

Conference Program
Thirteenth International Conference in Approximation Theory

San Antonio, TX **** March 7–10, 2010

Sunday Morning, March 7		
	Session M-1A Chair: <i>Simon Foucart</i>	Session M-1B Chair: <i>Kirill Kopotun</i>
8:15	Simon Foucart , <i>Université Pierre et Marie Curie, Paris, France</i> , Best Sufficient Conditions for Sparse Recovery	S. V. Borodachov , <i>Towson University</i> , Optimal Recovery of Functions and Integrals on Classes Defined by a Majorant for the Modulus of Continuity
8:35	Jeffrey D. Blanchard , <i>Grinnell College, Iowa</i> , Phase Transitions for Sparse Approximation Algorithms	Michael I. Ganzburg , <i>Hampton University</i> , Polynomial Interpolation and New Asymptotic Formulae for Zeta Functions
8:55	Rachel Ward , <i>Courant Institute, New York University</i> , Sparse Legendre Expansions via l_1 Minimization	Oleksandr Maizlish , <i>University of Manitoba, Canada</i> , Shape Preserving Approximation on the Real Line with Exponential Weights
9:15	Rick Chartrand , <i>Los Alamos National Laboratory, New Mexico</i> , Nonconvex Compressive Sensing and Dvoretzky's Theorem for Quasi-Normed Spaces	Nataliya Parfinovych , <i>Dnepropetrovsk National University</i> , The Best Approximation of Periodic Functions by Splines
9:35	T. Ullrich , <i>Hausdorff-Center for Mathematics, Bonn, Germany</i> , The Gelfand Widths of ℓ_p -balls for $0 < p \leq 1$	Oleksiy Klurman , <i>University of Manitoba, Canada</i> , Markov-Nikolskii Type Inequalities for Monotone and Monotone Nonnegative Polynomials
9:55	D. Needell , <i>Stanford University</i> , Mixed Operators in Compressed Sensing	Vladislav Babenko , <i>Dnepropetrovsk National University, Ukraine</i> , Sharp Inequalities of Kolmogorov Type for Hypersingular Integrals and Some Applications
10:15	Coffee Break	
	Session P-2 Chair: <i>Mike Neamtu</i>	
11:00	Albert Cohen , <i>Université Pierre et Marie Curie, Paris</i> , High Dimensional Sparse Approximation of Stochastic-Parametric PDE's	
12:00	Lunch	

Sunday Afternoon, March 7		
	Session M-3A Chair: <i>Hrushikesh Mhaskar</i>	Session M-3B Chair: <i>Kirill Kopotun</i>
13:30	Isaac Pesenson , <i>Temple University, Philadelphia</i> , Paley-Wiener and Multiscale Approximations on Manifolds	A. Shadrin , <i>Cambridge University, UK</i> , Landau-Kolmogorov Inequality Revisited
13:50	Naoki Saito , <i>University of California, Davis</i> , Signal Ensemble Classification on Manifolds	D. Skorokhodov , <i>Dnepropetrovsk National University</i> , Exact Asymptotics of the Best Asymmetric Piecewise-linear Approximation of Functions with Positive Hessian
14:10	Frank Filbir , <i>Helmholtz Center, Munich</i> , Quadrature Formulas for Functions Defined on Riemannian Manifolds	Bojan Popov , <i>Texas A&M University</i> , Surface Reconstruction via L1-minimization
14:30	Sung Jin Hwang , <i>University of Michigan</i> , Comparing Information Geometric Curves	Olga Holtz , <i>UC Berkeley, TU Berlin and IAS</i> , New Coins from Old, Smoothly
14:50	Armin Iske , <i>University of Hamburg</i> , Curvature Analysis of Frequency Modulated Manifolds in Dimensionality Reduction	A. Prymak , <i>University of Manitoba, Canada</i> , Convexity, Moduli of Smoothness and a Jackson-type Inequality
15:10	Mikhail Belkin , <i>Ohio State University</i> , Cluster Assumption and Sparsity in the Eigenfunction Basis	Peter Binev , <i>University of South Carolina</i> , Adaptive Approximation of Surfaces
15:30	Coffee Break	
	Session P-4 Chair: <i>Larry Schumaker</i>	
16:15	Greg Fasshauer , <i>Illinois Institute of Technology, Chicago</i> , Green's Functions: Taking Another Look at Kernel Approximation, Radial Basis Functions, and Splines	
	Session C-5A Chair: <i>Albert Cohen</i>	Session C-5B Chair: <i>Jürgen Prestin</i>
17:15	Entao Liu , <i>University of South Carolina</i> , Orthogonal Super Greedy Algorithm and Applications in Compressed Sensing	Thomas Kühn , <i>Universität Leipzig, Germany</i> , Approximation and Entropy Numbers in Sequence and Function Spaces
17:35	Sadegh Jokar , <i>TU Berlin, Germany</i> , Kronecker Products and Sparse Approximation	Mohammad A. AlQudah , <i>Central Michigan University</i> , Lipschitz Constant for Vector Valued Approximation
17:55	Ph. Lamby , <i>University of South Carolina</i> , Highdimensional Approximation with Sparse Occupancy Trees	E. Abu-Sirhan , <i>Tafila Technical University, Jordan</i> , On Simultaneous Approximation in Function Spaces
18:15	Th. Schlumprecht <i>Texas A & M University</i> Nonuniform Sampling and Recovery of Bandlimited Function via Gaussians	G. Kyriazis , <i>University of Cyprus</i> , On the Construction of Frames for Spaces of Distributions
18:45	Welcoming Reception (The Menger Hotel)	

