<u>Jaroslava</u> <u>Kořátková, Pavel</u> Reiterman	Response of HPC Incorporating Mineral Additive to Thermal Loading
10:20 – 10:40	Jan Fořt, Lucie Zemanová, <u>Zbyšek</u> <u>Pavlík, Robert Černý</u>	Inverse Analysis of Moisture Profiles for the Assessment of Moisture Diffusivity of Hybrid Fiber Reinforced UHPC
10:40 – 11:00	Ondřej Holčapek, <u>Jaroslava Kořátková</u>	The Effect of Hydrothermal Curing on Residual Mechanical Properties of Refractory Concrete
11:00 – 11:30	Coffee Break	



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27 September 2017		
SESSION 44: 3rd Symposium on Computational Modeling and Experimental Assessment of Transport Processes in Porous Building Materials		
CHAIR: Oldřich Zmeškal and Zbyšek Pavlík (ROOM 4)		
11:30 – 11:50	<u>Jaroslava Kořátková</u>, Karel Kolář	Long-term Sorption Properties of Modified Concrete Surface Layer
11:50 – 12:10	<u>Lenka Scheinherrová</u>, Zbyšek Pavlík	Hybrid Fiber Reinforced HPC at Elevated Temperatures – Analysis of Thermal Properties
12:10 – 12:30	<u>Monika Čáchová</u>, <u>Dana Koňáková</u>, Eva Vejmelková, Martina Záleská, Martin Vyšvařil, Patrik Bayer	Hygic Parameters of Ternary Binder Based Plasters Lightweighted by Expanded Perlite



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27 September 2017		
SESSION: Title: The methods of constructing intelligent and adaptive control for problems of physical, biological and socio-economic processes modeling		
CHAIR: Alexander Nikolaevich Kvitko		
(ROOM 5)		
09:00 – 09:30	<u>Alexander Kvitko</u>	“About local controllability of nonlinear nonstationary system” by A. N. Kvitko
09:30 – 10:00	<u>Valentina Chashnikova</u>	The Sufficient Conditions of a Measuring Basis Optimality on the Fixed Time Interval
10:00 – 10:30	<u>Mikhail Chashnikov</u>	On the Finding Problem of Lyapunov Matrices for some Class of Systems with Distributed Delay
10:30 – 11:00	<u>S. Kabrits E.Kolpak, Y. Pronina, O Sedova</u>	Bifurcation of Shock Absorber Arch Type Made of Elastomers
11:00 – 11:30	Coffee Break	



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27 September 2017		
SESSION: Some Applications of the Novel Numerical Methods		
CHAIR: Ali Akgül		
(ROOM 6)		
09:00 – 09:30	<i>Xuhao Li and Patricia J.Y. Wong</i>	Numerical Solution of Fourth-order Fractional Diffusion Wave Model
09:30 – 10:00	<i>Ali Akgül, Dumitru Baleanu and Esra Karatas Akgül</i>	Reproducing kernel method for strongly non-linear equation
10:00 – 10:30	<i>Xuhao Li and Patricia J.Y. Wong</i>	High Order Approximation to New Generalized Caputo Fractional Derivatives and its Applications
10:30 – 11:00	<i>M.S. Hashemi, Dumitru Baleanu, Z. Balmeh, Esra Karatas Akgul and A. Akgül</i>	Invariant investigation on the system of Hirota-Satsuma Coupled KdV equation
11:00 – 11:30	Coffee Break	

27 September 2017		
SESSION: Some Applications of the Novel Numerical Methods		
CHAIR: Ali Akgül		
(ROOM 6)		
13:35 – 14:05	<i>Xuhao Li and Patricia J.Y. Wong</i>	Parametric Quintic Spline Approach for Two-dimensional Fractional Sub-di_usion Equation
14:05 – 14:35	<i>Yasir Khan, Ali Akgül, Dumitru Baleanu, Esra Karatas Akgul, Naeem Faraz and Mustafa Inc</i>	A homotopy perturbation solution for solving highly nonlinear fluid flow problem arising in mechanical engineering



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27 September 2017 SESSION: SCLIT 2017 7th Symposium on Computer Languages, Implementations and Tools CHAIR: Zoran Budimac (ROOM 7)		
09:00 – 09:20	<u>Nemanja Milošević,</u> <i>Danijela Boberić</i> <i>Krstićev and</i> <i>Miloš Racković</i>	From traditional to containerized system architecture: A rule-based approach
09:20 – 09:40	<i>Agon Memeti,</i> <i>Florinda Imeri and</i> <u>Besnik Selimi</u>	Empirical Analysis of CASE Tool Impact on the Development Process in Macedonian IT Companies
09:40 – 10:00	<i>Oksana Nikiforova</i> <i>and</i> <u>Konstantin Gusarov</u>	Several Issues of Two-Hemisphere Model-Driven Approach to Improve with Anemic Domain Model
10:00 – 10:20	<i>Zeljko Bajic,</i> <u>Srdjan Skrbic</u> and <i>Jovana Vidakovic</i>	Towards a Scala embedded information system description DSL
10:20 – 10:40	<u>Novak Boškov</u> and <i>Igor Dejanović</i>	An Idiomatic Data Persistence System in Clojure
10:40 – 11:00	<u>Artúr Poór</u> and <i>Tamás</i> <i>Kozsik</i>	Resugaring: Undo Desugaring in Language Processing Tools
11:00 – 11:30	Coffee Break	



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27 September 2017 SESSION: Multiscale Multiphysics approaches for engineering applications CHAIR: Giorgio Bornia (ROOM 8)		
09:00 – 09:30	<u>Gabriele Pozzetti</u> Xavier Besseron, Alban Rousset, A.W.M Checkaraou and Bernhard Peters	On the performance of an overlapping-domain parallelization strategy for Eulerian-Lagrangian Multiphysics software
09:30 – 10:00	Alban Rousset , A.W.M Checkaraou , <u>Xavier Besseron</u>, Sebastien Varrette and Bernhard Peters	Comparing Broad-Phase Interaction Detection Algorithms for Multiphysics DEM Applications
10:00 – 10:30	<u>Roberto Da Via</u>, Leonardo Chirco and Sandro Manservigi	Natural convection in a squared cavity via a numerical coupling between a FEM code and OpenFOAM
10:30 – 11:00	<u>Daniele Cerroni</u> , Federica Laurino , Luca Formaggia , Anna Scotti and Paolo Zunino	A Mixed Finite Element Method for Modelling the Fluid Exchange between Microcirculation and Tissue Interstitium
11:00 – 11:30	Coffee Break	



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27 September 2017 SESSION: Analysis of Quantum Field Theory III CHAIR: Hofmann, Ralf (ROOM 9)		
09:30 – 10:00	<u>Roman Höllwieser</u>	The QCD phase diagram from effective Polyakov line actions
10:00 – 10:30	<u>Roman Höllwieser</u>	The QCD phase diagram from effective Polyakov line actions
10:30 – 11:00	<u>Discussion</u> <i>(Roman Höllwieser)</i>	The QCD phase diagram from effective Polyakov line actions



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27 September 2017 SESSION: 18 Title: Workshop on Numerical Computation in 2D and 3D Data Analysis CHAIR: R. Kozera Co-Chairs: A. Szczesna and A. Wiliński (ROOM 10)		
09:00 – 09:30	<i>F. Okulicka-Dłużewska, R. Kozera, A. Smoktunowicza</i>	Numerical properties of block Cholesky-like methods for solving symmetric quasi-definite linear systems
09:30 – 10:00	<i>J. Rosner, D. Pęszor, M. Paszkuta, K. Wereszczyński, K. Wojciechowski, M. Szender, D. Mieszalski, B. Zieliński</i>	A System for Automatic Detection of Potential Landing Sites for Horizontally Landing Unmanned Aerial Vehicles
10:00 – 10:30	<i>A.Szczesna</i>	Quaternion Wavelet-based Energy and Entropy to Analysis Human Gait Data
10:30 – 11:00	<i>P. Skurowski, M. Paszkuta</i>	Saliency Map Based Analysis for Prediction of Car Driving Difficulty in Google Street View Scenes
11:00 – 11:30	Coffee Break	



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27 September 2017 SESSION: INVITED SPEAKER CHAIR: Michael Dumbser (ROOM 1)		
11:30 – 12:30	<u>David Cohen</u>	Numerical discretisations of stochastic wave equations



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27 September 2017 SESSION: General Session CHAIR: Ch. Tsitouras (ROOM 5)		
12:00 – 12:30	<i>Ch. Tsitouras and Ioannis Th. Famelis</i>	New Phase-fitted Runge-Kutta Pairs of Orders 8(7)
12:30 – 13:00	<i>Josef Rak</i>	Error Behavior of the Nystrom Method With Singularity Subtraction Applied To a Singular Fredholm Integral Equation of the Second Kind
13:00 – 13:30	<i>Olyana Kovyrkina and Vladimir Ostapenko</i>	High Order Combined Finite- Difference Schemes
13:30 – 14:00	<i>V.Vucheva and N.Kolkovska</i>	Convergence Analysis of Finite Difference Scheme for Sixth Order Boussinesq Equation
14:00-14:30	<i>Vijay Shankar</i>	Applied Innovative, Energy Efficient and Sustainable Technologies – Numerical Investigations.



