

## June 18, 2012

8.00-9.00	Registration				
9.00-9.30	Congress Opening				
	Welcome reception				
10.00-10.45	Young Scientist - Mathematician Award Lecture				
10.45-11.30	Plenary lecture - E. Süli, Chair: T. Pogány Navier-Stokes-Fokker-Planck Systems: Analysis, Approximation, Computation				
11.30-12.00	Coffee break				
12.00-12.30	Invited lecture - J.-P. Francoise, Chair: M. Pašić The algebraic moments problem and its extensions	Invited lecture - C. Fuchs, Chair: A. Dujella Integral solutions of separated-variables equations			
12.30-13.30	Round table: Mathematics education - current state and perspectives (moderators: Aleksandra Čižmešija, Blaženka Divjak, Željka Milin Šipuš)				
13.30-15.30	Lunch break				
15.30-16.15	Plenary lecture - G. Muić, Chair: M. Tadić Cuspidal automorphic forms constructed via Poincare series, their non-vanishing and applications				
Chair:	D. Žubrinić	N. Mujaković	D. Adamović	D. Bakić	T. Šikić
SECTION	Real and Complex Analysis	Mathematical Physics	Lie Groups and Representation Theory	Operator Algebra and Functional Analysis	Math. Educ. and Popularization of Math.
16.30-16.45	M. Praljak On potential inequality for convex functions	D. Kovačević Kappa-Minkowski spacetime, kappa-Poincare Hopf algebra and realizations	N. Grbac Eisenstein cohomology and Franke filtration	Lj. Arambašić Finite-dimensional Hilbert $C^*$ -modules	A. Čižmešija The Trigonometric Functions - Concept Images of the First-Year Students of Mathematics Education at the Department of Mathematics, University of Zagreb
16.50-17.05	J. Jakšetić Exponential convexity method	I. Dražić 3-D flow of a compressible viscous micropolar fluid with spherical symmetry: a local existence theorem	M. Hanzer Applications of Eisenstein series in construction of automorphic representations	R. Rajić The Birkhoff-James orthogonality in Hilbert $C^*$ -modules	B. Divjak Mathematical proof and students' beliefs about counterexample at non-mathematical faculty
SECTION	Real and Complex Analysis	Partial Differential Equations	Lie Groups and Representation Theory	Operator algebra and Functional Analysis	Math. Educ. and Popularization of Math.
17.10-17.25	D. Pokaz A new Boas-type inequality for monotone convex functions	A. Cheskidov Navier-Stokes and Euler equations: a unified approach to the regularity problem	A. Valent Classification of discrete series of groups $GSp(2n, F)$	D. Ilišević Derivations, automorphisms and elementary operators	F. M. Brueckler The Ability of Contemporary University Students to Solve 18th Century High School Word Problems

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	106
	107
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17.30-18.00	Coffee break				
	N. Elezović	Ž. Milin-Šipuš	G. Muić	B. Kolarec	T. Vučičić
Chair:	Real and Complex Analysis	Geometry and Differential Geometry	Algebra	Operator Algebra and Functional Analysis	Combinatorics
18.00-18.15	G. Radunović Relative zeta functions of fractal sets in Euclidean spaces	D. Svrtn Intrinsic Geometry of Cyclic Polygons via "New" Brahmagupta Formula	D. Adamović On explicit realization of logarithmic modules for certain vertex algebras	V. Vladičić Solving inverse problems by means Fourier analysis	T. Došlić On the diameter and some related invariants of fullerene graphs
18.20-18.35	D. Žubrinić Lapidus zeta functions of fractal sets and applications	Z. Erjavec On Parallel Surfaces in $SL(2, \mathbb{R})$ geometry	T. Šikić Rogers-Ramanujan type identities for level one affine symplectic Lie algebras	I. Slamić Linear independence and sets of uniqueness	J. Sedlar On augmented eccentric connectivity index of graphs and trees
18.40-18.55	T. Burić Asymptotic expansions of the multiple quotients of the gamma functions	M. Šimić Horvath On Classification of Conic Sections in the Pseudo-Euclidean Plane	M. Butorac Combinatorial bases of principal subspaces for a ne Lie algebra of type $B_2^{(1)}$	V. Kovač Boundedness of some Multilinear Singular Integrals via Dyadic Martingales	D. Vukičević Complex networks
19.00-19.15	D. Jankov Integral Representations of Functional Series with Members Containing Jacobi Polynomials	S. Vidak Geometry of pentagonal quasigroups			
19.20.-19.35	Z. Pavić Jensen's, chord's, and Mercer's inequality				

