

CAIM 2013 Programme

<i>Thursday, September 19</i>	<i>Friday, September 20</i>		<i>Saturday, September 21</i>		<i>Sunday</i>
	8:00-9:00	Registration			
14.00-18.00	9.00-9.30	Opening Ceremony*	9.00-11.15	Plenary lectures	8.00-18.00
Registration	9:30-11:00	Plenary lectures	11.15-11.35	Coffee break	Excursion
	11.00-11.20	Coffee break	11.35-13.05	Plenary lectures	
	11.20-12.50	Plenary lectures	13:05-15:00	Lunch	
	12.50-15.00	Lunch	15.00-17.00	Invited lectures and	
	15.00-17.00	Invited lectures and communications on sections	17.00-17.20	Coffee break	
	17.00-17.20	Coffee break	17.20-18.20	Communications on sections	
	17.20-18.20	Communications on sections	18.30-19.30	ROMAI General Assembly	
	*Within the Opening Ceremony, the "Adelina Georgescu" Prize will be awarded to a young mathematician.		20:00	Official Dinner	

PLENARY LECTURES

Friday, September 20, Hall *Gheorghe Țițeica* (third floor)

	Chairman: Ilie Burdujan
9:30-10:15	Vladimir Gerdt, <i>Computer algebra aided numerical solving nonlinear PDEs</i>
10:15-11:00	George Dincă, <i>Propriétés fines des applications de dualité et géométrie des espaces de Sobolev à exposants variables</i>
	Chairman: Vladimir Gerdt
11:20-12.05	Sanda Cleja-Țigoiu, <i>Non-local evolution equation for lattice defects in finite elasto-plasticity</i>
12:05-12.50	Cristian Făciu, <i>A way to solve Goursat and Riemann problems for phase transforming thermo-elastic bars. Temperature effects in impact problems</i>

Saturday, September 21, Hall *Gheorghe Țițeica* (third floor)

	Chairman: Mitrofan Choban
9:00-9:45	Dana Schlomiuk, <i>Survey on quadratic differential systems</i>
9:45-10:30	Ilie Burdujan, <i>An algebraic approach of homogeneous quadratic differential systems</i>
	Chairman: Dana Schlomiuk
10:30-11:15	Mitrofan Choban, <i>Variational principles in vector - optimization</i>
11:35-12:20	Liubomir Chiriac, <i>The topological groupoids with multiple identities</i>
12:20-13:05	In memoriam Mefodie Rațiu

Section 1: Real, Complex and Functional Analysis

Friday, September 20, Room 1 (ground floor)

	Chairmen: George Dincă, Mihai Turinici, Malika Yaici, Boris Loginov
15:00-15:15	Gabriela Apreutesei - <i>Convergences and Cauchy conditions on semilinear topological spaces</i>
15:15-15:30	Andrei Baran - <i>The category of semi-simplicial analytic spaces</i>
15:30-15:45	Anca Croitoru, Alina Gavriluț - <i>Remarks on Birkhoff integrability</i>
15:45-16:00	Malika Yaici, Kamel Hariche - <i>On solvents of matrix polynomials</i>
16:00-16:15	Alina Gavriluț - <i>Continuity properties in hypertologies</i>
16:15-16:30	Cristina Stamate - <i>Some integrals for vector valued multifunctions</i>
16:30-16:45	Viorel Catană - <i>Perturbations of SG-hypoelliptic pseudo-differential operators on $L_p(\mathbb{R}^n)$ concerning essential spectra and semigroups of contractions</i>
16:45-17:00	Anastasia N. Kuvshinova, Boris V. Loginov, <i>Some consequences of the generalized Hamilton-Cayley theorem for matrices polynomially dependent on E.Schmidt spectral parameter</i>
17:20-17:35	Mihai Turinici, <i>Smooth variational principles and Dependent Choice</i>
17:35-17:50	Ilie Vălușescu, <i>Some geometrical aspects of the Γ correlated processes</i>
17:50-18:05	Nicoleta Ularu, <i>An integral operator on the classes $S^*(b)$ and $CVH(b)$</i>
18:05-18:20	Valentina Proytcheva, Snezhana Hristova, <i>Some remarks on eigenvalue problems for the Laplace operator</i>
18:20-18:35	A. V. Ion, Boris V. Loginov, Davran G. Rakhimov, <i>On spectral problems for Laplace operator in domains with perturbed boundaries</i>
18:35-18:50	Amitabh Banerjee, <i>Convergence of iterates of asymptotically quasi-nonexpansive mappings</i>