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27 September 2017		
SESSION: Summability Theory and its Applications		
CHAIR: Sebnem Yildiz, M. Mursaleen, Huseyin Cakalli		
and G. Canan Hazar Güleç		
(ROOM 11)		
13:00 – 13:20	<i>M. Mursaleen</i>	Summability Methods And Their Applications in Approximation
13:20 – 13:40	<i>Huseyin Cakalli</i>	A new variation on statistically quasi Cauchy sequences
13:40 – 14:00	<i>Sebnem Yildiz</i>	A matrix application of quasi-monotone sequences to infinite series and Fourier series
14:00 – 14:20	<i>Huseyin Cakalli and Huseyin Kaplan</i>	A new study on the strongly lacunary quasi Cauchy sequences
14:20 – 14:40	<i>Sebnem Yildiz</i>	A new variation on lacunary statistical quasi Cauchy sequences
14:40 – 15:00	<i>Huseyin Cakalli and Iffet Taylan</i>	A variation on absolutely almost convergence
15:30 – 15:20	<i>G. Canan Hazar Güleç and M. Ali Sarigöl</i>	Summability Factor Relations Between Absolute Weighted and Nörlund



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27 September 2017 The 12th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer Numerical Fluids 2017 CHAIR: Zdenek Chara (ROOM 1)		
15:00 – 15:20	<u><i>E. Askari Mahvelati,</i></u> <i>G. St-Pierre Lemieux, C. Braga Vieira, G. Litrico and P. Proulx</i>	Simulation of Bubbly Flow and Mass Transfer in a Turbulent Gas-Liquid Stirred Tank with CFD-PBM solver in OpenFOAM: EQMOM application
15:20 – 15:40	<i>A.R. Appadu</i>	Atmospheric flow modelling using some finite difference methods
15:40 – 16:00	<u><i>J. Vajisek and P.</i></u> <i>Svacek</i>	On application of acoustic analogies with numerical approximations of fluid flow with low Mach numbers
16:00 – 16:20	<i>Erhan Firat</i>	Control of Fluid Flow around a Square Prism by Jet Injection at Low Reynolds Number
16:20 – 16:40	<u><i>M.L. Niculescu, M.</i></u> <i>G. Cojocaru, M. V. Pricop, M. C. Fadgyas, M. G. Stoican and D.</i>	Hypersonic Gas Dynamics of a Marco Polo Reentry Capsule



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27 September 2017 SESSION: The First Symposium on Mathematical Methods in Economics and Nature Use (1) CHAIR: Alexander Medvedev, Marina Medvedeva (ROOM 2)		
15:00 – 15:20	<i>Dragos-Patru Covei</i>	A Profit-Maximization Model for a Company that Sells an Arbitrary Number of Products
15:20 – 15:40	<i>Alexander Sergeev, A.G. Buevich, A.N. Medvedev</i>	On the Hybrid Models of Soil Contaminants Concentrations Predicting in Subarctic Region
15:40 – 16:00	<i>Svetlana Lapshina, E.I. Shangina, N.N. Ilysheva</i>	Model of Mobile Learning and Its Application in the Educational Process
16:00 – 16:20	<i>Dmitry Tarasov, A.G. Buevich, A.P. Sergeev, A.A. Mokrushin</i>	Artificial Neural Networks Selection for Soil Chemical Elements Distribution Prediction
16:20 – 16:40	<i>Andrey Tyagunov, D.A. Tarasov, A.G. Buevich, A.P. Sergeev</i>	Forecasting of Heavy Metal Distribution Based on Co-Kriging and Generalized Regression Neural Network with Co-Elements Concentration as Input Data
16:40 – 17:00	<i>Alexander Sergeev, A.V. Shichkin, D.A. Tarasov, A.S. Sydikhov</i>	Comparison of Different Models for the Chromium Distribution Forecasting in Topsoil in Subarctic Novy Urengoy City
17:00 – 17:15	<i>Alexander Tarasyev, G.A. Agarkov</i>	Machine Learning in Labour Migration Prediction



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27 September 2017 SESSION: Symposium 21 CHAIR: Marianna Ruggieri (ROOM 3)		
15:00 – 15:30	<i>Emilia Bazhlekova</i>	Poiseuille Flow of Fractional Jeffreys' Fluid in a Rectangular Channel - Analytical Results
15:30 – 16:00	<i>Ivan Bazhlevkov</i>	Poiseuille Flow of Fractional Jeffreys' Fluid in a Rectangular Channel - Numerical Results
16:30 – 17:00	<i>Anton I. Popov</i>	Modeling of vertebral system by the nudged elastic band method
17:00 – 17:30	<i>Maria Paola Speciale</i>	Analytical and numerical solutions of a new fractional type advection- diffusion equation

27 September 2017 SESSION#7: The 6th Symposium on Generating Functions of Special Numbers and Polynomials and their Applications (GFSNP2017) CHAIR: Eda YULUKLU (ROOM 4)		
15:00 – 15:30	<u><i>Aykut Ahmet</i></u> <u><i>AYGUNES</i></u>	Convolution identities for new numbers including Euler and Bernoulli numbers
15:30 – 16:00	<u><i>Erkan AGYUZ and</i></u> <u><i>Mehmet ACIKGOZ</i></u>	A New Type Bernstein Polynomials Depend On (p,q) - Integers
16:00 – 16:30	<u><i>Gunes AYGUNES</i></u>	Evaluation venture capital investment and macroeconomic variables via stepwise regression method



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27 September 2017 SESSION: Title: The methods of constructing intelligent and adaptive control for problems of physical, biological and socio-economic processes modeling. CHAIR: Alexander Nikolaevich Kvitko (ROOM 5)		
15:00 – 15:30	<i>Alesova, L.</i> <i>Babadzanjanz, L.,</i> <i>Bregman, K., Bregman, A.,</i> <i>Pototskaya I., . Pupyshva</i> <i>Yu and Saakyan. A.</i>	Perturbations Calculation Technique for Central Fields
15:30 – 16:00	<i>A. Ekimov,</i> <i>Yu. Balykina,</i> <i>M. Svirkin;</i>	Analysis of the global null-controllability of linear-in-control systems
16:00 – 16:30	<i>Alesova, L.</i> <i>Babadzanjanz, L.,</i> <i>Bregman, K., Bregman, A.,</i> <i>Pototskaya I., . Pupyshva</i> <i>Yu and Saakyan. A</i>	Schemes of Fast Evaluation of Multivariate Monomials for Speeding up Numerical Integration of Equations in Dynamics
16:30 – 17:00	<i>Alesova, L.</i> <i>Babadzanjanz, L.,</i> <i>Bregman, K., Bregman, A.,</i> <i>Pototskaya I., . Pupyshva</i> <i>Yu and Saakyan. A.</i>	Control of Satellite Aerodynamic Oscillations
17:00 – 17:30	Coffee Break	



