



“Al. I. Cuza” UNIVERSITY OF IAȘI, Faculty OF MATHEMATICS
“Octav Mayer” MATHEMATICAL INSTITUTE OF THE ROMANIAN ACADEMY
ACADEMY OF ROMANIAN SCIENTISTS
ROMANIAN SOCIETY OF APPLIED AND INDUSTRIAL MATHEMATICS
ROMANIAN MATHEMATICAL SOCIETY - IAȘI branch
ROMANIAN SOCIETY OF RHEOLOGY
UNIVERSITY OF AGRICULTURAL SCIENCES AND VETERINARY MEDICINE
“Ion Ionescu de la Brad” IAȘI
NATIONAL INSTITUTE OF INVENTICS - IAȘI



October 14-17, 2010
Iasi, Romania

THE 18th CONFERENCE ON APPLIED AND INDUSTRIAL MATHEMATICS

CAIM 2010

PROGRAMME

Editura Universității "Alexandru Ioan Cuza" din Iași
"Al. I. Cuza" UNIVERSITY OF IAȘI, Faculty OF MATHEMATICS
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CONFERENCE MAIN TOPICS

- 1 ALGEBRA, LOGIC, TOPOLOGY
- 2 DYNAMICAL SYSTEMS
- 3 FUNCTIONAL ANALYSIS AND DIFFERENTIAL EQUATIONS
- 4 ANALYTICAL AND NUMERICAL METHODS IN MECHANICS
- 5 MATHEMATICS IN PHYSICS, CHEMISTRY AND INDUSTRY
- 6 MATHEMATICS IN BIOLOGY
- 7 THEORETICAL COMPUTER SCIENCES
- 8 EDUCATION

INVITED SPEAKERS

Viorel BARBU (Iași, Romania)
Vasile BRINZANESCU (Bucharest, Romania)
Mitrofan CHOBAN (Chișinău, Rep. Moldova)
Adrian CONSTANTINESCU (Bucharest, Romania)
Ioan CRUDU (Galați, Romania)
Angelo FAVINI (Bologna, Italy)
Angel GARRIDO (Madrid, Spain)
Rolf JELTSCH (Zürich, Switzerland)

Cezar JOITA (Bucharest, Romania)
Nikos MASTORAKIS (Athens, Greece)
Radu MIRON (Iași, Romania)
Nicolae PAVEL (Athens, USA)
Boris PLAHTEANU (Iași, Romania)
Ionut PORUMBEL (Bucharest, Romania)
Dana SCHLOMIUK (Montreal, Canada)
Mircea CAZACU (Bucharest, Romania)

SCIENTIFIC COMMITTEE

Sergiu AIZICOVICI (Athens, Ohio)
Nuri AKSEL (Bayreuth)
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Gheorghe MARIN (Bucharest)
Nikos MASTORAKIS (Greece)

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Titus PETRILA (Cluj-Napoca)
Emilia PETRISOR (Timisoara)
Kazimierz PIECHOR (Warsaw)
Maria PINHO (Porto)
Constantin POPA (Constantza)
Mihail POPA (Chisinau)
Kumbakonam RAJAGOPAL (Texas)
Mefodie RATA (Chisinau)
Liliana RESTUCCIA (Messina)
Valeriu SAVA (Iasi)
Panayotis SIAFARIKAS (Patras)
Mirela STEFANESCU (Constantza)
Nicolae SUCIU (Cluj-Napoca)
Kiyoyuki TCHIZAWA (Tokyo)
Vladilen TRENIGIN (Moskow)
Harry VERECKEN (Juelich)
Cristian VOICA (Bucharest)

ORGANIZING COMMITTEE

Ilie BURDUJAN
Ovidiu CĂRJĂ
Ion CRĂCIUN
Costica MOROȘANU

SCHEDULE

October 14, 2010

14.00 – 22.00 **Registration** at “Alexandru Ioan Cuza” University, Iași

October 15, 2010

7.00 – 9.00 **Registration at “Alexandru Ioan Cuza” University, Iași**

9.00 – 10.00 **Opening Ceremony**

10.00 – 10.20 **Coffee Break**

10.20 – 12.35 **Plenary Session**

12.40 – 13.30 **Book Promotion**

13.30 – 15.00 **Lunch**

15.00 – 17.15 **Plenary Session**

17.15 – 17.45 **Coffee Break**

17.45 – 19.15 **Sessions on Sections**

20.00 – 22.00 **Official Dinner**

October 16, 2010

8.00 – 8.30 **Poster Session**

8.30 – 9.30 **Plenary Session**

9.30 – 10.45 **Sessions on Sections**

10.45 – 11.00 **Coffee Break**

11.00 – 12.15 **Sessions on Sections**

12.15 – 13.30 **ROMAI meeting**

15.00 – 19.00 **Sessions on Sections**

October 17, 2010

Excursion to Agapia – Secu

THURSDAY, October 14, 2010

14.00 – 22.00 Participants' arrival and check-in

FRIDAY, October 15, 2010

9.00-9.30 **Opening session**, Conference Hall of the Romanian Academy, Bd. Carol I, nr.6
Prof. univ. dr. Vasile Işan, Rector of "Alexandru Ioan Cuza" University