Monday Morning, March 8		
	Session M-6A Chair: <i>Gerlind Plonka</i>	Session M-6B Chair: <i>Doron Lubinsky</i>
8:15	G. Kutyniok , <i>University of Osnabrueck</i> , Compactly Supported Shearlets: Construction and Optimally Sparse Approximation	F. Balogh , <i>Concordia University, Quebec, Canada</i> , Reduction of Planar Orthogonality to Non-Hermitian Orthogonality on Contours
8:35	Wang-Q Lim , <i>University of Osnabrueck, Germany</i> , Sparse Image Representations using the Discrete Shearlet Transform	Peter Dragnev , <i>Indiana-Purdue University</i> , Asymptotic Behavior of Carleman Orthogonal Polynomials
8:55	Laurent Demanet , <i>Massachusetts Institute of Technology</i> , Directional Constructions in Computational Wave Propagation	A. López , <i>Vanderbilt University</i> , Multiple Orthogonal Polynomials on Star-like Sets
9:15	Jens Krommweh , <i>University of Duisburg-Essen, Germany</i> , Sparse Image Representation by Tetrolet Transform	Erwin Miña-Díaz , <i>University of Mississippi</i> , Asymptotics of Polynomials Orthogonal on the Unit Disk with respect to a Positive Polynomial Weight
9:35	Y. Babenko , <i>Sam Houston State University</i> , On the L_p -error of Adaptive Interpolation by Splines on Box Partitions	N. Stylianopoulos , <i>University of Cyprus</i> , Strong Asymptotics for Szegő and Bergman Polynomials over Non-smooth Domains
9:55	S. Dekel , <i>GE Healthcare</i> , On Anisotropic Hardy Spaces	A. L. Lukashov , <i>Fatih University, Turkey</i> , Exact Solutions of Some Extremal Problems of Approximation Theory
10:15	Coffee Break	
	Session P-7 Chair: <i>Joe Ward</i>	
11:00	Anna Gilbert , <i>University of Michigan, Ann Arbor</i> , A Survey of Sparse Approximation	
12:00	Lunch	

