

Conference Programme



Conference Programme, June 4, 2010

Morning Session

Lecture Hall A

8:30 – 9:00	Opening	
9:00 – 9:50	Blagovest Sendov	Extremal domains associated with a complex polynomial 44
10:00 – 10:50	Dimitar K. Dimitrov	Zeros of polynomials 4

11:00 – 11:30 *Coffee Break*

Lecture Hall A

Lecture Hall B

11:30 – 11:55	Vladimir Kostov: On the Schur-Szegő composition of polynomials 28	Margareta Heilmann: Strong converse results on Baskakov-Durrmeyer operators and their quasi-interpolants 25
12:00 – 12:25	Peter Dragnev: Asymptotic behavior of Carleman orthogonal polynomials 21	Borislav Draganov: On estimating the rate of best trigonometric approximation in L_p by a modulus of smoothness 20

Afternoon Session

Lecture Hall A

Lecture Hall B

15:00 – 15:25	Szilárd Révész: Conjectures and results on the multivariate Bernstein inequality on convex bodies 43	Ludmila Nikolova: On ψ -direct sums and some inequalities 39
15:30 – 15:55	Vitaly Maiorov: Harmonic analysis and approximation by radial functions 34	Ágota Horváth: Near-best approximation by a de la Vallée Poussin-type interpolatory operator 26
16:00 – 16:25	Peter Binev: Scattered data approximation in high dimensions 16	Friedrich Littmann: Bandlimited one-sided approximations to the Gaussian 33

16:30 – 17:00 *Coffee Break*

Lecture Hall A

Lecture Hall B

17:00 – 17:25	Ionela Moale: Min-max polynomials on the ball in several dimensions 35	M. A. Navascués: Shauder fractal bases of $L^p(I)$ 38
17:30 – 18:00	Stanislav Vasilyev: Multidimensional Jackson inequality in mean-square norm 46	Alexander Goncharov: Bases in Banach spaces of smooth functions on Cantor-type sets 24

19:00 – 20:00 *Reception*



Conference Programme, June 5, 2010

Morning Session

Lecture Hall A

8:30 – 9:00	Ceremony of conferring Professor Ronald A. DeVore a Foreign Member of the Bulgarian Academy of Sciences	
9:00 – 9:50	Ronald A. DeVore	The reduced basis method and greedy algorithms 3
10:00 – 10:50	Vladimir M. Tikhomirov	Extremal problems in approximation theory and Lagrange principle 8

11:00 – 11:30

Coffee Break

Lecture Hall A

Lecture Hall B

11:30 – 11:55	Vitaly Arestov: Polynomials that deviate the least from zero in measure and in the uniform norm on compact sets of a given measure and other related problems 14	Stefano De Marchi: Computing multivariate Fekete and Leja points by numerical linear algebra 34
12:00 – 12:25	Asen Dontchev: Splines with constraints 20	Guergana Petrova: On extended cubatures of Turán type for the ball 40

Afternoon Session

Lecture Hall A

Lecture Hall B

15:00 – 15:25	András Kroó: On Markov, Bernstein and Chebyshev type inequalities for k -monotone polynomials 30	Martin Wagner: Asymptotic expansions for a Durrmeyer variant of Baskakov and Meyer-König and Zeller operators and quasi-interpolants 48
15:30 – 15:55	Heinz-Joachim Rack: A new extremal property of the Chebyshev polynomials: Maximizing pairs of coefficients of bounded polynomials 41	Parvan Parvanov: A Goodman-Sharma variant of the Meyer-König and Zeller operators 40
16:00 – 16:25	Sergei Sidorov: Relative linear n -widths of sets of differentiable functions 45	Antonio-Jesús López-Moreno: Some properties of Durrmeyer modifications of the Meyer-König and Zeller and other composite linear operators 36

16:30 – 17:00

Coffee Break

Lecture Hall A

Lecture Hall B

17:00 – 17:25	Mohammed A. Qazi: An inequality for self reciprocal polynomials 41	Roumen Anguelov: Locally monotone approximations of real functions on graphs 13
17:30 – 18:00	Marina Deykalova: Some extremal problems for algebraic polynomials on the Euclidean sphere 18	Markus Niess: Universal phenomena in the complex plane 38



Conference Programme, June 6, 2010

Morning Session

Lecture Hall A

9:00 – 9:50	Qazi I. Rahman	Derivative estimates for meromorphic functions and functions of exponential type	7
10:00 – 10:50	Hakop Hakopian	On the Gasca-Maeztu Conjecture in \mathbf{R}^2 and \mathbf{R}^3	4

11:00 – 11:30

Coffee Break

Lecture Hall A

Lecture Hall B

11:30 – 11:55	Alex Brudnyi: On local behavior of holomorphic functions along complex submanifolds of \mathbf{C}^N	Songping Zhou: What condition can correctly generalize monotonicity in L^1 -convergence of sine series?	16
12:00 – 12:25	Geno Nikolov: On the behavior of ultraspherical polynomials in the complex plane	Martin Lind: On functions of bounded p -variation	39