9.30-9.45 **Anca Veronica Ion**, *Tribute to Adelina Georgescu*

9.45-10.00 **Adelina Georgescu award**

10.00 – 10.20 **Coffee break**

10.20 – 12.35 **PLENARY SESSIONS**

PLENARY SESSION - Chairman: Acad. Mitrofan M. Choban

10.20-10.50 **Acad. Radu Miron** ("Octav Mayer" Institute of Mathematics, Iasi)

On the Finslerian mechanical systems

10.55-11.25 **Rolf Jeltsch, Julin T. Becerra Sagredo, Wesley P.Petersen, Jrg Gass s.a**

High-order semi-Lagrangian numerical method for the large-eddy simulation of reactive flows

11.30-12.00 **Acad. Viorel Barbu** ("Octav Mayer" Institute of Mathematics, Iasi)

Nonlinear diffusion equations and self-organized criticality

12.05-12.35 **Mircea Dimitrie Cazacu, Cabiria Andreian Cazacu** (Polytechnic University, Bucharest, "Simion Stoilow" Institute of Mathematics, Bucharest)

New mathematical boundary conditions for the 3D-Flow of the heavy and viscous liquid in a suction pump chamber and its modelling after multiple similitude criteria

12.40-13.30 **BOOK PROMOTION**

Library Hall of Romanian Academy house, Bd. Carol I, nr.6

«**Matematică și viață**» authors *Adelina Georgescu și Lucica Dragotescu*

PLENARY SESSION - Chairman: Ionuț Porumbel

15.00-15.30 **Angelo Garrido** (Facultad de Ciencias de la UNED, Madrid, Spain)

Analyzing Complex Networks

15.35-16.05 **Boris Plăhțeanu, Mircea Frunză** (Technical University of Iasi)

Innovational culture through performance and inventics school from Iasi

16.10-16.40 **Ionuț Porumbel** (National Research and Development Institute for Gas Turbines COMOTI, Galati)

An Implementation of the Embedded Boundary Method in Large Eddy Simulation CFD Algorithms

16.45 – 17.15 **Nikos Mastorakis RS** (Naval Academy of Athens, Greece)

17.15 – 17.45 **Coffee break**

17.45-19.15 **PARALLEL SESSIONS**

SECTION 1 – ALGEBRA, LOGIC, TOPOLOGY

Chairmen: Adrian Constantinescu, Mefodie Rațiu

17.45-18.00 **Adrian Constantinescu** (Institute of Mathematics, Bucharest)

Variations on a theme of Wadsworth

18.00-18.15 **Acad. Mefodie Rațiu** (Institute of Mathematics and Computer Science, Chisinau, Rep. of Moldova)

An example of maximal iterative algebra of the functions of topological boolean algebra of order 16 with 3 open elements

18.15-18.30 **Olga Izbaș** (Institute of Mathematics and Computer Science, Chisinau, Rep. of Moldova)

A numerable cardinal of model pre-complete classes of formulas in the non-tabular extensions of proof-intuitionistic logic

18.30-18.45 **Dumitru Botnaru, Alina Țurcanu** (Technical University of Moldova, Chisinau)

The Hewitt spaces as right product of two subcategories

18.45-19.00 **Olga Cerbu** (Technical University of Moldova)

The lattice of semi-reflexive subcategories

SECTION 2: DYNAMICAL SYSTEMS

Chairmen: Serban E. Vlad, Brigita Fercek

17.45-18.00 **Șerban E. Vlad** (City Hall, Oradea, Romania)

Universal Regular Autonomous Asynchronous Systems: ω -Limit Sets, Invariance and Basins of Attraction

18.00-18.15 **Adriana-Paula Petre** (Department of Mathematics, West Univ. of Timisoara)

On uniform exponential dichotomy of linear skew-product three-parameter semiflows in Banach spaces

18.15-18.30 **Brigita Fercek, Xingwu Chen, Valery G. Romanovschi** (CAMTP- Center for Applied Mathematics and Theoretical Physics, Mirabor, Slovenia)

Some integrability conditions for two-dimensional systems with homogeneous quintic nonlinearities

18.30-18.45 **Georgios Papamikos** (CAMTP- Center for Applied Mathematics and Theoretical Physics, Mirabor, Slovenia)

Lie and Noether symmetries of a class of time-dependent anharmonic oscillators

18.45-19.00 **Ilie Burdujan** (USAVM, Iasi)

Classification of a class of homogeneous quadratic differential systems with derivations

SECTION 3: FUNCTIONAL ANALYSIS AND DIFFERENTIAL EQUATIONS

Chairmen: Liliana Restuccia, Mihai Turinici

- 17.45-18.00 **A. Georgescu**, **L. Palese** (University of Bari, Italy)
On the nonlinear stability of the chemical equilibrium of a binary mixture
- 18.00-18.15 **Liliana Restuccia** (University of Messina, Italy)
Determination of asymptotic waves in visco-inelastic media by double-scale method
- 18.15-18.30 **Mihai Turinici** (Department of Mathematics, UAIC, Iasi)
Altman ordering principles and dependent choice
- 18.30-18.45 **Ioana Cătălina Galan** ("Octav Mayer" Institute of Mathematics, Iasi)
Approximate Controllability of the Magnetohydrodynamic Equations
- 18.45-19.00 **Gabriela Marinoschi** (Institut. of Mathematical Statistics and Applied Mathematics, Bucharest)
Inverse problems in porous media