Monday Afternoon, March 8		
	Session M-8A Chair: <i>Tom Lyche</i>	Session M-8B Chair: <i>Ed Saff</i>
13:30	Durkbin Cho , <i>IMATI - CNR, Pavia, Italy</i> , On the Use of T-splines in Isogeometric Analysis	L. Baratchart , <i>INRIA, France</i> , Weighted Uniform Rational Approximation to Schur Functions
13:50	John A. Evans , <i>University of Texas at Austin</i> , Assessment of the Effectiveness of Multidimensional Splines in Numerical Approximation and Isogeometric Analysis	R. K. Kovacheva , <i>Bulgarian Academy of Science, Sofia</i> , Growth Behaviour and Zero Distribution of Rational Approximants
14:10	Francesca Pelosi , <i>University of Rome "Tor Vergata", Italy</i> , Isogeometric Analysis based on Tensioned B-splines in Advection-diffusion Problems	G. Lopez Lagomasino , <i>Univ. Carlos III de Madrid, Spain</i> , On a Perfect System
14:30	A. Reali , <i>University of Texas at Austin</i> , Efficient Quadrature and Collocation Techniques for Isogeometric Analysis	M. Yattselev , <i>Vanderbilt University</i> , Weak Asymptotics of H^2 -best Rational Approximants to Algebraic Functions
14:50	J. Rivas , <i>Universidad del País Vasco, Spain</i> , $h - p - k$ Approximation Estimates for NURBS	Xiang-Sheng Wang , <i>City University of Hong Kong</i> , Asymptotics of Orthogonal Polynomials and Order Reduction Method of Difference Equations
15:10	Michael A. Scott , <i>Institute for Computational Engineering and Sciences, Austin</i> , Local Refinement of Aligned T-spline Spaces	M. L. Wong , <i>University of Oklahoma</i> , The Point Mass Problem – Recent Developments
15:30	Coffee Break	
	Session P-9 Chair: <i>Pencho Petrushev</i>	
16:15	Winner of the Popov Prize	
	Session C-10A Chair: <i>Armin Iske</i>	Session C-10B Chair: <i>Frank Deutsch</i>
17:15	Victoria Baramidze , <i>Western Illinois University</i> , Minimal Energy Spherical Splines on Clough-Tocher Triangulations for Hermite Interpolation	Boris Shekhtman , <i>University of South Florida</i> , On Newton Interpolation and Error Formulas in Multivariate and Ideal Interpolation
17:35	David Jiménez , <i>Texas A&M University, College Station</i> , Matching of Point Configurations: An Approach Through Grammians	Debao Chen , <i>OSU – Tulsa</i> , Generalization of Polynomial Interpolation at Chebyshev Nodes
17:55	Felix Krahmer , <i>University of Bonn, Germany</i> , An Optimal Family of Exponentially Accurate One-Bit Quantization Schemes	Oliver Nowak , <i>ETH Zurich, Switzerland</i> , Korovkin-type Convergence Results for Non-positive Operators Related to a Class of Scattered Data Interpolation Operators
18:15	Peter Ndajah , <i>Niigata University, Japan</i> , Total Variation Image Denoising	Antonio-Jesús López-Moreno , <i>University of Jaén, Spain</i> , Localization and Saturation Results for Durrmeyer Type Operators
18:35	Vasilis Zafiris , <i>University of Houston-Downtown</i> , New Results in Geometric Modeling	Ágota Horváth , <i>Budapest University of Technology and Economics, Hungary</i> , Müntz Type Theorems on the Half Line