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27 September 2017		
SESSION: 3rd Symposium on Integrated Computational Tools for Advanced Manufacturing		
CHAIR: Nuno Alves, Paula Pascoal-Faria, Sandra Amado (ROOM 6)		
15:00 – 15:30	<i>Mário Rito Pereira, Pedro G Morouço, Isabel Vasconcelos, Margarida Franco, Nuno Alves, António Ginjeira</i>	Computer Fluid Dynamics as a tool for analysis of endodontic irrigation
15:30 – 16:00	<i>Lino Ferreira, Nuno Alves, Paula Pascoal- Faria and Nelson Martins Ferreira</i>	An automatic procedure for the detection of regions of interest in arbitrary images
16:00 – 16:30	<i>Rui Silva, Sandra Amado, Filipa Joao, Pedro Morouço, Paula Pascoal Faria, Nuno Alves, António Veloso</i>	Biomechanics modeling for functional analysis: animal models
16:30 – 17:00	<i>Cândida Malça, Marco Sena, Cyril Santos, Artur Mateus, Nuno Alves</i>	Numerical Modeling of Mechanical and Thermal Behaviors of Cellular Structures Produced by SLM
17:00 – 17:30	Coffee Break	



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27 September 2017		
SESSION 74: Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques		
CHAIR: Alexandru Dumitrache, Florin Frunzulica (ROOM 7)		
15:00 – 15:30	<i>Dan Radulescu, Marius Deaconu</i>	A Better Design for Pulsation Dampeners
15:30 – 16:00	<i>Grigore Cican, Marius Deaconu, Florin Frunzulica</i>	JetCat P80 Noise Experimental and Numerical Evaluation
16:00 – 16:30	<i>Catalin Nae, <u>Gabriela-Liliana</u> Stroe, Irina-Carmen Andrei, Sorin Berbente, Florin Frunzulica</i>	Active control systems with applications in aeroservoelasticity
16:30 – 17:00	<i><u>Liliana Stroe, Irina-</u> Carmen Andrei, Sorin Berbente, Florin Frunzulica</i>	Computational analysis of aircraft control systems
17:00 – 17:30	Coffee Break	



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27 September 2017 SESSION: Multiscale Multiphysics approaches for engineering applications CHAIR: Giorgio Bornia (ROOM 8)		
15:00 – 15:30	<u>G. Bornia</u> and <u>S.Ratnavale</u>	Different approaches for Dirichlet and Neumann boundary optimal control
15:30 – 16:00	Daniele Cerroni , <u>Leonardo Chirco</u>, Roberto Da Via and <u>Sandro Manservigi</u>	Numerical simulation of a falling drop on a bending wall by coupling a VOF method with a Fluid Structure Interaction solver

27 September 2017 SESSION: Analysis of Quantum Field Theory III CHAIR: Hofmann, Ralf (ROOM 9)		
15:00 – 15:30	<u>Mareike Haberichter</u>	Skymions
15:30 – 16:00	<u>Mareike Haberichter</u>	Skymions
16:00 – 16:30	<u>Discussion</u> <u>(Mareike Haberichter)</u>	Skymions



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27 September 2017 SESSION: 18 Title: Workshop on Numerical Computation in 2D and 3D Data Analysis CHAIR: R. Kozera Co-Chairs: A. Szczęśna and A. Wiliński (ROOM 10)		
15:00 – 15:30	<i>A. Wiliński</i>	Arithmetic-Interval Method of Finding Similar Features to Reduce Data for Use in Computer Vision
15:30 – 16:00	<i>M. Staniszewski</i>	Image Quality Parameters in Application of Compressed Sensing for MRI Data



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27 September 2017 SESSION: The First Symposium on Mathematical Methods in Economics and Nature Use (1) CHAIR: Alexander Medvedev, Marina Medvedeva (ROOM 2)		
17:30 – 17:45	<i>Dmitry Tarasov, A.G. Buevich, A.P. Sergeev, A.V. Shichkin</i>	Forecasting of Chromium Distribution in Subarctic Noyabrsk Using Generalized Regression Neural Networks and Multilayer Perceptron
17:45 – 18:00	<i>Svetlana Lapshina, N.N. Ilysheva, A.A. Detkov, A.P. Rylova</i>	Analysis and Modelling of Dynamic Changes in the Russian Economy Macroeconomic Indices (2002 - 2016)
18:00 – 18:15	<i>Andrey Tyagunov, D.A. Tarasov, A.G. Buevich, A.P. Sergeev, Shichkin A.V.,</i>	Chromium Distribution Forecasting Using Multilayer Perceptron Neural Network and Multilayer Perceptron Residual Kriging
18:15 – 18:25	<i>Gavriil A. Agarkov, A.A. Tarasyev</i>	Fuzzy Logic for Educational Paths
18:25 – 18:35	<i>Ekaterina Shamaeva B.E. Bolshakov, A.N. Medvedev</i>	Modelling of Biosphere Sustainability Parameters for Nature Reserves
18:35 – 18:45	<i>Anna Kolomytseva, H. Kazakova, M.A. Medvedeva</i>	Interaction risk assessment in partner entrepreneurial networks
18:45 – 18:55	<i>D.V. Vezhleva, A.S. Sydikhov, A.P. Sergeev, S.Yu. Arapov, O.A. Lvova</i>	Psychophysical Model of the Signal Detection Theory with Nine Events. Basic Provisions
18:55 – 19:10	<i>Nikolay Dubinin, A.V. Kokovin, S.N. Lapshina</i>	Shewhart's Control Charts in the Education Quality Management System



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27 September 2017 SESSION: Fuzzy Logic with Engineering Applications CHAIR: Avriilia Konguetsof & Basil Papadopoulos (ROOM 3)		
17:35 – 18:05	<i>Panagiotis Pagouropoulos, Christos D. Tzimopoulos and Basil . Papadopoulos</i>	A Generalized Method for Fuzzy Implication Selection
18:05 – 18:35	<i>Vardis-Dimitris Anezakis, Konstantinos Demertzis , Lazaros Iliadis</i>	Classifying with Fuzzy Chi- Square Test: The case of Invasive Species

27 September 2017 SESSION The methods of constructing intelligent and adaptive control for problems of physical, biological and socio-economic processes modeling. CHAIR: Alexander Nikolaevich Kvitko (ROOM 5)		
17:35 – 18:05	Alesova, L. Babadzanzanz,L., Bregman, K., Bregman, A., Pototskaya I., . Pupysheva Yu and Saakyan.A	Pieewise Constant Control of Linear Mechanical Systems in the General Case
18:05 – 18:35	Goncharova M	On a method of separating hyperplane construction



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27 September 2017 SESSION: General Session CHAIR: Konstantinos G. Eptaimeros (ROOM 4)		
17:35 – 18:05	<i>Konstantinos G. Eptaimeros</i>	Continuous Interior Penalty Finite Element Method for a 6th-order Bending Gradient Elastic (Nano)Beam Equation
18:05 – 18:35	<i>C. Chr. Koutsoumaris and <u>K.G. Eptaimeros</u></i>	The Gradient Beam: A Confrontation between the Analytical Closed Type and Numerical Type Solution
18:35-19:05	<i>Filip Kolarik</i>	Multiscale damage model for compressive strength of cement paste
19:05-19:35	<i>Vijay Shankar</i>	Innovative Energy and Sustainable Technologies – Numerical Investigations
19:35 – 20:05	<i><u>M. Popovič</u>, <u>M. Drdlová</u>, <u>M. Chadima</u>, <u>M. Šebík</u></i>	Dynamic Behavior of Cement-bonded Wood-chip Board



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27 September 2017		
SESSION: 3rd Symposium on Integrated Computational Tools for Advanced Manufacturing		
CHAIR: Nuno Alves, Paula Pascoal-Faria, Sandra Amado (ROOM 6)		
17:35 – 18:05	<i>Pedro Forte, Daniel A Marinho, Jorge E Morais, Pedro Morouço, Paula Pascoal Faria, Tiago M Barbosa</i>	Aerodynamics of a wheelchair sprinter racing at the 100m world record pace by CFD
18:05 – 18:35	<i>Miguel Clemente, Paula Pascoal-Faria, Miguel Panão, Nuno Alves</i>	Micro-cooling constructal design: an application to mold inserts thermal management
18:35 – 19:05	<i>Daniela Frogheri, Alberto T. Estévez</i>	Bichos (Bugs): a Family of Pavilions in Evolution
19:05 – 19:35	<i>Sara Gomes, Paula Pascoal-Faria, David Ângelo, Nuno Alves</i>	Finite element method for the temporomandibular disk: preliminary results