SECTION 4: ANALYTICAL AND NUMERICAL METHODS IN MECHANICS

Chairmen: Anca Veronica Ion, Laurentiu Calmutchi

- 17.45-18.00 **Acad. Mitrofan Choban, Laurențiu Calmuțchi** (Tiraspol State University, Rep. of Moldova)
Some fixed points theorems in E-metric spaces
- 18.00-18.15 **Anca Veronica Ion** (Institute of Mathematical Statistics and Applied Mathematics, Bucharest)
An unconventional method of solving the Navier Stokes equations
- 18.15-18.30 **Florica Dragomirescu** (Polytechnical University of Timisoara)
Micropolar parameters influence on the stability domain in a convection problem for a micropolar fluid flow
- 18.30-18.45 **Adela Ionescu** (University of Craiova)
New computational approaches of mixing behavior in excitable media
- 18.45-19.00 **Yui Hiroaki** (University of Aizu, Japan)
Reduced Operation Size for Chord Method Applying Partially Solving Method

SECTION 5: MATHEMATICS IN PHYSICS, CHEMISTRY AND INDUSTRY

Chairmen: Dimitry Ivanov, Sanda Cireșica Cocindău

- 17.45-18.00 **Sanda Cireșica Cocindău, Gheorghe Iorga** (S.C.Uzinsider Engineering of the Work Rolls of Finishing Stand – LTG2, Galati)
Studies, researches and contributions improving the controlled cooling system of the work rolls of finishing stand - LTG2

- 18.00-18.15 **Dimitry Ivanov** (Institute of Applied Mathematics and Mechanics, National Academy of Sciences of Ukraine)
Parallel fault simulation algorithm of digital circuits for many-core workstations with common memory
- 18.15-18.30 **Hossein Karkehabadi** (Sharif University of Technology, Iran)
Logistic Optimization in Automotive Corporations by Using Graph Theory
- 18.30-18.45 **Vasile Patraşcu** (TAROM, Bucharest)
New HSL distance based color clustering methods

SECTION 6: MATHEMATICS IN BIOLOGY

Chairmen: Gabriel Dimitriu, Jacques Lundja

- 17.45-18.00 **Viorel Arnăutu, Ana Maria Moşneagu** (Department of Mathematics, UAIC, Iasi)
Numerical applications for insulin treatment models
- 18.00-18.15 **Gabriel Dimitriu, Răzvan Ştefănescu** ("Gr. T. Popa" University of Medicine and Pharmacy Iasi)
Optimal therapeutic protocols applied to tumor-immune-chemotherapy interaction
- 18.15-18.30 **Paul Georgescu** (Technical University of Iasi)
The dynamics of an impulsively controlled two-prey one-predator food web model
- 18.30-18.45 **Jacques Lundja** (RFC, France)
Mathematical modelling of the movement of animals
- 18.45-19.00 **Rauf Malik** (Bahria University)
Gene Regulatory Networks a System Approach

SECTION 7: THEORETICAL COMPUTER SCIENCES

Chairmen: Acad. Gheorghe Mişcoi, Cristian Vidraşcu

- 17.45-18.00 **Aleksandra Maximova** (Institute of Applied Mathematics and Mechanics, National Academy of Sciences of Ukraine)
One use of fuzzy portraits for pattern recognition problem
- 18.00-18.15 **Cristian Vidraşcu** (Department of Computer Science, UAIC, Iasi)
Modelling parallel and distributed systems by Petri Nets
- 18.15-18.30 **Gheorghe Mişcoi, O. Groza, L. Usatii** (Free International University of Moldova, Chisinau)
Method of "catastrophes" and its application to analyze generalized queueing models
- 18.30-18.45 **Gheorghe Mişcoi, Olga Benderschi** (Free International University of Moldova, Chisinau)
Moments of busy periods in a $M_n | G_n | 1$ priority queue with Pareto distribution of services

18.45-19.00 **Lilia Tabără** (Moldova State University, Chisinau)

On function approximation with Faber-Laurent polynomials in Holder spaces

SECTION 8: EDUCATION

Chairmen: Ion Valuță, Cristian Voica

17.45-18.00 **Cristian Voica, Consuela Voica** (Department of Mathematics, Univ. of Bucharest)

Strategies in problem posing

18.00-18.15 **Acad. Mitrofan Choban, Ion Valuță** (Tiraspol State University, Chisinau)

Asupra periodizarii dezvoltarii matematicii din pdv metodologoco-genetic

18.15-18.30 **Ion Valuță, Evelina Tihonov** (Tiraspol State University, Chisinau)

Cum sa predam-invatom matematica azi?