Section 1: Numerical Analysis

Saturday, September 21, Room 1 (ground floor)

	Chairmen: Călin Ioan Gheorghiu, Vladimir Seiciuc, Constantin Popa, Stelian Ion
15:00-15:15	Doina Carp, Constantin Popa, Cristina Șerban - <i>Modified Han algorithm for maritime containers transportation problem</i>
15:15-15:30	Stelian Ion, Dorin Marinescu, Ștefan Gicu Cruceanu - <i>Porting data. Real data terrain applications</i>
15:30-15:45	Ștefan Gicu Cruceanu, Stelian Ion, Dorin Marinescu - <i>Cellular automaton in flow routing</i>
15:45- 16:00	Ivan Secrieru - <i>Approximate schemes for fractional diffusion equation with two space variables</i>
16:00-16:15	Călin-Ioan Gheorghiu - <i>Laguerre collocation solutions to boundary layer type problems</i>
16:15-16:30	Luminița Grecu - <i>Modified shape functions for the singular integration procedure when applying BEM for the 2D compressible fluid flow</i>
16:30-16:45	Costică Moroșanu, Ana - Maria Moșneagu - <i>On the numerical approximation of the phase-field system with non-homogeneous Cauchy-Neumann boundary conditions. Case 1D</i>
16:45-17:00	Adela Ionescu, <i>Computational analysis of the trajectories behavior for the mixing flow model</i>
17:20-17:35	Mihaela Dumitrache, Camelia Gheldiu - <i>The two-scale convergence and the splitting operator method for convection-diffusion</i>
17:35-17:50	Vladislav Seichiuc - <i>On direct methods in solving of some nonlinear singular integral equations on closed contours</i>
17:50-18:05	Lilia Tabără - <i>On reduction method for solving singular integral equations given on closed smooth contours</i>
18:05-18:20	Vladimir Racu - <i>On direct approximate methods in solving of weakly-singular integral equations</i>

Section 2: PDEs with Applications in Mechanics, Biology, etc.

Friday, September 20, Hall Gheorghe Țițeica (third floor)

	Chairmen: Gabriel Dimitriu, Cristian Bereanu, Gelu Pașa
15:00-15:30	Gabriel Dimitriu - <i>Reduced-order approach for a pharmacokinetic model of subcutaneous injection of insuline analogues using POD-DEIM method</i>
15:30-16:00	Cristian Bereanu - <i>Dirichlet problems with the mean curvature operator in Minkowski space</i>
16:00-16:30	Pațuc Vladimir, Ribacova Galina - <i>Numerical solution of some three-dimensional electrostatic problems</i>
16:30-16:45	Andaluzia Matei - <i>A variational method for solving a class of boundary value problems arising from Contact Mechanics</i>
16:45-17:00	Cecil P. Grunfeld, Dorin Marinescu - <i>On the convergence of a class of approximating solutions of the Boltzmann equation in the whole space</i>
17:20-17:35	E. M. Crăciun, A. Carabineanu, D. Bigoni, M. Gei - <i>Interface cracks in fiber reinforced elastic composites</i>
17:35-17:50	Gelu Pașa - <i>A reverse Saffman-Taylor instability</i>
17:50- 18:05	Narcisa Apreutesei - <i>Existence of waves for an atherosclerosis reaction-diffusion model</i>
18:05-18:20	

Saturday, September 21, Hall Gheorghe Țițeica (third floor)

	Chairmen: Aurelian Cernea, Liviu Marin, Elvira Naval
15:00-15:30	Aurelian Cernea - <i>Variational inclusions for a class of nonlinear differential inclusions</i>
15:30- 16:00	Andreas Karageorghis, Daniel Lesnic, Liviu Marin - <i>Regularized meshless solution for inverse boundary value problems in static thermoelasticity</i>
16:00-16:30	Elvira Naval - <i>Macroeconomic modeling of the economic activity, case of the Republic of Moldova</i>
16:30-17:00	Dan Tiba - <i>Implicit parametrizations and applications in shape optimization</i>
17:20- 17:35	Anjan Biswas, Luminița Moraru - <i>Optical soliton perturbation by semi-inverse variational principle</i>
17:35- 17:50	Anna Korczak, Alicja Piasecka-Belkhat - <i>The Interval Lattice Boltzmann Method for transient heat transfer in a silicon thin film</i>
17:50-18:05	Galina Rusu - <i>Singular limits of solutions to the Cauchy problem for second order linear differential equations with positive powers of a positive defined operator</i>