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SESSION 74: Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques		
CHAIR: Alexandru Dumitrache, Daniel Crunteanu (ROOM 7)		
17:35 – 18:05	<i>M. C. <u>Fadgyas</u>, M. V. <u>Pricop</u>, M. L. <u>Niculescu</u>, M. G. Cojocaru, A. Dumitrache</i>	Fast computational hypersonic heat flux estimation
18:05 – 18:35	<i>M.C. <u>Fadgyas</u>, M. V. <u>Pricop</u>, M. L. <u>Niculescu</u>, M. G. Cojocaru, A. Dumitrache</i>	Semi-empirical relations for pressure distributions in hypersonic regime
18:35 – 19:05	<i>Irina-Beatrice Stefanescu and Adrian-Mihail Stoica</i>	Control Laws for Multivariable Systems Applied in Helicopter AFCS Design
19:05 – 19:35	<i>F. Frunzulica, Al. Dumitrache, D. Crunteanu</i>	Directional Control of a Jet Using Coandă Effect



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27 September 2017 SESSION: General Session CHAIR: Ondřej Sokol (ROOM 8)		
17:35 – 18:05	<i><u>Ondřej Sokol and Miroslav Rada</u></i>	Data envelopment analysis: Ranking units using data depth measures
18:05 – 18:35	<i><u>Hsiu-Chuan Wei, Yuh-Yih Chen, Jenn-Tsann Lin and Shin-Feng Hwang</u></i>	The Dynamics of an Intraguild Predation Model with Prey Switching
18:35 – 19:05	<i><u>Masatomo Matsushima and Taro Okano</u></i>	Mathematical model of depression based on cognitive theory
19:05-19:35	<i><u>Dragana Cvetkovic Ilic</u></i>	Properties of $A+CX$ in the case when $A, C \in B(H)$
19:35-20:05	<i><u>Tingting Li</u></i>	Characterization of core and dual core inverses in rings with involution
20:05-20:35	<i><u>Jianlong Chen</u></i>	Some progress on relative EP elements in rings



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27 September 2017 SESSION: Analysis of Quantum Field Theory III CHAIR: Haberichter, Mareike (ROOM 9)		
17:35 – 18:05	<i>Jacques Rubin</i>	Consequences in field theory and astrophysics of a projective theory of relativity emerging from relativistic localizing systems
18:05 – 18:35	<i>Jacques Rubin</i>	Consequences in field theory and astrophysics of a projective theory of relativity emerging from relativistic localizing systems
18:35 – 19:05	<u>Discussion</u> <i>(Jacques Rubin)</i>	Consequences in field theory ...



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27 September 2017 SESSION: The First Symposium on Mathematical Methods in Economics and Nature Use(2) CHAIR: Alexander Medvedev, Marina Medvedeva (ROOM 2)		
19:10 – 19:25	<i>Mujahed A. Saif, I.A. Ibrahim, A.N. Medvedev, S.N. Lyubarsky</i>	On the Construction of Recommendation Systems using the Behaviour Study Analytical Tools
19:25 – 19:40	<i>Roman Chechushkov, V.V. Kalinin, M.A. Medvedeva.</i>	Use of the "Dynamic Standard" Method to Assess the Economic System Development Sustainability
19:40 – 19:55	<i>E.I. Shangina, G.A. Shangin, A.N. Medvedev</i>	Construction of a Geometric Model for Multidimensional Space
19:55 – 20:10	<i>O.A. Iskra, E.A. Sizonenko, M.A. Medvedeva</i>	Imitation Model of Decision Support for Mobile Applications Lifecycle Management
20:10 – 20:25	<i>Mujahed A. Saif, A.V. Prisyazhny, M.A. Medvedeva</i>	On the Model of Credit Score Calculation Using Social Networks Data
<i>Virtual Participant</i>	<i>Dmitry Berg, Alina Bodnar</i>	Functional algorithm of information management based on fuzzy logic models
<i>Virtual Participant</i>	<i>Dmitry Berg, T.O. Zagornaya, V.L. Panova</i>	Mathematical Tools of the Architectural Decisions Efficiency Assessment
<i>Virtual Participant</i>	<i>Dmitry Berg, Yury Kharitonov</i>	On Relational Model of Nomenclature Management
<i>Virtual Participant</i>	<i>Dmitry Berg, E.G. Chepurov</i>	Information system of projects activities monitoring: "Electronic Project Office" and "Project Cloud"



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27 September 2017 SESSION: Fuzzy Logic with Engineering Applications CHAIR: C. Tzimopoulos (ROOM 3)		
18:35 – 19:05	<i>Zisis A. Daffas and Ioannis E. Zevgolis</i>	Probabilistic Analysis of the Internal Stability of Soil Nail Walls Using Monte Carlo Simulations
19:05 – 19:35	<i>K. Mattas, G. Botzoris and B. Papadopoulos</i>	Fuzzy simulated annealing optimizing the circular path around Greek cities
19:35 – 20:05	<i>Athanasios C. Bogiatzis and Basil K. Papadopoulos</i>	Binarization of Texts with Changing Lighting Conditions Using Fuzzy Inclusion and Entropy Measures
20:05 – 20:35	<i>A. Kapsimallis, B. Papadopoulos</i>	Application of fuzzy equivalence relations in clustering of variables that affect the volume of construction activity

END OF THE 3RD DAY



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28 September 2017 SESSION: INVITED SPEAKER CHAIR: David Cohen (ROOM 1)		
09:30 – 10:00	<u>Michael Dumbser</u>	TBA

28 September 2017 SESSION: INVITED SPEAKER CHAIR: Luigi Brugnano (ROOM 1)		
10:30 – 11:30	<u>Yaroslav D. Sergeyev</u>	Computations with numerical infinities and infinitesimals

28 September 2017 SESSION: INVITED SPEAKER CHAIR: Yaroslav D. Sergeyev (ROOM 1)		
11:30 – 12:30	<u>Peter Kloeden</u> <u>and Xiaoying Han</u>	The Numerical Solution of Random ODEs



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28 September 2017		
SESSION: 1st Symposium on “Hypercompositional Algebra – new Developments and Applications (HAnDA)”		
CHAIR: Christos Massouros and Irina Cristea		
(ROOM 4)		
11:30 – 12:00	<i>Nathan Bowler</i>	Matroids over Hyperfields



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12:40

Photo of the Conference

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13:00

Excursion



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20:30

Central Dinner

- **Introduction by Professor Dr. Theodore E. Simos**
- **Presentation of the Honorary Fellowship Awards of the European Society of Computational Methods in Sciences, and Engineering**
- **Dinner**

END OF THE 4TH DAY



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29 September 2017 The 12th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer Numerical Fluids 2017 CHAIR: Peer Ueberholz (ROOM 1)		
09:30 – 09:50	<i>Jan Halama</i>	Notes to Modelling of Non-Equilibrium Condensation of Steam in Nozzles
09:50 – 10:10	<i>Erhan Aslan, <u>Yavuz Ozturk</u> and <u>Sertac Dileroglu</u></i>	Design Optimization of an Air Intake Chamber for an Euro VI Diesel Bus
10:10 – 10:30	<i>A.R. Appadu</i>	Comparison of some finite difference methods for the Black-Scholes equation
10:30 – 10:50	<i>Michal Benes and <u>Lukas Krupicka</u></i>	On coupled dual-porosity flows in structured porous media
10:50 – 11:10	<i><u>Alin I. Bosioc</u>, <u>S. Muntean</u> and <u>L.E. Anton</u></i>	Numerical Simulation of an Axial Rotor with Variable Speed in a Pump Impeller
11:10 – 11:30	<i><u>B. Kysela</u>, <u>Z. Chara</u>, <u>J. Konfrst</u>, <u>K. Tomasek</u> and <u>R. Sulc</u></i>	CFD Study of Flow Similarities in Turbulent Regime in a Stirred Tank



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29 September 2017		
SESSION 88: Dynamical systems and their applications to advanced materials, structures and technologies		
CHAIR: Josef Doblík (ROOM 2)		
09:00 – 09:30	<i>H. Štekbauer, Z. Vlček, <u>J. Vala</u></i>	On Some Implicit Numerical Integration Schemes in Structural Dynamics
09:30 – 10:00	<i><u>M. Hušek</u>, J. Kala, P. Král, F. Hokeš</i>	Using Noise to Generate the Material Structure of Concrete
10:00 – 10:30	<i><u>P. Král</u>, P. Hradil, M. Hušek, J. Kala, Z. Kala</i>	Sensitivity Analysis and Optimization as Tools for the Inverse Concrete Material Model Parameter Identification
10:30 – 11:00	<i>I. Němec, A. Vaněčková, <u>M. Hušek</u></i>	Nonlinear Seismic Analysis by Explicit and Implicit Method
11:00 – 11:30	Coffee Break	