18.30-18.45 **Mitrofan Choban, Ion Valuță, Evelina Tihonov** (Tiraspol State University, Chisinau)

Considerente in privinta rolului algebrei si informatiei asupra genezei notiunilor matematice

18.45-19.00 **Viorica Cornelia Bront** ("Ioan Bococi" Scholar Group, Oradea)

Dificultati intampinate in pregatirea examenului de Bacalaureat la matematica

19.00-19.15 **N. Samarescu** (Universitatea din Pitesti)

Tranziția de la aritmetic la algebric: tehnica Scaffolding

SATURDAY, October 16, 2010

8.00-8.30 POSTER SESSION

Library Hall, Romanian Academy, Bd. Carol I, nr.6

Cristina-Eliza Brunchi, Simona Morariu, Maria Bercea

Theoretical and Experimental Evaluation of the Viscosity of Polymer Solutions

Simona Morariu, Cristina-Eliza Brunchi, Maria Bercea

Rheological models for smectite aqueous dispersions

8.30-9.30 PLENARY SESSION

Chairman: Angelo Garrido

8.30-9.00 **Acad. Mitrofan Choban, Liubomir Chiriac** (Tiraspol State University, Chisinau)

General problems of topological algebra

9.00-9.30 **Cezar Joița** (Institute of Mathematics of the Romanian Academy, Bucharest)

Analytic convexity in complex manifolds

9.30-19.00 PARALLEL SESSIONS

SECTION 1 – ALGEBRA, LOGIC, TOPOLOGY

Chairmen: Mirela Ștefănescu, Vasile Ursu

9.30-9.45 **Camelia Ciobanu** (“Mircea cel Batran” Naval Academy, Constantza)

Some remarks on the properties of Frattini subalgebras of Lie algebras

9.45-10.00 **Alexandru Lungu, Mariana Braniște** (Moldova State University, Chisinau)

On the methods for deriving pseudo-minor groups of Wq -symmetry

10.00-10.15 **Parascovia Syrbu** (Moldova State University, Chisinau)

On Middle Bol Loops

10.15-10.30 **Liubomir Chiriac, Natalia Bobeică** (Tiraspol State University, Chisinau)

Direct Products of Groupoids with Multiple Identities

10.30-10.45 **Natalia Bobeică, Liubomir Chiriac**, (Tiraspol State University, Chisinau)

On Topological AG-groupoids and Paramedial Quasigroups with Multiple Identities

10.45-11.00 **Coffee break**

11.00-11.15 **Vladimir Izbaș** (Institute of Mathematics and Computer Science, Chisinau)

On subquasigroups of the direct product of quasigroups

11.15-11.30 **Vasile Ursu** (Technical University of Moldova, Chisinau)

Axiomatization of Some Classes of Loops and the Local Theorem for Them

11.30-11.45 **Alexandru Covalschi** (“Ion Creanga” Pedagogical State University, Chisinau)

Quasiidentities of the Finitely Generated Nilpotent A-Loops

11.45-12.00 **Dumitru Botnaru, Elena Baes** (Technical University of Moldova, Chisinau)

Factorization structures with hereditary classes

12.00-12.15 **Joseph Varghese** (Christ University, Bangalore, India)

Some Complete Tripartite Graphs that do not accept Continuous Monotonic Decomposition

12.15-13.30 The annual meeting of ROMAI assembly

15.00-15.15 **Adriana Cataș** (Department of Mathematics and Computer Science, University of Oradea)

Neighborhood of a New Family of Multivalent Functions with Negative Coefficients Using Multiplier Transformations

15.15-15.30 **Alina Alb Lupăș** (Department of Mathematics and Computer Science, University of Oradea)

On special differential subordinations using multiplier transformation and Ruscheweyh derivative

15.30-15.45 **Anca Croitoru, Alina Gavriliuț** (Department of Mathematics UAIC Iasi)

About L-infinity in non-additive case

- 15.45-16.00 **Archana Paradkar** (MDU, India)
Pairwise Weakly \hat{I}^2 -Continuous Functions in Bitopological Spaces
- 16.00-16.15 **Gabriela Apreutesei** (Department of Mathematics UAIC Iasi)
Nonlinear topological structures and applications
- 16.15-16.30 **Adrian Sandovici** (Department of Mathematics UAIC Iasi)
Composition of Dirac structures for infinite-dimensional systems
- 16.30-16.45 **Florin Damian** (Moldova State University, Chisinau)
Tilings of hyperbolic spaces by a manifold reconstruction
- 16.45-17.00 **Adina Balmuş** (Department of Mathematics UAIC Iasi)
On the mean curvature of biharmonic submanifolds in spheres
- 17.00-17.30 **Coffee break**
- 17.30-17.45 **Siraj Udin** (University of Malaya)
Warped product pseudo-slant submanifolds of nearly Kaehler manifolds
- 17.45-18.00 **Siraj Udin** (University of Malaya)
Warped product submanifolds of a Kenmotsu manifold
- 18.00-18.15 **Livia Bejan** (Technical University of Iasi)
A generalization of Weyl type for derivative
- 18.15-18.30 **Simona Druţă-Romaniuc, V. Oproiu** (Department of Mathematics UAIC Iasi)
Some properties of the natural diagonal Sasakian tangent sphere bundles