Section2:

PDEs with Applications in Mechanics, Biology, etc.
(subsection devoted to modeling)

Saturday, September 21, Room 220 (second floor)

	Chairmen: Sanda Cleja-Țigoiu, Ion Crăciun, Adrian Carabineanu, Mircea Cazacu
15:00-15:30	Mircea Cazacu, Cabiria Andreian Cazacu - <i>On the gravitation theory</i>
15:30-15:45	Adrian Carabineanu - <i>The steady flow of an electroconducting fluid past a thin airfoil</i>
15:45-16:00	Bogac Bilgic, Serdar Baris, M. Salih Dokuz - <i>Hydromagnetic stagnation-point flow towards a moving plate</i>
16:00-16:15	Bogac Bilgic, M. Salih Dokuz, Serdar Baris - <i>Theoretical analysis on some simple flows of a binary mixture of incompressible Newtonian fluids</i>
16:15-16:30	Ion Crăciun - <i>Study of some boundary value problems of micropolar thermoelasticity</i>
16:30-16:45	Przemyslaw Makowski - <i>Two-scale model of cancellous bone structure</i>
16:45-17:00	Emilian Bulgariu, Ghiba Ionel Dumitrel - <i>Thermal stresses in anisotropic porous cylinder</i>
17:20- 17:35	Constantin Onescu, Nicolae Popa - <i>The theoretical approach of mechanical face seals hydrodynamic operation model</i>
17:35-17:50	Eugen Vasile - <i>Modelling the electron movement in electric field - nonlinear aspects</i>
17:50-18:05	Zine Labidine Mahri, Said Zid - <i>An optimal design of the wind turbine blade geometry adapted to a specific site</i>
18:05-18:20	Dumitru Popescu - <i>The pulsatory liposome acting as a biomicroengine device</i>
18:20-18:35	Dumitru Popescu, Iuliana Pașol - <i>Mathematical modelling of the piezoelectric effect of human long bones</i>
18:35-18:50	Camelia Gheldiu, Raluca Mihaela Georgescu - <i>The homogenization of the controlled vibrations in a reinforced structure by thickness</i>

Section 3: ODEs; Dynamical Systems

Friday, September 20, Room 5 (ground floor)

	Chairmen: Dana Schlomiuk, Ilie Burdujan
15:00-15:30	Dumitru Cozma- <i>Centers in cubic differential systems with invariant algebraic curves</i>
15:30-16:00	Șubă Alexandru, Repeșco Vadim - <i>Classification of cubic differential systems with degenerate infinity and five invariant straight lines</i>
16:00- 16:20	Suba Alexandru, O. Văcărașu - <i>Cubic differential systems with a straight line of maximal geometric multiplicity</i>
16:20-16:40	Snezhana Hristova, Valentina Proytcheva - <i>Psi- exponential stability for differential equations with "maxima"</i>
16:40-17:00	Elisabete Alberdi Celaya - <i>Using numerical differentiation formulae in superfuture-point schemes</i>
17:20-17:40	Elisabete Alberdi Celaya - <i>Stiffness of the linear diffusion and wave-type Partial Differential Equations</i>
17:40-18:00	Valeriu Guțu - <i>A new characteristic of attractors of Iterated Function Systems</i>

Saturday, September 21, Room 5 (ground floor)