Afternoon Session

Lecture Hall A

Lecture Hall B

15:00 – 15:25	Artur Sahakian: On the double Fourier series of functions of bounded partial Λ -variation	Ognyan Kounchev: Infinite-dimensional generalization of Kolmogorov-Gelfand theory of widths and applications to Compressive Sensing	44
15:30 – 15:55	Ushangi Goginava: Strong approximation of two-dimensional Walsh-Fourier series	Hermann Render: Bernstein operators for functions in the unit ball of euclidean space	23
16:00 – 16:25	Teimuraz Akhobadze: On convergence of trigonometric Fourier series	Dimo Dimov: Exact performance of (ρ, θ) -Hough transform for star chain images processing	11

16:30 – 17:00

Coffee Break

Lecture Hall A

Lecture Hall B

17:00 – 17:25	Givi Nadibaidze: On summability almost everywhere by Cesaro and Abel-Poisson method of series with respect to block-orthonormal systems	Costas Karanikas: Boolean invertible matrices identified from two permutations, their corresponding unbalanced Haar matrices and an application to data encryption	36
17:30 – 17:55	Robert Algervik: On Fournier-Gagliardo mixed norm spaces	Nikolaos Atreas: On a class of local average sampling expansions in subspaces of $L_2(\mathbf{R})$	12
18:00 – 18:25	Irina Georgieva: On interpolation in the unit disk based on both Radon projections and function values	Vassil Kolev: Universal construction of orthogonal double shift functions and applications	23



Conference Programme, June 7, 2010

Morning Session

Lecture Hall A

9:00 – 9:50	Alexei Shadrin	Landau-Kolmogorov inequality revisited	7
10:00 – 10:50	Evgenij Livshitz	Greedy algorithms and the best m -term approximation	6

11:00 – 11:30

Coffee Break

Lecture Hall A

Lecture Hall B

11:30 – 11:55	Denka Kutzarova: Weak convergence of greedy algorithms in Banach spaces 31	Lozko Milev: Markov interlacing property for exponential polynomials 35
12:00 – 12:25	Markus Hansen: m -term approximation in tensor products of Sobolev and Besov spaces 25	Nikola Naidenov: Markov type inequalities for oscillating exponential polynomials 37

14:00 – 19:00

Excursion



Conference Programme, June 8, 2010

Morning Session

Lecture Hall A

9:00 – 9:50	Kamen Ivanov	Sub-exponentially localized kernels and frames with applications to numerical analysis 5
10:00 – 10:50	Georgii M. Kobelkov	Existence of a solution to the 3D primitive equations "in the large" 5

11:00 – 11:30

Coffee Break

Lecture Hall A

Lecture Hall B

11:30 – 11:55	Raytcho Lazarov: Discontinuous Galerkin finite element method of elliptic problems 31	Krassimira Vlachkova: Error bounds for scattered data interpolation in \mathbf{R}^3 with smooth cubic curve networks 47
12:00 – 12:25	Ludmil Zikatanov: Some canonical decompositions of discontinuous Galerkin finite element spaces and preconditioning 49	Spas Tashev: Interpolation by spherical polynomials on the sphere 46

Afternoon Session

Lecture Hall A

Lecture Hall B

15:00 – 15:25	Andrey B. Andreev: Lower bounds for eigenvalues by non-conforming FEM on convex domain 13	Alexey Lukashov: Rational functions with fixed poles deviated least from zero on several arcs with zeros belonging to those arcs 33
15:30 – 15:55	Ivan Georgiev: Subspace correction method for discontinuous Galerkin discretizations of linear elasticity equations 22	Ralitza Kovacheva: Zero distribution of sequences of rational functions 29
16:00 – 16:25	Ivan Hristov: Numerical investigation of fluxon solutions in stacks of Josephson junctions 26	Kazuaki Kitahara: Functions approximated by any sequence of interpolating generalized polynomials 27

16:30 – 17:00

Coffee Break

Lecture Hall A

Lecture Hall B

17:00 – 17:25	Mohamed Belhout: A reduced space interpolation method for the time derivative applied to transport in domains with heterogeneous geometric dimensions 15	Dinh Dung: Optimal adaptive sampling recovery based on quasi-interpolant representations 21
17:30 – 17:55	Milko Takev: Modified product cubature formulae with finite-differences error representation 45	Alexander Alexandrov: An inequality of Duffin-Schaeffer type 12

20:00

Conference Dinner



Conference Programme, June 9, 2010

Morning Session

Lecture Hall A

9:00 – 9:50	József Szabados	Extending and modifying classical operators to the weighted case	8
10:00 – 10:50	Elena Berdysheva	Bernstein-Durrmeyer operators with arbitrary weight functions	3

11:00 – 11:30

Coffee Break

Lecture Hall A

Lecture Hall B

11:30 – 11:55	Heiner Gonska: Simultaneous approximation by Bernstein operators in Hölder norms I	Lubomir T. Dechevsky: Smooth convex resolution of unity on general partitions of multidimensional domains using generalized expo-rational B-splines, and application to multivariate approximation and Hermite interpolation on scattered point sets	24 17
12:00 – 12:25	Gancho Tachev: Simultaneous approximation by Bernstein operators in Hölder norms II		24
12:30 – 13:00	Ulrich Abel: Old and new results on the Favard operator		11

16:00 – 17:30	<i>Open Problems Session</i>
17:30 – 17:45	<i>Closing CTF-2010</i>