SECTION 2: DYNAMICAL SYSTEMS

Chairmen: Mihail Popa, Eugen Vasile

- 9.30-9.45 **Nicolae Teodora, Eugen Vasile** ("Politehnica" University, Bucharest)
A Bidimensional Dynamical System for Semiconductor Transport and Relaxation Phenomena
- 9.45-10.00 **Cătălin Liviu Bichir, Adelina Georgescu, Bogdan Amuzescu**
Limit cycles by FEM for a one - parameter dynamical system associated to the Luo - Rudy I model
- 10.00-10.15 **Ana Novakovska** (Rostirea Maths Research, Galati)
Dynamical system of the control of the silver biosorption process
- 10.15-10.30 **Ganna Ivanovna** (IAMM, National Academy of Sciences, Donetsk, Ukraine)
Operative adaptation of mathematical model of heat and mass transfer of continuous casting
- 10.30-10.45 **Petre Preda, R. Mosincat, Ciprian Preda** (West University of Timisoara)
On the roughness of some stability properties of one-parameter semigroups
- 10.45-11.00 **Coffee break**

- 11.00-11.15 **V. Culev, V. Orlov, V. Pricop, V. Putuntica** (Institute of Mathematics and Computer Science, Academy of Moldova)
Lie algebra admitted by differential system of tuberculosis natural dynamic
- 11.15-11.30 **Dumitru Cozma** (Tiraspol State University, Chisinau)
The cyclicity of a weak focus in cubic differential systems with invariant straight lines and invariant conics
- 11.30-11.45 **Vadim Repesco, A. Şubă** (Institute of Mathematics and Computer Science, Academy of Moldova)
Integrability of quadratic systems with 1:-3 resonant singular point
- 11.45-12.00 **Mircea Lupu, Olivia Florea, Ciprian Lupu** ("Transilvania" University of Brasov)
Studies and applications of absolute stability in the automatic regulation case of the nonlinear dynamical systems

12.00-13.30 The annual meeting of ROMAI assembly

- 15.00-15.15 **Mihail Popa, Victor Pricop** (Institute of Mathematics and Computer Science, Chisinau)
Combinatorial and asymptotic aspects to the center-focus problem
- 15.15-15.30 **Călin Iurie, Valeriu Baltag** (Institute of Mathematics and Computer Science, Academy of Moldova)
The transvectants and invariant conditions for a center for some classes of cubic bidimensional differential systems
- 15.30-15.45 **Victor Orlov** (Institute of Mathematics and Computer Science, Academy of Moldova)
Lie's Integrating Factor for quadratic differential system

SECTION 3: FUNCTIONAL ANALYSIS AND DIFFERENTIAL EQUATIONS

Chairmen: Narcisa Apreutesei, Rodica Luca-Tudorache

- 9.30-9.45 **Radu Ţurcan, Ciprian Ţurcan, Mariana Dumitru** (University of Oradea)
A Parallel Between the Pollutant Transport Equation, into the Porous Environment and The Black-Scholes Equation in Evaluating Stock Options
- 9.45-10.00 **Ahmad Saeedi** (Department of Mathematics, Mofid University, Iran)
Numerical solution to Nonlinear Diffusion Problem
- 10.00-10.15 **Ahmed Ali Elwakshi** (Faculty of Science of Misurata University, Libya)
Stability of Solving Rank IV-Partial Differential Equations
- 10.15-10.30 **Alexandra Scerbakova** (Department of Mathematics, Transnistrian State Univ., Tiraspol)
To the theory of solvability of one integral equation with a summary-difference kernel
- 10.30-10.45 **Roxana Şendruţiu** (University of Oradea)
A note on certain inequalities for univalent functions

10.45-11.00 **Coffee break**

- 11.00-11.15 **Marius Apetrii** (Department of Mathematics of UAIC Iasi)
Fuzzy cones in topological spaces
- 11.15-11.30 **Șt. Cruceanu, A. M. Răducan** ("Gh. Mihoc-C.Iacob" Institute of Mathematical Statistics and Applied Mathematics of Romanian Academy, Bucharest)
Numerically tracing homotopy paths for nonlinear systems
- 11.30-11.45 **Narcisa Apreutesei** (Department of Mathematics, Technical University of Iasi)
Elliptic perturbations of some parabolic and hyperbolic problems
- 11.45-12.00 **Rodica Luca-Tudorache** (Department of Mathematics, Technical University, Iasi)
Boundary value problems for some classes of third-order difference systems

12.00-13.30 The annual meeting of ROMAI assembly

- 15.00-15.15 **Gabriela Tănase** (Department of Mathematics, UAIC Iasi)
On the use of orthogonal polynomials in multi-step numerical methods for ordinary differential equations
- 15.15-15.30 **Eduard Rotenstein** (Department of Mathematics, UAIC Iasi)
A multi-dimensional FBSDE with quadratic generator and its applications in options pricing and hedging
- 15.30-15.45 **Petru Sorin Botezat** (Department of Mathematics, UAIC Iasi)
On the Brezis-Browder ordering principle
- 15.45-16.00 **Vasile Neaga, Oxana Paladi** (Tiraspol State University, Chisinau)
On some algebraic methods of regularization of integral singular operators