	Chairmen: Dumitru Cozma, Șubă Alexandru
15:00-15:20	J.C. Artes, J. Llibre, D. Schlomiuk, N. Vulpe - <i>Global classification of configurations of singularities for quadratic differential systems with three real finite distinct singularities</i>
15:20-15:40	Mihail Popa, Victor Pricop - <i>A new vision on solving the center-focus problem</i>
15:40-16:00	Vitalie Puțunică - <i>Quartic differential systems with invariant straight lines along three directions</i>
16:00-16:20	Adriana Buica, Isaac Garcia - <i>Jacobi multipliers and first integrals for nonautonomous differential equations</i>
16:20-16:40	Antonio Nuică - <i>Renormalization of a generalized Sierpinski gasket and Lindstrom's snowflake</i>
16:40-17:00	Askin Mutlu, Recep Burkan - <i>Fuzzy logic robust control of robot manipulators</i>
17:20-17:40	Bianca Satco - <i>Continuous and discrete problems treated in a unified manner</i>
17:40-18:00	Ionel Cristinel Iorga, Adrian Toader - <i>Sufficient conditions for Lurie problem in the context of Popov criterion applied to roll dynamics with delay</i>

Section 4: Probability Theory, Mathematical Statics, Operational Research

Friday, September 20, Room 202 (second floor)

	Chairmen: Gh. Mishkoy, Valeriu Ungureanu, Gh. Zbăganu, M. Rădulescu
15:00-15:30	Gheorghită Zbăganu - <i>Stochastic comparisons and orders</i>
15:30-16:00	Marius Rădulescu, Sorin Rădulescu, Gheorghită Zbăganu, Constanța Zoie Radulescu - <i>Efficient frontiers and absolute portfolios</i>
16:00-16:15	Gheorghe Mishcoy, Diana Bejenari, Lilia Mitev, Kendall - <i>Pollaczek-Khintchin equations for queueing models with semi-Markov switching</i>
16:15-16:30	Iulian Mircea, Mihaela Covrig - <i>On Some Mathematical Models for the Management of Pension Funds</i>
16:30-16:45	Andreea Mădălina Stancu, I.M.Stancu-Minasian - <i>Sufficient Efficiency Criteria in Multiobjective Fractional Programming with Generalized n-Set Functions</i>
16:45-17:00	Elena Cristina Căneș - <i>Modeling and calibrating the federal funds market- micro level</i>
17:20-17:35	Ludmila Novac - <i>Solving of the Currency Exchange Problem using a dynamic model</i>
17:35-17:50	Raluca Vernic, Elena Pelican - <i>Parameters estimation for the bivariate Sarmanov distribution with normal marginals</i>
17:50-18:05	Alexandru Lazari - <i>A geometric program for optimize the evolution of stochastic systems with final sequence states</i>
18:05-18:20	Alin Rusu - <i>On some generalization of univariate distributions based on truncated moments of order statistics</i>
18:20-18:35	Ionel Roventa - <i>Generalized equilibrium problems related to Ky Fan inequalities</i>
18:35-18:50	Emil Simion - <i>Statistical testing of random number generators</i>
18:50-19:05	Gheorghe Mishkoy, Alina Costea, Ionela Rodica Ticu - <i>A modelling system for seaport activities</i>

Saturday, September 21, Room 202 (second floor)

	Chairmen Ioan Stancu Minasian, Iulian Mircea, Messaoud Deghdak
15:00-15:30	Messaoud Deghdak - <i>On the existence of Berge equilibrium with pseudocontinuous payoffs</i>
15:30-16:00	Valeriu Ungureanu - <i>Mathematical theory of Pareto-Nash-Stackelberg game-control processes</i>
16:00- 16:15	Boris Hâncu - <i>Parallel algorithms for solving information extended games</i>
16:15-16:30	Iulia Dahmer, Goetz Kersting, Anton Wakolbinger - <i>Beta-coalescents and their lengths</i>
16:30-16:45	Marek T. Malinowski - <i>Modeling with set-valued and Fuzzy Stochastic Differential Equations</i>

	Chairmen Ioan Stancu Minasian, Iulian Mircea, Messaoud Deghdak
16:45-17:00	Toni Mihalcea - <i>Optimality and duality in multiobjective programming with fuzzy-valued objective functions under generalized type-I invexity</i>
17:20-17:35	Nimet Yapici Pehlivan, Ismail Burhan Turkşen - <i>A New Multiplicative Fuzzy Regression Function Approach</i>
17:35-17:50	Alexandra Tkacenko - <i>Fuzzy Cost Multiobjective Transportation Problem with Time Restriction</i>
17:50- 18:05	Monica Patrache - <i>Equilibrium of Bayesian fuzzy economies and quasi-variational inequalities with random fuzzy mappings</i>
18:05-18:20	Veaceslav Zelentsov, Tatiana Datsko- <i>Modeling of adsorption kinetics of fluorine onto modified trepel</i>