## June 19, 2012

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8.30-9.15	Plenary lecture - V. Tonchev, Chair: D. Crnković Incidence structures, codes, and Galois geometry				
9.30-10.00	Invited lecture - T. Yang, Chair: N. Grbac Gross-Zagier formula		Invited lecture - L. Molnar, Chair: D. Ilišević Algebraic properties of isometries on structures of linear operators		
10.00-10.30	Coffee break				
	M. Matić	R. Scitovski	B. Jadrijević	Lj. Arambašić	S. Braić
Chair:	Real and Complex Analysis	Numer. Anal. and Sci. Comput.	Number Theory	Operator Algebra and Functional Analysis	Combinatorics
10.30-10.45	M. Andrić Improvements of the composition rule for the Canavati fractional derivatives and applications to Opial-type inequalities	N. Bosner GPU algorithms for solving shifted systems with multiple right-hand sides	M. Jukić Bokun Elliptic curves over quadratic fields with fixed torsion subgroup and positive rank	B. Kolarec Extensions of product systems	L. Storme Erdős-Ko-Rado theorems in finite classical polar spaces
10.50-11.05	I. Brnetić Some New Opial type Inequalities	I. Kuzmanović Sherman-Morrison-Woodbury formula for Sylvester and $T$ -Sylvester equation	P. Tadić On the injectivity of the specialization homomorphism	H. Rafeiro Grand grand Morrey spaces and boundedness of some classical operators	A. Nakić Tight sets on the Hermitian variety $H(2r+1, q^2)$
11.10-11.25	S. Kovač Error bounds for weighted twopoint open and semi-open quadrature rules	S. Maćešić Backward-in-time Probabilistic Method Applied to the Gulf of Mexico Oil Spill	S. Slijepčević Delsarte's Method in Number Theory	J. Mičić Operator inequalities involving real convex functions	V. Krčadinac Large symmetric configurations in translation planes
11.30-11.45	K. Smoljak Stolarsky type means related to generalizations of Steffensen's and Gauss' inequality	J. Matejaš The Kogbetliantz Method is Accurate	M. Kazalicki Modular forms, de Rham cohomology and congruences		K. Tabak Norm invariance method and applications
11.45-12.15	Poster session				
12.15-13.15	Round table: Enhancing mathematical education and research on non-mathematical study programs (moderators: Blaženka Divjak, Zlatko Erjavec, Vesna Županović)				

13.15.-15.00	Lunch break				
15.00-15.45	Plenary lecture - R. Scitovski, Chair: D. Jukić Cluster analysis: theory, methods and applications				
	A. Aglič Aljinović	V. Hari	O. Perše	S. Maćešić	B. Divjak
Chair:	Real and Complex Analysis	Numer. Anal. and Sci. Comput.	Lie Groups and Representation Theory	Control Theory and Optimization	Math. Educ. and Popularization of Math.
16.00-16.15	M. Krnić Multidimensional Hilbert-type inequality on the weighted Orlicz spaces	K. Sabo Cluster stability in a partition and applications	M. Božičević Asymptotic $K$ -character of nilpotent orbits	I. Nakić Generalized Eigenvalue Problems with Specified Eigenvalues	F. M. Brueckler The Role of Mathematicians in Raising the Public Awareness of Mathematics
SECTION	Real and Complex Analysis	Numer. Anal. and Sci. Comput.	Algebra	Mathematical Aspects of Computer Science	Math. Educ. and Popularization of Math.
16.20-16.35	A. Vukelić Montgomery's identities for function of two variables	Z. Bujanović Ritz values of normal matrices	J. Pita Costa Coset laws for skew lattices	T. Ban Kirigin A Rewriting Framework for Activities Subject to Regulations	A. Vrdoljak The role of visualisation in the development of an effective classroom technique for teaching numerical algebra
SECTION	Real and Complex Analysis	Numer. Anal. and Sci. Comput.			History of Mathematics
16.40-16.55	A. Čivljak Generalizations of Ostrowski inequality involving real Borel measures	S. Miodragović The Rotation of Eigenspaces of Perturbed Matrix Pairs			D. Žubrinić William Feller - distinguished Croatian-American mathematician
	Conference dinner				