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29 September 2017		
SESSION: Stochastic Models: Methods and Applications (SAMMA 2017)		
CHAIR: Ioannis Dimitriou and Eleni Vatamidou (ROOM 3)		
09:00 – 09:30	<u>Alain Jean-Marie,</u> <u>Eleni Vatamidou</u>	The Class of Semi-Markov Accumulation Processes
09:30 – 10:00	<u>Sarah Dendievel, Guy</u> <u>Latouche, Yuanyuan</u> <u>Liu</u>	A Fluid Queue Modulated by a Varying Markovian Environment
10:00 – 10:30	<u>Tuan Phung-Duc,</u> <u>Velika Dragieva</u>	Stability Analysis of Multiserver System with Servers-Orbit Interaction and Feedback
10:30 – 11:00	<u>Maximiliano Udenio,</u> <u>Eleni Vatamidou, Jan</u> <u>C. Fransoo</u>	A Control Theoretic Analysis Of The Bullwhip Effect Under Triple Exponential Smoothing Forecasts
11:00 – 11:30	<u>Coffee break</u>	



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29 September 2017		
Symposium: Hull Slamming and Water Entry Problems		
CHAIR: Prof. Giacomo Falcucci, PhD		
(ROOM 4)		
09:00 – 09:30	<u><i>Andrea Luigi Facci</i></u> <u><i>University of Tuscia</i></u>	Numerical simulation of water entry problems using open source codes.
09:30 – 10:00	<u><i>Pierluigi Fanelli</i></u> <u><i>University of Tuscia</i></u>	Influence of Sensors Layout in Damage Monitoring of Cylindrical Bodies under Impulsive Hydrodynamic Loading.
10:00 – 10:30	<u><i>Piergiorgio Manciola</i></u> <u><i>University of Perugia</i></u>	A Central Moments Model for Shallow Water Equations: Convergence Analysis.
10:30 – 11:00	<u><i>Vesselin K. Krastev</i></u> <u><i>Univerist of Tuscia</i></u>	Numerical and Experimental Study of Asymmetric Water Impacts of Wedge-Shaped Sections.
11:00 – 11:30	Coffee Break	



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29 September 2017 SESSION: Analysis of Quantum Field Theory III CHAIR: Tsang, Peter (ROOM 5)		
09:30 – 10:00	<u>Thierry Grandou</u>	Effective locality and mass scale(s)
10:00 – 10:30	<u>Thierry Grandou</u>	Effective locality and mass scale(s)
10:30 – 11:00	<u>Discussion</u> <u>(Thierry Grandou)</u>	Effective locality and mass scale(s)
11:00 – 11:30	Coffee Break	



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29 September 2017		
SESSION (54): Mathematics in Relation to Computer Science and their Applications		
CHAIR: Jose C. Valverde		
(ROOM 6)		
09:00 – 09:30	<u><i>J.A. Aledo, L.G. Diaz,</i></u> <u><i>S. Martinez, J.C.</i></u> <u><i>Valverde</i></u>	Advances in parallel dynamical Systems
09:30 – 10:00 SKYPE CALL	<u><i>A. Galletti, G. Giunta,</i></u> <u><i>L. Marcellino</i></u>	A Parallel Approach for Gaussian Recursive Filters
10:00 – 10:30 SKYPE CALL	<u><i>P. Alberti-Villalobos,</i></u> <u><i>S. Molina-Adasme, P.</i></u> <u><i>Maldonado-Cárdenas</i></u>	High performance implementation of Wolf's Method
10:30 – 11:00	<u><i>I. E. Kibona</i></u>	Simple HIV Spread Model Enhancing UNAIDS Target to End AIDS by 2030
11:00 – 11:30	Coffee Break	



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29 September 2017 SESSION: General Session CHAIR: Pavel Martinek (ROOM 7)		
09:00 – 09:30	<i><u>Teodora Selea, Anca Vulpe, Oana Brandibur, Madalina Erascu, Eva Kaslik, Daniela Zaharie, Marc Frincu</u></i>	Benchmarking Numerical Libraries for Flight Software Prequalification
09:30 – 10:00	<i>Pavel Martinek</i>	Some Notes to Minimization of Multiset Finite Automata
10:00 – 10:30	<i><u>Hee-Yong Kang, Vu Thi Ngoc Hanh and Dong-Chul Park</u></i>	Modeling of Color Probability Map Using Artificial Neural Network

29 September 2017 SESSION: General Session CHAIR: D.V. Alexandrov (ROOM 8)		
09:00 – 09:30	<i><u>A. Avramenko, O. Agafonova, J. Sorvari, Y. Avramenko and H. Haario</u></i>	Numerical Approach for Solving Beam Contact Problem for Airframe Assembly Simulation in Case of Non-conformal Meshes
09:30 – 10:00	<i><u>D.V. Alexandrov, L.V. Toropova and P. K. Galenko</u></i>	Thermo-Solutal Growth of an Anisotropic Dendrite in the Case of Convective Heat and Mass Transfer in a Binary System
10:00 – 10:30	<i><u>D.V. Alexandrov, I.V. Alexandrova and A. A. Ivanov</u></i>	On the Theory of Self-Similar Solidification with a Mushy Layer
10:30 – 11:00	<i><u>E. Pindza, K.C. Patidar and E. Ngounda</u></i>	Efficient pricing of European and American options under local volatility



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29 September 2017		
SESSION: 9) Title: The Fourth Symposium on Approximation of Curves and Surfaces (ACS 2017)		
CHAIR: Abedallah Rababah (ROOM 2)		
11:30 – 11:45	<u>M. Shakhathreh</u>	New generalized method generate fuzzy partitions
11:45 – 12:00	<u>A. AlOmari</u>	Modify Legender operator matrix for nonlinear of IVP
12:15 – 12:30	<u>M. Mheidat</u>	Cubature formula for bivariate generalized Chebyshev Koonwinder's type polynomials
12:30 – 12:45	<u>M. AlQudah</u>	A recursive relation for generalized Ultraspherical type orthogonal polynomials



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29 September 2017 SESSION: Stochastic Models: Methods and Applications (SAMMA 2017) CHAIR: Ioannis Dimitriou and Eleni Vatamidou (ROOM 3)		
11:30-12:00	<u><i>Nico M. van Dijk</i></u>	Bounds and Error Bounds for unsolvable CT Markov Chains
12:00-12:30	<u><i>Jens Baetens, Bart Steyaert, Dieter Claeys, Herwig Bruneel</i></u>	Delay Analysis of a Variable-Capacity Batch-Server Queue with General Class-Dependent Service Times
12:30-13:00	<u><i>Ioannis Dimitriou, Tuan Phung-Duc</i></u>	Riemann-Hilbert boundary value problem for single-server systems with two orbits for blocked and feedback customers

29 September 2017 Symposium: Hull Slamming and Water Entry Problems CHAIR: Prof. Giacomo Falcucci, PhD (ROOM 4)		
11:30 – 12:00	<u><i>Simonluca Russo</i></u> <u><i>University of Rome</i></u> <u><i>Tor Vergata</i></u>	Experimental Assessment of the Water Entry of Compliant Cylindrical Structures.
12:00 – 12:30	<u><i>Giacomo Falcucci</i></u> <u><i>University of Rome</i></u> <u><i>Tor Vergata</i></u>	A Critical Assessment of PIV-Based Pressure Reconstruction in Water-Entry Problems
12:30 – 13:00	<u><i>Daniele Chiappini</i></u> <u><i>University “Niccolò Cusano”</i></u>	Ligament Break-Up Simulation Through PseudoPotential Lattice Boltzmann Method
13:00 – 13:30	<u><i>Daniele Chiappini</i></u> <u><i>University “Niccolò Cusano”</i></u>	Water impact of obstacles using KBC-free Lattice Boltzmann Method