SECTION 4: ANALYTICAL AND NUMERICAL METHODS IN MECHANICS

Chairmen: Sanda Cleja-Țigoiu, Stelian Ion

- 9.30-9.45 **Ion Crăciun** (Department of Mathematics, Technical University of Iasi)
On the second axially-symmetric problem of micropolar elasticity in the case of steady vibrations
- 9.45-10.00 **Sanda Cleja-Țigoiu** (Department of Mathematics, University of Bucharest)
Dislocations and Disclinations in Finite Elasto-Plasticity
- 10.00-10.15 **Sanda Cleja-Țigoiu, Nadia Stoicuță, Olimpiu Stoicuță** (Department of Mathematics, University of Bucharest)
Analysis and Numerical Approach to Unidimensional Elasto-Plastic Problem with Mixed Hardening
- 10.15-10.30 **Faraidun Hama-Salh** (College of Science, University of Sulaimani, Iraq)
Numerical Solution for Fifth Order Initial Value Problems using Lacunary Interpolation
- 10.30-10.45 **Nadia Stoicuță** (University of Petrosani)
Analysis and Numerical Approach to Unidimensional Elasto-Plastic Problem with Mixed Hardening

10.00-11.15 **Coffee break**

11.15-11.30 **Ivan Secrieru, Vitalie Ticău** (State University of Moldova, Chisinau)

Stability of approximate scheme for evolution equation with space fractional derivative

11.30-11.45 **Stelian Ion** ("Gh. Mihoc-C.Iacob" Institute of Mathematical Statistics and Applied Mathematics of Romanian Academy, Bucharest)

Mathematical modelling of metals mobility in the soil root zone

11.45-12.00 **Tommaso Benincasa, Costică Moroşanu** (Department of Mathematics, UAIC Iasi)

A product formula approach to an inverse problem governed by nonlinear phase-field transition system. Numerical implementation

12.00-12.30 **Angela Muntean** ("Mircea cel Batran" Naval Academy, Constantza)

Equations of motion used in oceanography and meteorology

12.30-14.00 **The annual meeting of ROMAI assembly**

15.00-15.15 **John Kechagias** (Technological Educational Institute of Larissa, Greece)

Predicting layer thickness deformation of the laminated object manufacturing process using the Taguchi design

15.15-15.30 **Kulbhushan Singh** (Papua New Guinea University of Technology, LAE, PNG)

Lacunary interpolation for generalized problem

15.30-15.45 **Lotfekar Roushanak** (Department of Mathematics, Islamic Azad University, Iran)

Nonlinear Degenerate Pseudo-parabolic Equations

15.45-16.00 **Dan Tiba** (Institute of Mathematics, Bucharest)

Shape optimization problems in Mechanics

16.00-16.15 **Sergiu Lupu, Carmen Elena Lupu, Camelia Ciobanu** ("Mircea cel Batran" Naval Academy of Constantza)

Some remarks about orbits of GPS satellites

16.15-16.30 **Sergiu Lupu, Carmen Elena Lupu, Camelia Ciobanu** ("Mircea cel Batran" Naval Academy of Constanta)

On Exponential-Binomial-Max lifetime distribution

SECTION 5: MATHEMATICS IN PHYSICS, CHEMISTRY AND INDUSTRY

Chairmen: Veaceslav Zelentov, Vasile Postolică

9.30-9.45 **Vasile Postolică** ("Vasile Alecsandri" Bacau University)

Theoretical and Applied Mathematics under the Efficiency

9.45-10.00 **Silviu Năstac, Mihaela Picu** ("Dunarea de Jos" University, Galatzi)

Personality determination using vibrating movement parameters

10.00-10.15 **Ssi. Mt Zahedi** (Binus University, Indonesia)

Integer Relaxation in Backward Batch scheduling Problem with Batching and Sequencing in Single Formulation to Minimize Total Actual Flow Times

10.15-10.30 **Shafei Ebrahimi Shokoofeh** (University of Applied Science and Technology & SAIPA Corporation)

Logistic Optimization in Automotive Corporations by Using Graph Theory

10.30-10.45 **Iulian Stoleriu** (Department of Mathematics, UAIC Iasi)

Non-local models for solid-solid phase transitions

10.45-11.00 **Coffee break**

11.00-11.15 **Dana Ortansa Dorohoi, Alina Rogojanu, Mihaela Liliana Ivan** (Department of Physics, UAIC Iasi)

Point Group Theory Applied to Establish Symmetry Selection Rules for Molecular Spectra

11.15-11.30 **Roxana Elena Stănculescu, Doina Hélène Patenie, Dana Ortansa Dorohoi** (Department of Physics, UAIC Iasi)

Quantum Mechanical Characterization of Benzo-[[f]]-Quinolinium Ylids by using HyperChem