Section 5: Algebra, Logic, Geometry (with applications)

Friday, September 20, Hall *Dimitrie Pompeiu* (second floor)

	Chairmen: Adrian Constantinescu, Sergiu Moroianu, Liubomir Chiriac
15:00-15:30	Adrian Constantinescu - <i>Hilbert - Mumford - Nagata Theorem on invariants and some topological aspects of the finite generation of subalgebras.I</i>
15:30-16:00	Syrbu Parascovia - <i>Middle Bol loops</i>
16:00-16:30	Botnaru Dumitru, Ţurcanu Alina - <i>The left and right product in the description of the pairs of conjugate subcategories</i>
16:30-16:45	Ursu Vasile - <i>On the lattice of quasivarieties of quasigroups</i>
16:45-17:00	Mihai Cipu - <i>Tools from combinatorial commutative algebra in discrete tomography</i>
17:20-17:35	Botnaru Dumitru, Cerbu Olga - <i>The lattice of semireflexive subcategories</i>
17:35-17:50	Botnaru Dumitru, Băeş Elena - <i>The cocartesian product and pairs of conjugate subcategories</i>
17:50-18:05	Natalia Bobeică, Liubomir Chiriac - <i>On the structure of grid</i>
18:05-18:20	Natalia Bobeică, Liubomir Chiriac - <i>Distributive topological groupoids and paramedialitivity</i>
18:20-18:35	Ion Cucu, Mefodie Raţiu - <i>Criterion for completeness relative to implicit reducibility in the chain super-intuitionistic logics</i>
18:35-18:50	Borumand Saeid, Neda Mohtashamnia - <i>Implication filters in BL-algebras</i>
18:50-19:05	Borumand Saeid, Marjan Kuchaki Rafsanjani - <i>Some results in t-convex vague sets</i>

Saturday, September 21, Hall *Dimitrie Pompeiu* (second floor)

	Chairmen: Dumitru Botnaru, Ursu Vasile
15:00-15:30	Florin Damian - <i>Points stabiliser on the elements of simmetry in manifolds</i>
15:30-16:00	Sergiu Moroianu - <i>An intrinsic characterisation of minimal surfaces</i>
16:00-16:30	Vladimir Balan, Jelena Stojanov - <i>Applications of Finsler-type structures in image registration</i>
16:30 -16:45	Mitrofan M.Choban, Laurentiu I.Calmuţchi - <i>On extensions with first-countable remainders</i>
16:45 - 17:00	I.S.Gutsul - <i>On the completion of Gieseking manifold</i>
17:20-17:35	Afrodita Iorgulescu - <i>New generalizations of BCI and BCK algebras and of Hilbert algebras</i>
17:35-17:50	Aynur Yalciner - <i>A matrix approach for divisibility properties of the generalized Fibonacci numbers</i>

	Chairmen: Dumitru Botnaru, Ursu Vasile
17:50-18:05	Alexandru Lungu, Marina Roşca - <i>The minor groups of $\bar{4}$ symmetry by the generating discrete groups of category $G_{\{320\}}$</i>
18:05-18:20	Andrei Rusu - <i>Infinitely many precomplete relative to parametric expressibility classes of formulas in the maximal non-tabular extension of the provability logic</i>
18:20-18:35	Vasile Pătraşcu - <i>Neutrosophic information in the framework of multi-valued representation</i>
18:35-18:50	Dorin Pavel - <i>On some classes of functions</i>
18:50-19:05	Eugene Kuznetsov - <i>Group transversals in the infinite sharply 2-transitive permutation group</i>

Section: Computer Science

Friday, September 20, room 220 (second floor)