Tuesday Morning, March 9		
	Session M-11A Chair: <i>Tom Lyche</i>	Session M-11B Chair: <i>Kathy Driver</i>
8:15	Elaine Cohen , <i>School of Computing, University of Utah</i> , Parameterizing Volumes and Creating Trivariate Splines for Geometric Modeling and Isogeometric Analysis	Kathy Driver , <i>University of Cape Town, South Africa</i> , Interlacing of Zeros of Polynomials of Non-adjacent Degree from Different Sequences of Orthogonal Polynomials
8:35	Thomas A. Grandine , <i>The Boeing Company, Seattle</i> , Aerospace Applications of Isogeometric Analysis	H. N. Mhaskar , <i>California State University</i> , On the Problem of Parameter Estimation in Exponential Sums
8:55	Ulrike Schwarzmaier , <i>JKU Linz, Austria</i> , Towards Isogeometric Fluid Analysis in the Design Process of Hydroelectric Turbine Blades	Doron S. Lubinsky , <i>Georgia Institute of Technology</i> , Universality Holds in Measure for Compactly Supported Measures
9:15	L. Kämmerer , <i>Chemnitz University of Technology, Germany</i> , On the Stability of the Hyperbolic Cross Discrete Fourier Transform	Úlfar F. Stefánsson , <i>Georgia Institute of Technology</i> , Asymptotic Properties of Müntz Orthogonal Polynomials
9:35	Stefan Kunis , <i>Chemnitz University of Technology, Germany</i> , On the Butterfly Approximation Scheme for Fourier Transforms	Manuel Domínguez de la Iglesia , <i>Courant Institute of Mathematical Sciences, New York University</i> , Methods and New Phenomena of Orthogonal Matrix Polynomials Satisfying Differential Equations
9:55	V. Vatchev , <i>University of Texas at Brownsville</i> , On Approximation of Piece-Wise Analytic Functions on Finite Interval	Olga Holtz , <i>IAS, UC Berkeley, TU Berlin</i> , Structured Matrices, Continued fractions, and Root Localization of Polynomials
10:15	Coffee Break	
	Session P-12 Chair: <i>Ed Saff</i>	
11:00	Vilmos Totik , <i>University of South Florida and University of Szeged, Hungary</i> , The Polynomial Inverse Image Method	
12:00	Lunch	

Tuesday Afternoon, March 9		
	Session M-13A Chair: <i>Shai Dekel</i>	Session M-13B Chair: <i>Günther Nürnberger</i>
13:30	J.-M. Mirebeau , <i>UPMC, Paris</i> , Optimal Meshes for Finite Elements of Arbitrary Order	Günther Nürnberger , <i>University of Mannheim, Germany</i> , Local Lagrange Interpolation by Splines on Tetrahedral Partitions
13:50	Armin Iske , <i>University of Hamburg, Germany</i> , Geometrical Methods for Adaptive Approximation of Image and Video Data	Ming-Jun Lai , <i>University of Georgia, Athens</i> , A Multi-level and Multi-scale Expansion based on Bivariate Spline Functions
14:10	I. Gershtansky , <i>Tel-Aviv University</i> , Active Geometric Wavelets	Tatyana Sorokina , <i>Towson University, MD</i> , Intrinsic Supersmoothness of Multivariate Splines
14:30	T. Teuber , <i>University of Mannheim, Germany</i> , Anisotropic Image Regularization Using Double Orientations	Xiquan Shi , <i>Delaware State University</i> , The Dimension of the Space of Smooth Splines of Degree 8 on Tetrahedral Partitions
14:50	Gerlind Plonka , <i>University of Duisburg-Essen</i> , Optimally Sparse Image Representation by the EPWT	Gerard Awanou , <i>Northern Illinois University</i> , Numerical Methods for Fully Nonlinear Equations
15:10	S. Tenorth , <i>University of Duisburg-Essen</i> , Hybrid Algorithm for Image Approximation Based on the EPWT	G. Schneider , <i>University of Mannheim</i> , Lagrange Interpolation by Trivariate C^2 -Splines of Low Locality
15:30	Coffee Break	
	Session P-14 Chair: <i>Larry Schumaker</i>	
16:15	Oleg Davydov , <i>University of Strathclyde, Glasgow, UK</i> , Quasi-interpolation Methods for Multivariate Splines	
	Session C-15A Chair: <i>Edward Fuselier</i>	Session C-15B Chair: <i>Vilmos Totik</i>
17:15	Bernd Mulansky , <i>TU Clausthal, Germany</i> , Smooth Convex Extensions of Functions	Franklin Kemp , <i>Collin College, TX</i> , Discrete Rational Approximation Existence
17:35	Jian-ao Lian , <i>Prairie View A&M University, TX</i> , Interpolatory Biorthogonal Systems	Rodrigo B. Platte , <i>Arizona State University, Tempe</i> , Impossibility of Approximating Analytic Functions from Equispaced Samples at Geometric Convergence Rate
17:55	Alireza Entezari , <i>University of Florida</i> , Multivariate Splines for Sampling Lattices	Leslaw Skrzypek , <i>University of South Florida, Tampa</i> , Fourier and Rademacher Projections in L_p Spaces
18:30	Conference Dinner	