11.30-11.45 **Dana Ortansa Dorohoi, Cristina-Marcela Scoban** (Department of Physics, UAIC)

Solvatochromic Effects, Studied by Statistical Methods

11.45-12.00 **Servilia Oancea, I. Grosu, A.V. Oancea** (UASVM Iasi)

Synchronization and antisynchronization for two chaotic systems with quadratic nonlinearity

12.00-12.15 **Veaceslav Zelentov** (Institute of Applied Physics of the Academy of Science of Moldova)

Calculation of the constant of adsorption equilibrium and isotherm for the system aqueous solution naf-diatomite

12.15-13.45 **The annual meeting of ROMAI assembly**

SECTION 6: MATHEMATICS IN BIOLOGY

Chairmen: Gabriel Dimitriu, Jacques Lundja

9.30-9.45 **Răzvan Ștefănescu, Gabriel Dimitriu** ("Gr. T. Popa" University of Medicine and Pharmacy Iasi)

Optimal control in treatment strategy of HIV infection

9.45-10.00 **Ștefan Gicu Cruceanu, Dorin Marinescu** ("Gh. Mihoc-C. Iacob" Institute of Mathematical Statistics and Applied Mathematics of Romanian Academy, Bucharest)

Applications of cellular exclusion methods to locate solutions of nonlinear systems of equations

10.00-10.15 **Nadia Stoian** ("Transilvania" University of Brasov)

An analysis of the growth of a mixed bacterial population

12.00-13.30 **The annual meeting of ROMAI assembly**

SECTION 7: THEORETICAL COMPUTER SCIENCES

Chairmen: Valeriu Ungureanu, Doru Anastasiu Popescu

9.30-9.45 **Cristian Tudorache** ("Gr. Moisil" Computer Science High School of Iasi)

Limbajul C#

9.45-10.00 **Iuliana Paraschiv Munteanu** (Faculty of Mathematics and Computer Science, University of Bucharest)

A fast Classification Algorithm based on Support Vector Machines

10.00-10.15 **Gheorghe Căpățână** (Moldova State University)

Some p-expert systems for classification of objects

10.15-10.30 **Sergiu Cataranciuc** (Moldova State University)

Algorithm of median calculation of the complex abstract cubes

10.30-10.45 **Teodora Gherman** (Public Administration Academy of Moldova)

Computer Assisted Methods of Evaluation

10.45-11.00 **Coffee break**

11.00-11.15 **Doru Anastasiu Popescu** (Faculty of Mathematics and Computer Science, University of Pitesti)

Method for Verification Web Application

11.15-11.30 **Doru Anastasiu Popescu, Maria Catrinel Dăunăuța** (Faculty of Mathematics and Computer Science, University of Pitesti)

A method of selection of the files to be submitted to verification and testing in the process of web applications development

11.30-11.45 **Eleonora Seichiuc** (Moldova State University, Chisinau)

On intelligent support system in solving regular and weak-singular integral equations

11.45-12.00 **Vladislav Seichiuc** (Trade Cooperative University of Moldova, Chisinau)

On approximate solving of mixed nonlinear singular integral equations

12.00-13.30 The annual meeting of ROMAI assembly

15.00-15.15 **Valeriu Ungureanu** (Moldova State University, Chisinau)

Numerical iterative methods for Nash equilibrium computing

15.15-15.30 **Ludmila Novac** (Moldova State University, Chisinau)

Conditions of Nash equilibrium existence for the non-cooperative informational extended games

15.30-15.45 **Serghei Sapunov** (IAMM of National Academy of Science, Ukraine)

On the distinguishability of vertices of labeled graphs

15.45-16.00 **Oleksiy Kurganskyy** (IAMM of National Academy of Science, Ukraine)

What is a state of a dynamic computational structure distributed in an environment?

16.00-16.15 **Patrick Lechuga** (Lechuga Foundation, France)

Theoretical computer sciences

16.15-16.30 **Ioan C. Maxim, Costică Moroşanu** (Department of Mathematics, UAIC Iasi)

Algorithm optimization for the coverage of the unrestricted planar surface

SECTION 8: EDUCATION

Chairmen: Valerian Oprişor, Anil Rajput

9.30-9.45 **Corina Andreea Sultana** ("I.L. Caragiale" National College, Bucharest)

Analysis methods to improve school motivation

9.45-10.00 **Angela Sava** ("Vasile Alecsandri" High School Iasi)

Bazele psihologice ale formarii interesului studierii geometriei

10.00-10.15 **Marcel Teleucă, Andrei Găluşca** (Tiraspol State University, Chisinau)

Zsigmondy's theorem and applications to olympiad problems

10.15-10.30 **Sali Larisa, Marcel Teleucă** (Tiraspol State University, Chisinau)

Identificarea Copiilor Dotati La Matematică: Metode, Strategii si Instrumente Didactice

10.30-10.45 **Anil Rajput** (Bhabha Engineering Research Institute, Bhopal, India)

The Role of ICT in Green Technology Implementation

10.45-11.00 **Coffee break**

11.00-11.15 **Valerian Oprişor** (Theoretic High school "Iulia Zamfirescu", Mioveni)