	Chairmen: Cristian Vidraşcu, Eugen Mândrescu
15:00-15:20	Vadim E. Levit, Eugen Mândrescu - <i>Greedoids and unique perfect matchings</i>
15:20-15:40	Teodor Cioacă, Horea Cărămizaru - <i>On the impact of explicit or semi-implicit integration methods over the stability of real-time numerical simulations</i>
15:40-16:00	Teodor Cioacă, Bogdan Dumitrescu, Mihai-Sorin Stupariu - <i>Towards a hybrid wavelet-based multiresolution representation of terrain data</i>
16:00-16:20	Lacramioara Lita, Elena Pelican - <i>Comparative study of some algorithms for face recognition</i>
16:20-16:40	Marjan Kuchaki Rafsanjani, Zahra Miroei - <i>A survey on replication methods in data grid</i>
16:40-17:00	Marjan Kuchaki Rafsanjani, Mohammad Hassan Nataj, Arsham Borumand Saeid - <i>A new intrusion detection system based on MLP neural network and parallelism technique</i>
17:20-17:40	Cristian Vidraşcu - <i>Specifying complex systems: the Petri nets formalism</i>
17:40-18:00	Inga Titchiev - <i>Workflow Petri nets in modeling of parallel processes</i>
18:00-18:20	Lucia Bitcovschi - <i>Algebraic structure of the ordered tables</i>

Section: Education

Friday, September 20, room 215 (second floor)

	Chairmen: Marcel Teleucă, Larisa Sali
15:00-15:30	Larisa Sali - <i>Probleme ale pregătirii cadrelor didactice pentru activitatea cu elevii dotați la matematică</i>
15:30-16:00	Cristian Voica - <i>Supporting Mathematics students in their first years' studies: the tutorial system applied in FMI</i>
16:00-16:20	Cristian Voica, Ariana - Stanca Văcărețu, <i>Romanian Students' Misconceptions in Learning Math - an Analysis of the TIMSS 2007 Results</i>
16:20-16:40	Silvia Făt - <i>Teacher training programs focused on innovative blended learning practices in Math. Education</i>
16:40-17:00	Olga Benderschi, Andrei Postaru - <i>Formarea gândirii probabiliste la elevi și modelarea unor experimente aleatoare</i>
17:20-17:40	Viorica Cornelia Bronț - <i>Role of mathematics in high school physics exam preparation</i>
17:40-18:00	Liliana-Camelia Săndulescu, Mariana Vladu - <i>Matematica și științele economice în societatea cunoașterii</i>
18:00-18:20	Cerasela Liliana Cozoș - <i>The perspective of projecting a schedule based on the integrated approach of mathematics curriculum in secondary education system</i>
18:20- 18:40	Bogdan Cânepă - <i>Descompunerea în factori ireductibili a polinoamelor omogene $f(a,b,c)$ de grad 3</i>

Saturday September 21, room 215 (second floor)

	Chairmen: Cristian Voica, Ion Văluță
15:00-15:30	Elena Răilean - <i>Metasystems learning design in digital textbook use and development</i>
15:30 -16:00	Consuela Luiza Voica - <i>Xcolony: a modular paper game used in learning geometry</i>
16:00-16:20	Ion Văluță, Evelina Văluță - <i>Referitor la interacțiunile matematicii cu teoria informației în aspect istoric</i>
16:20-16:40	Liliana Mihalache, Chiriac Liubomir - <i>Examinarea unui model didactic de predare - învățare a compartimentului "Modelare și metode de calcul" în cursul liceal</i>
16:40-17:00	Marcel Teleucă - <i>Proprietățile simedianei la rezolvarea problemelor de geometrie competitivă</i>
17:20-17:40	Vladislav Seiciuc, Victor Seiciuc, Eleonora Seiciuc - <i>Asupra arhitecturii cursului de "Teoria probabilităților și statistică matematică" pe platforma on-line MOODLE</i>

	Chairmen: Cristian Voica, Ion Văluță
17:40-18:00	Neculae Dinuță, <i>Aspecte metodice privind elaborarea unui demers didactic pentru formarea competențelor specifice la matematică în învățământul gimnazial</i>
18:00-18:20	Raluca Mihaela Georgescu - <i>Dreapta în spațiul euclidian tridimensional prezentată cu ajutorul calculatorului</i>
18:20-18:40	Svitlana Pomian - <i>Integral Estimation of the Training Level of University Students of Direction "Computer Science and Engineering"</i>
18:40-19:00	Boris Țarălungă - <i>Elemente din teoria congruențelor pentru liceeni</i>
19:00-19:20	Margarita Nizhegorodova - <i>The growth of efficacy of network technologies with introduction of the integrated model of estimation</i>