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29 September 2017 SESSION: General Session CHAIR: Marcin Wołowicz (ROOM 7)		
11:30-12:00	<i>Piotr Krawczyk, Aleksandra Mikołajczak, <u>Marcin Wołowicz</u>, Krzysztof Badyda, Michalina Gruszecka</i>	Impact of Selected Parameters on the Performance of Compressed Natural Gas Energy Storage Using Cavern Gas Storage System
12:00-12:30	<i><u>Marcin Wołowicz</u>, Jarosław Milewski, Gabriel Ziembicki</i>	Mathematical modelling and analysis of recompression supercritical CO₂ Brayton cycle in terms of maximum pressure and temperature at turbine inlet
12:30 – 13:00	<i>Piotr Krawczyk, Aleksandra Mikołajczak, <u>Marcin Wołowicz</u>, Krzysztof Badyda, Michalina Gruszecka</i>	Mathematical model and simulation of a new concept of the bus powering –Liquid Air Bus (LABus)
13:00 – 13:30	<i>Jarosław Milewski, <u>Marcin Wołowicz</u>, Gabriel Ziembicki</i>	Working fluid model for supercritical CO₂ Brayton cycle
13:30 – 14:00	<i><u>Hanna Wojewódka</u>, Dawid Czapla and Katarzyna Horbacz</i>	Limit Theorems for Certain Stochastic Models for Gene Regulatory Networks



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29 September 2017 SESSION: General Session CHAIR: Elena V. Nikolova (ROOM 8)		
11:30-12:00	<u>Alexander Churkin,</u> <u>Vladimir Reinharz,</u> <u>Harel Dahari and</u> <u>Danny Barash</u>	HCV Multiscale Dyn: A Simulator For The Multiscale Model Of Hepatitis C Virus Dynamics
12:00-12:30	<u>Karina Kolodina, Anna Oleynik and John Wyller</u>	Localized stationary solutions of a 2-population homogenized neural field model
12:30 – 13:00	<u>Robert Willie</u>	AKS-chemotaxis model generalized well-posedness, blow-up dynamics and controllability
13:00 – 13:30	<u>Elena V. Nikolova</u>	On Nonlinear Waves in a Blood-filled Artery with an Aneurysm
13:30 – 14:00	<u>Enrique Gerstl and Gur Mosheiov</u>	Batch scheduling on a flow-shop with unit time jobs and machine-dependent setup times



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29 September 2017 SESSION 88: Dynamical systems and their applications to advanced materials, structures and technologies CHAIR: Jiří Vala (ROOM 2)		
15:00 – 15:30	<i>J. Diblík, D. Ya. Khusainov, M. Růžičková</i>	Exponential Stability of Linear Discrete Systems with Delay
15:30 – 16:00	<i>J. Bařtinec, J. Diblík, D. Ya. Khusainov</i>	Stability of Linear Discrete Systems with Variable Delays
16:00 – 16:30	<i>Z. Svoboda, J. Diblík</i>	Asymptotic Behavior of the Delayed Matrix Exponential Function
16:30 – 17:00	<i>Z. Pátíková</i>	Possibility of Conversion of Half-Linear Oscillation Results to Criteria for Equat- ions with Jumarie Operator

29 September 2017 Symposium: Hull Slamming and Water Entry Problems CHAIR: Prof. Daniele Chiappini, PhD (ROOM 4)		
15:00 – 15:30	<i>Nicola Cavalagli University of Perugia</i>	Experimental Analysis of Slamming Reduction in Rectangular Liquid Tanks Subjected to Harmonic Motion
15:30 – 16:00	<i>Martina Carlino University "Niccolò Cusano"</i>	Free-Surface Dynamics in the Impact of a Rigid Wedge - Part A
16:00 – 16:30	<i>Martina Carlino University "Niccolò Cusano"</i>	Free-Surface Dynamics in the Impact of a Rigid Wedge - Part B



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29 September 2017 SESSION: Analysis of Quantum Field Theory III CHAIR: Tsang, Peter (ROOM 5)		
15:00 – 15:30	<i>Herb Fried</i>	Non-perturbative, gauge-invariant QCD: No longer in the shadow of QED
15:30 – 16:00	<i>Herb Fried</i>	Non-perturbative, gauge-invariant QCD: No longer in the shadow of QED
16:00 – 16:30	<u>Discussion</u> <i>(Herb Fried)</i>	Non-perturbative, gauge-invariant QCD: No longer in the shadow of QED
17:00 – 17:30	Coffee Break	

29 September 2017 SESSION: General Session CHAIR: Yuriy E. Gorbachev (ROOM 7)		
15:00 – 15:30	<u>H. Omara, Sherif M. Elsayed, G. M. Abdeelaal, Hany F. Abd-Elhamid, A. Tawfik</u>	3-D numerical study of local scour around bridge piers
15:30 – 16:00	<u>Sang Yun Shin, Ji-Hwan Hwang and Dong-Wook Jerng</u>	Numerical Analysis for Stratification with Steam Condensation Using a CFD Code
16:00 – 16:30	<i>Yuriy E. Gorbachev</i>	Approximate Expressions for the One-Temperature Non-Equilibrium Reaction Rates



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**SESSION: Advances in Analytical, Analytical Approximate,
Numerical and Asymptotic Analysis of Sturm-Liouville
Problems with the Applications in Engineering**

**CHAIRS: Assist. Prof. Dr. Mehmet Tarik ATAY
Mechanical Engineering Dept., Engineering Faculty,
Abdullah Gul University, Sumer Campus, Kayseri/
Turkey**

**Assist. Prof. Dr. Hakan Erdogan
Civil Engineering Dept, Kocaeli University, Kocaeli, Turkey
(ROOM 6)**

15:00 – 15:30	<i>Dr. Safa Bozkurt Coskun , Zuhal Elif Kara</i>	Axisymmetric deformation analysis of thick-walled cylinders using an improved Adomian Decomposition Method
15:30 – 16:00	<i>Dr. Safa Bozkurt Coskun, Sevda Memiş , Zeynep Özcan</i>	Analysis of Flexural-Torsional Buckling of Rectangular Beams via Ritz and Power Series Methods
16:00 – 16:30	<i>Dr. Cihan Çiftçi , Dr. Hatice Sinem Şaş , Dr. Mehmet Tarik Atay , Batuhan Toker , Berkay Güncan , Afşin Talha Yıldırım</i>	The Numerical Solutions for Stiff Ordinary Differential Equations by Using Interpolated Variational Iteration Method with Comparison to Exact Solutions
16:30 – 17:00	<i>Dr. Safa Bozkurt Coskun, Dr. Mehmet Tarik Atay, Ahmet Yucesoy</i>	Twist-Bend Instability of a Cantilever Beam Subjected to an End Load via Homotopy Perturbation Method
17:00 – 17:30	Coffee Break	



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29 September 2017 SESSION: General Session CHAIR Sanjay Kindo (ROOM 8)		
15:00 – 15:30	<i><u>Sanjay Kindo, Rohit Vashistha, Sumit Raj, G.P. Ravishankar and Mahesh P. Padwale</u></i>	Selection and Validation of Hyperelastic Finite Element Model for Analysis of Silicone Rubber
15:30 – 16:00	<i>A. Houmat</i>	A Nonlocal Shell p -Element for the Nonlinear Free Vibration of Orthotropic Doubly Curved Shallow Nanoshells

29 September 2017 SESSION: Dynamical systems and their applications to advanced materials, structures and technologies CHAIR: Jaromír Bařtinec (ROOM 2)		
17:35 – 18:05	<i><u>P. Jarořov, J. Vala</u></i>	Computational Optimization of Energy Consumption in the Design of Buildings
18:05 – 18:35	<i><u>J. Vtovec</u></i>	Risk Analysis of Apparatus, Devices, Systems and Machines Failure
18:35 – 19:05	<i><u>M. Tma, P. Jura</u></i>	Optimal Parameters for the Generalized Laguerre Identification Method



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29 September 2017 SESSION: Fuzzy Logic with Engineering Applications CHAIR: M. Spiliotis (ROOM 3)		
17:35 – 18:05	<i>G. Ellina, G. Papaschinopoulos, and B.K. Papadopoulos</i>	Research of Fuzzy Implications via Fuzzy Linear Regression in a Eutrophic Waterbody
18:05 – 18:35	<i>Avrilia Konguetsof and Basil Papadopoulos</i>	Seismic Behavior Using Fuzzy Methods

29 September 2017 SESSION: Symposia 82:: Statistical Methods and Applications in Engineering CHAIR: Zerrin Asan Greenacre, Mehmet Tarık Atay, Cengiz GAZELOGLU (ROOM 6)		
17:35 – 18:05	<i>Sinan Saracli and Cengiz Gezeloglu</i>	Statistical Analysis of Vehicle Driver Behaviors
18:05 – 18:35	Selcuk Goren, Ibrahim Tumay Gulbahar	Statistical Approach for Table Tennis Athletes' Success