Methods to solve the problems of collinear points and competition straight lines

11.15-11.30 **Dinuţă Neculae** (Educational Science Faculty, University of Pitesti)

Strategii de abordare a gandirii critice prin studiul matematicii in invatamantul preuniversitar

11.30-11.45 **Mihaela Neagu** (National College Iasi)

Repere metodologice in analiza si evaluarea curriculumului scolar proiectat

11.45-12.00 **Ioan Maxim** (Teacher Training Department "Stefan cel Mare" University, Suceava)

Particularities of Feedback implementation in Educational Software

12.00-13.30 **The annual meeting of ROMAI assembly**

Exhibition "INVENTICS"

**"Institutul Național de Inventică - Centrul PATLIB Iași - și Spațiul academic
- piloni ai Iașului Creativ" -**

Library Hall of Romanian Academy House, Bd. Carol I, nr. 6

LIST OF PARTICIPANTS

Section 1 ALGEBRA, LOGIC, TOPOLOGY

Alina ALB LUPAS	University of Oradea, Dpt of Mathematics and Computer Science
Gabriela APREUTESEI	"Al.I. Cuza" University, Faculty of Mathematics
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Joseph VARGHESE	Christ University
Ursu VASILE	Universitatea Tehnica a Moldovei, Chisinau

Section 2 DYNAMICAL SYSTEMS

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Serban E. VLAD	Oradea City Hall

Section 3 FUNCTIONAL ANALYSIS AND DIFFERENTIAL EQUATIONS

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Ciprian TURCAN	University of Oradea
Radu TURCAN	University of Oradea

Section 4 ANALYTICAL AND NUMERICAL METHODS IN MECHANICS

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Sergiu LUPU	Academia Navala "Mircea cel Batran" Constanta
Angela MUNTEAN	Naval Academy "Mircea cel Batran"
Faraidun Hama-Salh	Numerical Analysis
Ivan SECRIERU	State University of Moldova
Kulbhushan SINGH	The Papua New Guinea Univ. of Tech. Lae, PNG
Nadia STOICUTA	University of Petrosani
Dan TIBA	Institute of Mathematics, Bucharest

Section 5 MATHEMATICS IN PHYSICS, CHEMISTRY AND INDUSTRY

Cristina-Eliza BRUNCHI	"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania
Sanda Ciresica COCINDAU	S.C. UZINSIDER ENGINEERING S.A.GALATI
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Hossein KARKEHABADI	Sharif University of Technology
Silviu NASTAC	University "Dunarea de Jos" Galati
Vasile PATRASCU	Tarom
Mihaela PICU	University "Dunarea de Jos" Galati
Ionut PORUMBEL	National Research and Development Institute for Gas Turbines
Vasile POSTOLICA	"Vasile Alecsandri" Bacau University
Iulian STOLERIU	University "Al. I. Cuza" from Iasi
Ssi. Mt ZAHEDI	Binus University Indonesia
Veacheslav ZELENTSOV	Institute of Applied Physics of the Academy of Sciences of Moldova

Section 6 MATHEMATICS IN BIOLOGY

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Gabriel DIMITRIU	"Gr. T. Popa" University of Medicine and Pharmacy Iasi
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Razvan STEFANESCU	"Gr. T. Popa" University of Medicine and Pharmacy Iasi

Section 7 THEORETICAL COMPUTER SCIENCES

Olga BENDERSCHI	State University of Moldova
Gheorghe CAPATANA	Moldova State University
Sergiu CATARANCIUC	Moldova State University
Maria Catrinel DANAUTA	Univ. Pitesti, Ro, Univ. of Southampton, UK
Angel GARRIDO	Facultad de Ciencias de la UNED, Madrid, Spain
Teodora GHERMAN	Academia de Administrație Publică pe lângă Președintele Republicii Moldova

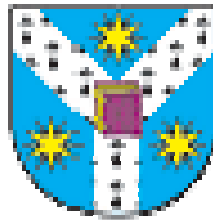
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Doru Anastasiu POPESCU	University of Pitesti, Faculty of Mathematics and Computer Science
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Cristian TUDORACHE	Liceul de Informatica "Gr. Moșil"
Valeriu UNGUREANU	State University of Moldova
Cristian VIDRASCU	Universitatea "Al.I.Cuza" din Iasi, Fac. de Informatica

Section 8 EDUCATION

Viorica Cornelia BRONT	Grup Scolar "IOAN BOCOCI" Oradea
Neculae DINUTA	Universitatea din Pitesti, Facultatea de Stiinte ale Educatiei
Andrei GALUSCA	Universitatea de Stat din Tiraspol, Republica Moldova
Mihaela NEAGU	COLEGIUL NATIONAL IASI
Valerian OPRÎȘOR	ROMAI
Anil RAJPUT	Principal, Bhabha Engineering Research Institute, Bhopal, India
Larisa SALI	Tiraspol State University, Republic of Moldova
Corina-Andreea SULTANA	"I.L.Caragiale", National College, Bucharest
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