## June 20, 2012

8.30-9.15	Plenary lecture - G. Peskir, Chair: Z. Vondraček Three-Dimensional Brownian Motion and the Golden Ratio Rule				
9.30-10.00	Invited lecture - T. Pogány, Chair: H.Šikić Sampling theorems	Invited lecture - S. Štimac, Chair: V. Matijević On isotopy and unimodal inverse limit spaces			
10.00-10.30	Coffee break				
Chair:	M. Krnić Real and Complex Analysis	P. Pavešić Topology	M. Hanzer Number Theory	S. Slijepčević Probability and Statistics	V. Krčadinac Combinatorics
10.30-10.45	A. Aglič Aljinović Error bounds for approximations of the integral transforms in the complex domain	V. Matijević Covering maps over solenoids	B. Jadrijević On the minimal index and indices of the form $2^a 3^b$ in a parametric family of bicyclic biquadratic fields	A. Tchobadjeff Probability estimation of branching processes in atmosphere cosmic ray cascades	M.O. Pavčević Kramer-Mesner method enhancements
10.50-11.05	I. Franjić Refinements of the lower bounds of the Jensen functional	N. Uglešić A complete ultrametric on pro*- morphism sets	A. Dujella On Hall's conjecture	D. Krizmanić Functional limit theorem for moving average processes	P. O' Cathain Symmetric designs, difference sets and Hadamard matrices
11.10-11.25	K. Krulić Himmelreich On refined Hardy-type inequalities with fractional integrals and fractional derivatives	N. Koceić Bilan Algebraic approach to the (coarse) shape path connectedness	I. Soldo The problem of existence of Diophantine quadruples in $\mathbb{Z}[\sqrt{-2}]$	N. Sandrić Recurrence and transience property for stable-like Markov chains	L. Simčić Self-orthogonal codes constructed from orbit matrices of block designs
11.30-12.30	Round table: Scientific journals (moderators: Dražen Adamović, Andrej Dujella, Neven Elezović, Mervan Pašić)				
12.30- 14.15	Lunch break				
14.15.-	Excursion				

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## June 21, 2012

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8.30-9.15	Plenary lecture - P. Mardešić, Chair: V. Županović Tangential Center Problem for Darboux Centers				
9.30-10.00	Invited lecture - M. Greferath, Chair: M.O. Pavčević Error-Correcting Codes - A Beautiful Chapter of Applicable Algebra and Geometry	Invited lecture - P. Pavešić, Chair: S. Mardešić Lower estimates for the topological complexity			
10.00-10.30	Coffe break				
Chair:	A. Čižmešija	P. Mardešić	N. Grbac	N. Črnjarić-Žic	A. Golemac
	Real and Complex Analysis	Ordinary Differ. Equ. and Dynam. Sys.	Algebra	Partial Differential Equations	Combinatorics
10.30-10.45	J. Perić Remarks on the paper "Jensen's inequality and new entropy bounds" of S. Simic	S. Miličić Linear singular differential equations in Banach space and nonrecti able attractivity in two-dimensional linear differential systems	G. Trupčević Combinatorial bases of principal subspaces for affine lie algebra of the type $C_l^{(1)}$	J. Kraljević Strong and weak solutions of quasilinear elliptic equations with strong dependence on the gradient	A. Švob On some transitive combinatorial structures constructed from the unitary group $U(3,3)$
10.50-11.05	N. Lovričević Superadditivity of some Jensen-type functionals	M. Pašić Some new kinds of attractivity for nonautonomous differential systems	O. Perše Conformal embeddings of affine vertex operator algebras	I. Pažanin Asymptotic analysis of micropolar fluid flow through a thin pipe	T. Vučičić On the number of primitive designs on projective line and their antiflag- transitivity
11.10-11.25	S. Banić Jensen's inequality for functions superquadratic on the coordinates in a plane	D. Vlah Fractal properties of Bessel equation	M. Jerković Quasi-particle fermionic formulas for $(k;3)$ -admissible configurations	A. Ćurković Efective equation modeling the unsteady interaction of fluid flow in a thin channel with an elastic plate	M. Sošić Computation of constants in multiparametric algebras of noncommutative polynomials
SECTION	Real and Complex Analysis	Numer. Anal. and Sci. Comput.	Algebra	Control Theory and Optimization	
11.30-11.45	M. Rodić Lipanović n-exponential convexity for Jensen-type inequalities	V. Županović Multiplicity of fixed points and growth of $\epsilon$ -neighborhoods of orbits	G. Radobolja Representations over Virasoro algebra with infinite multiplicities	G. Lešaja Infeasible Full-Newton-Step Interior- Point Method for Linear Complementarity Problems	
11.50-12.05		M. Resman $\epsilon$ -neighbourhoods of orbits and formal classification of parabolic diffeomorphisms			
Lunch					