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29 September 2017 SESSION: General Session CHAIR: Lotfi Abdelhakim (ROOM 7)		
17:35 – 18:05	<i>Sandor Kristyan</i>	Analytic Evaluation for Integrals of Product Gaussians with Different Moments of Distance Operators (RC1-nRD1-m, RC1-nr12-m and r12-nr13-m with $n, m=0,1,2$), Useful in Coulomb Integrals for One, Two and Three-Electron Operators
18:05 – 18:35	<i>Sandor Kristyan</i>	Note on the cardinality difference between primes and twin primes and its impact on function $x/\ln(x)$ in Prime Number Theorem
18:35 – 19:05	<i>Lotfi Abdelhakim</i>	FEEL++ applications to engineering problems
19:05 – 19:35	<i>Xiaojian Hu and <u>Mingyang Liu</u></i>	UPPER VENTS IN THE TUNNELS:THE INFLUENCE ON TRANSIT SAFETY



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29 September 2017 SESSION: General Session CHAIR: Vadim Anishchenko (ROOM 8)		
17:35 – 18:05	<u>Vadim Anishchenko, Elena Rybalova and Nadezhda Semenova</u>	Chimera States in Two Coupled Ensembles of Henon and Lozi Maps. Controlling Chimera States
18:05 – 18:35	<u>G. Strelkova, E. Rybalova, V. Anishchenko and A. Zakharova</u>	Effect of Switchings and the Lifetime of Chimeras in an Ensemble of Nonlocally Coupled Chaotic Maps
18:35 – 19:05	<u>Dawid Czapla, Katarzyna Horbacz and Hanna Wojewódka</u>	The Strong Law of Large Numbers for Certain Piecewise-Deterministic Markov Processes with Application to a Gene Expression Model
19:05 – 19:35	<u>Edyta Hetmaniok, Mariusz Pleszczyński, Michał Rozanski and Roman Wituła</u>	Parametric-vector versions of the Gerschgorin Theorem and the Brauer Theorem

29 September 2017 SESSION 88: Dynamical systems and their applications to advanced materials, structures and technologies CHAIR: Jaromír Bařtinec (ROOM 2)		
19:05 – 19:35	<u>M. Tůma, P. Jura</u>	Dead Time Approximation of LTI SISO Systems in Time Domain Using Generalized Laguerre Functions
19:35 – 20:05	<u>M. Růžičková, J. Diblík, G. Vážanová</u>	Mathematical Modeling of the IV-administered Drug Concentration Level



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29 September 2017 SESSION: Fuzzy Logic with Engineering Applications CHAIR: Lazaros Iliadis (ROOM 3)		
18:35 – 19:05	<i>Christos Tzimopoulos, Kyriakos Papadopoulos and Christos Evangelides</i>	Fuzzy analytical solution to horizontal infiltration
19:05 – 19:35	<i>Tsiliki P. A. and Papadopoulos B.</i>	Pattern Recognition with Non Asymptotic Fuzzy Estimators
19:35 – 20:05	<i>M. Spiliotis and B.K. Papadopoulos</i>	A hybrid fuzzy probabilistic assessment of the extreme hydrological events

29 September 2017 SESSION: Analysis of Quantum Field Theory III CHAIR: Rubin, Jacques (ROOM 5)		
19:35 – 20:05	<i>Peter Tsang</i>	Test of an analytic, finite, non-perturbative, gauge-invariant QCD formulation ...
20:05 – 20:35	<i>Peter Tsang</i>	Test of an analytic, finite, non-perturbative, gauge-invariant QCD formulation ...
20:35 – 21:05	<i><u>(Discussion)</u> <u>Peter Tsang</u></i>	Test of an analytic, finite, non-perturbative, gauge-invariant QCD formulation ...



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29 September 2017 SESSION: General Session CHAIR: R. Guirardello (ROOM 7)		
19:35 – 20:05	<i><u>K. A. Pacheco and R. Guirardello</u></i>	Chemical and Phase Equilibria with Adsorption using Minimization of Gibbs Energy
20:05 – 20:35	<i><u>K. A. Pacheco and R. Guirardello</u></i>	Isotherm Parameters for Gas-Solid Adsorption using Monte Carlo Simulation
20:35 – 21:05	<i><u>L. Stinguel and R. Guirardello</u></i>	Numerical Resolution of the Advection-Diffusion Equation with Non-Linear Adsorption Isotherm
21:05 – 21:35	<i><u>Ji Hwan Cha and Hyunju Lee</u></i>	Reliability Analysis of a System Affected by Dynamic Shock Environment

29 September 2017 SESSION: General Session CHAIR: Mantas Landauskas (ROOM 8)		
19:35 – 20:05	<i><u>Mantas Landauskas, Kristina Lukoseviciute, Guangqing Lu and Minvydas Ragulskis</u></i>	Chebyshev interpolation with internal smoothing for short-term time series forecasting
20:05 – 20:35	<i><u>Nathan Muyinda, Bernard De Baets and Shodhan Rao</u></i>	On the Stability of Finite Difference Schemes for Nonlinear Reaction-Diffusion Systems
20:35 – 21:05	<i><u>Somogyi Ildiko and Soos Anna</u></i>	Interpolation using Local Iterated Function Systems
21:05 – 21:35	<i><u>Teodora Catinas</u></i>	Extensions of Some Nielson Type Operators to the Case of Triangles with Curved Sides



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29 September 2017 Poster Session 16:00 - 17:00	
<i><u>Martina Drdlová, Miloslav Popovič,</u></i> <i>René Čechmánek, Petr Bibora</i>	FEM Modelling of Fibre-concrete in Development of Blast Resistant Elements

END OF THE 5TH DAY



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30 September 2017 SESSION: Mathematical Aspects & Physical Modeling of Problems related to the Anisotropic Sphere I CHAIR: Touvia Miloh (ROOM 1)		
09:00 – 09:30	<i>C.E. Athanasiadis, E. Athanasiadou, S. Zoi & I. Arkoudis</i>	An inverse scattering problem for the dielectric ellipsoid
09:30 – 10:00	<i>L.N. Gergidis, D. Kourounis, S. Mavratzas & A. Charalambopoulos</i>	Numerical investigation for the acoustic scattering problem from penetrable prolate spheroidal structures using the Vekua transformation and arbitrary precision arithmetic
10:00 – 10:30	<i>M. Hadjinicolaou</i>	Deriving “eigen-flows” in ellipsoidal coordinate system of revolution and their inverted ones: A comparative study
10:30 – 11:00	<i>E. Argyropoulos, E. Argyropoulou & K. Kyriaki</i>	The modified Green’s function technique for the exterior Neumann problem in linear thermoelasticity
11:00 – 11:30	Coffee Break	



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30 September 2017		
Mini-Symposium* "Chemomechanics and Fracture of Novel Materials & Disclinated MicroCrystals/DMCs"		
CHAIR: Elias Aifantis		
(ROOM 2)		
09:30 – 10:00	<i>E.C.Aifantis</i>	Gradient Chemomechanics
10:00 – 10:30	<i>G.Petsos</i>	On spinodal decomposition in coherent binary solid solutions: strain gradient effects
10:30 – 11:00	<i>I.Tsagrakis</i>	Coupling gradient elasticity with diffusion: application on <i>LiB</i> and pentagonal micro crystals
11:00 – 11:30	<i>G.Efrimidis</i>	A special form of gradient elasticity and Rayleigh waves
11:30 – 12:00	Coffee Break	



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30 September 2017 SESSION: Analysis of Quantum Field Theory III CHAIR: Höllwieser, Roman (ROOM 3)		
09:30 – 10:00	<u><i>Ralf Hofmann</i></u>	The isolated. uniformly moving electron: Yang-Mills center vortex loop and de Broglie's hidden thermodynamics
10:00 – 10:30	<u><i>Ralf Hofmann</i></u>	The isolated. uniformly moving electron: Yang-Mills center vortex loop and de Broglie's hidden thermodynamics
10:30 – 11:00	<u><i>Discussion (Ralf Hofmann)</i></u>	The isolated. uniformly moving electron: Yang-Mills center vortex loop and de Broglie's hidden thermodynamics

30 September 2017 SESSION: General Session CHAIR: Hsiu-Chuan Wei (ROOM 4)		
09:00 – 09:30	<i>Ondřej Čížek</i>	A Note on Identifiability in Econometrics
09:30 – 10:00	<u><i>Lukas Novak and Drahomir Novak</i></u>	Shear Strength Design by Stochastic Simulation and Semi-probabilistic Methods
10:00 – 10:30	<u><i>Ilya Zabrodskiĭ and Arkadi Ponossov</i></u>	The Approximations of Parametrized Functions
10:30 – 11:00		



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30 September 2017 SESSION: General Session CHAIR: Agnieszka B. Malinowska (ROOM 5)		
09:00 – 09:30	<i>Agnieszka B. Malinowska</i>	Pareto Optimal Solutions to Fractional Optimal Control Problems
09:30 – 10:00	<i>Xiangcheng You and HangXu</i>	Non-similarity solution of double-diffusive free convection flow from a vertical surface
10:00 – 10:30	<i>Alibek Issakhov and Aiyimzhan Baitureyeva</i>	Numerical study of a passive scalar transport in lower atmosphere layer from thermal power plants
10:30 – 11:00	<i>Alibek Issakhov and Gulderayim Musakulova</i>	Numerical simulation for forecasting the flooding flow impact on different shape of dam
11:00 – 11:30	Coffee Break	

30 September 2017 SESSION: General Session CHAIR: P. S. Rao (ROOM 6)		
09:00 – 09:30	<i>P. S. Rao and Birendra Murmu and Santosh Agrawal</i>	Effects of Surface Roughness and Non-Newtonian Micropolar Fluid Squeeze Film Between Conical Bearings
09:30 – 10:00	<i>Fernando Ramirez and Jose R. Mora</i>	3D Geometry Generation of Angular Particulate Composites for Computational Simulation
10:00 – 10:30	<i>Zhen Wang, Yupeng Qin and Li Zou</i>	A kind of analytical solution for the Rayleigh-Plesset equation in N -dimensions
10:30 – 11:00	<i>M Anas Abd Bari, Jernej Drofelnik, Andrea Da Ronch and Marco Panzeri</i>	Machine Learning Approach to the Intermittency Transition Turbulence Model for Wind Turbine Application



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30 September 2017		
SESSION: Mathematical Aspects & Physical Modeling of Problems related to the Anisotropic Sphere II		
CHAIR: Ioannis K. Chatjigeorgiou (ROOM 1)		
11:30 – 12:00	<i>G. Cavriil, P. Vafeas & F.A. Coutelieris</i>	An innovative tool for the identification of the accuracy of modeling phenomena of engineering interest: the case of flow through granular media
12:00 – 12:30	<i>T. Maayan & G. Zilman</i>	Distant detecting of a wall by a moving sphere: theory and experiment
12:30 – 13:00	<i>I.K. Chatjigeorgiou, V. Katsardi & T. Miloh</i>	Hydrodynamics and ellipsoidal harmonics
13:00 – 13:30	Discussion	



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30 September 2017 SESSION: General Session CHAIR: Dmitri Knyazkov (ROOM 4)		
11:30-12:00	<i><u>A. P. Konstantinov</u> and S. V. Sukhinin</i>	Wave transmission and reflection at the boundary of phononic crystals
12:00-12:30	<i>S. V. Sukhinin, V. S. Yurkovskiy, <u>A. P. Konstantinov</u>, A. V. Trilis and A. N. Chupin</i>	Nonlinear Hydraulic Shock Mechanism of the Wave Energy Dissipation in the Porous and Fractured Media
12:30 – 13:00	<i>A. Dobrovolskaya, E. Filimonova, V. Bityurin, A. Bocharov and N. Klyuchnikov</i>	Different Numerical Approaches for Simulation of Combustion Wave Initiation by Electrical Discharge
13:00 – 13:30	<i>Dmitri Knyazkov</i>	Diffraction of Plane Wave at 3-dimensional Periodic Layer

30 September 2017 SESSION: General Session CHAIR: Vitaly V. Popuzin (ROOM 5)		
11:30-12:00	<i>Mezhlum A. Sumbatyan, <u>Vitaly V. Popuzin</u> and Mikhail Yu. Remizov</i>	An efficient numerical treatment of the basic integral equation for acoustic filters of a doubly-periodic geometry
12:00-12:30	<i>G. M. Nkeumaleu, A. S. <u>Tchakoutio Nguetcho</u>, J. M. Bilbault</i>	Modulated-wave solutions classification for a discrete nonlinear electrical transmission line



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30 September 2017 SESSION: General Session CHAIR: Zacharoula Kalogiratou (ROOM 5)		
12:30-13:00	<i>Z. Kalogiratou, Th. Monovasilis and T.E. Simos</i>	Two Derivative Runge-Kutta methods with minimum phase-lag
13:00-13:30	<i>Th. Monovasilis Z. Kalogiratou and T.E. Simos</i>	Phase Fitted and Amplification Fitted Two Derivative Runge-Kutta methods

30 September 2017 SESSION: Mathematical Aspects & Physical Modeling of Problems related to the Anisotropic Sphere III CHAIR: George Dassios (ROOM 1)		
15:00 – 15:30	<i>T. Miloh & B. Weis-Goldstein</i>	Electrohydrodynamics and electrorotation of ideally polarized ellipsoidal nanoparticles
15:30 – 16:00	<i>F. Kariotou & M. Doschoris</i>	Connecting ellipsoidal boundaries of different eccentricities for error estimation on EEG ellipsoidal models
16:00 – 16:30	<i>G. Dassios</i>	Three basic open problems in the use of ellipsoidal harmonics
16:30 – 17:00	Discussion	



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30 September 2017 Mini-Symposium* "Chemomechanics and Fracture of Novel Materials & Disclinated MicroCrystals/DMCs" CHAIR: Elias Aifantis (ROOM 2)		
12:00 – 12:30	<i>A.Konstantinidis</i>	Gradient theory and Indentation
12:30 – 13:00	<i>A.Kampouris</i>	Indentation size effect modeling with gradient plasticity
13:00 – 13:30	<i>A.Sidiropoulos</i>	Experimental and theoretical investigation of ITO/Si and Cu/Si structures
13:30 – 14:00	<i>Y.Nikolaides</i>	Fractal analysis of signals and images
14:00 – 14:30	<i>V.Nigdelis</i>	The neuropricing effect: Irrationality of consumer behavior on price stimuli
14:30 – 15:00	Discussion	

30 September 2017 SESSION: 9) Title: The Fourth Symposium on Approximation of Curves and Surfaces (ACS 2017) CHAIR: Abedallah Rababah (ROOM 2)		
15:00 – 15:30	<i>A. Taani</i>	Cardinal E-Splines
15:30 – 16:00	<i>A. Rababah</i>	On Hermite-Fejer Interpolation



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30 September 2017 SESSION: General Session CHAIR: Codruta Stoica (ROOM 4)		
15:00 – 15:30	<i>Codruta Stoica</i>	On Dichotomy and Splitting Issues for Evolution Equations
15:30 – 16:00	<i><u>Joanna Wróbel</u> and Adam Kulawik</i>	Analysis of the Influence of Material Parameters of The Numerical Model on The Obtained Shape of The Heat Affected Zone for the TIG Heating Process
16:00 – 16:30	<i><u>Pedro Alberti-Villalobos</u> and Sebastián Molina-Adasme and Patricia Maldonado-Cárdenas</i>	High performance implementation of Wolf's Method

30 September 2017 SESSION: General Session CHAIR: Jurgen Geiser (ROOM 5)		
15:00 – 15:30	<i><u>Vijay Shankar,</u> Andreas Bengston, Victor Fransson, Carl- Eric Hagentoft</i>	Numerical Analysis of the influence of Natural Convection in Attics – A CFD Analysis
15:30 – 16:00	<i><u>Vijay Shankar</u> Ragnar Hellsvik and Carl-Eric Hagentoft</i>	Transient Heat Transfer and Moisture Load in Cold Attic Constructions – A CFD Analysis
16:00 – 16:30	<i><u>Jurgen Geiser,</u> Karsten Bartecki</i>	Additive, Multiplicative and Iterative Splitting Methods for Maxwell Equations: Algorithms and Applications

END OF THE 6TH DAY
END OF THE CONFERENCE