Wednesday Morning, March 10		
	Session C-16A Chair: <i>Greg Fasshauer</i>	Session C-16B Chair: <i>Ming-Jun Lai</i>
8:15	Thomas Hangelbroek , <i>Texas A&M University, College Station</i> , Stable Approximation on Manifolds with Kernels	Bruce Kessler , <i>Western Kentucky University, Bowling Green</i> , An Algorithm for Wavelet-Based Elemental Spectrum Analysis
8:35	A. Heryudono , <i>University of Massachusetts, Dartmouth</i> , 2D RBF Interpolation on Irregular Domain Through Conformal Transplantation	David W. Roach , <i>Murray State University</i> , Parameterized Wavelets
8:55	Benjamin Bailey , <i>Texas A&M University, College Station</i> , Sampling and Recovery of Multidimensional Bandlimited Functions	Philipp Grohs , <i>TU Graz, Austria</i> , Refinable Functions for Composite Dilation Systems
9:15	Rodrigo B. Platte , <i>Arizona State University, Tempe</i> , How Fast do Radial Basis Function Interpolants of Analytic Functions Converge?	Haichao Wang , <i>Vanderbilt University</i> , Uncertainty Principle and Balian-Low Type Theorems in Shift-Invariant Spaces
9:35	Qi Ye , <i>Illinois Institute of Technology, Chicago</i> , Green Function Approach to (Conditionally) Positive Definite Function and Reproducing Kernel of Generalized Sobolev Space	Xiaosheng Zhuang , <i>University of Alberta</i> , Matrix Extension with Symmetry and Its Applications
9:55	J. P. Ward , <i>Texas A&M University, College Station</i> , L^p Bernstein Inequalities and an Inverse Theorem for RBF Approximation on Euclidean d -space	Markus Hansen , <i>Friedrich-Schiller-Universität Jena, Germany</i> , Best m -term Approximation in Tensor Products of Besov and Sobolev Spaces
10:15	Coffee Break	
	Session P-17 Chair: <i>Mike Neamtu</i>	
11:00	Kirill Kopotun , <i>University of Manitoba, Canada</i> , Approximation with Constraints	
12:00	Lunch	

Wednesday Afternoon, March 10		
	Session C-18A Chair: <i>Oleg Davydov</i>	Session C-18B Chair: <i>Boris Shekhtman</i>
13:30	Scott N. Kersey , <i>Georgia Southern University</i> , Best l_2 Spline-by-Spline Approximation	J. Prestin , <i>University of Lübeck, Germany</i> , Quadrature Rules on Spherical Triangles
13:50	Hendrik Speleers , <i>Katholieke Universiteit Leuven, Belgium</i> , Convexity of Spline Functions on Triangulations	Hao Nguyen , <i>Texas A&M University, College Station</i> , On Extended Cubatures of Turan Type for the Ball
14:10	Bree Ettinger , <i>Georgia State University, Atlanta</i> , Hurricane Prediction Using Bivariate Splines	Leonardo Traversoni , <i>Universidad Autonoma Metropolitana, Mexico</i> , Building Quaternionic Hermitian Curves
14:30	Qianying Hong , <i>University of Georgia, Athens</i> , The Minimum Surface Area Method for Scattered Data Fitting	Manuel Gräf , <i>Chemnitz University of Technology, Germany</i> , A Continuous Approach for Distributing Points on the Sphere Using Fast Fourier Transforms
14:50	Vera Rayevskaya , <i>University of Northern Iowa</i> , Filling Polygonal Holes Using Minimal Energy Macro-Elements	S. Bernstein , <i>Freiberg Univ. of Mining and Technology, Germany</i> , Diffusive Wavelets on Groups and Homogenous Spaces
15:10	Lujun Wang , <i>Vanderbilt University, Nashville</i> , Spline Spaces on Triangulations with Hanging Vertices	Francisco Casesnoves , <i>Nottingham, United Kingdom</i> , Optimal Nonlinear Approximations and Errors Reduction for Numerical Reuleaux Method (NRM) Pseudo-Rigid Bodies Dynamics
15:30	Coffee Break	
	Session P-19 Chair: <i>Charles Chui</i>	
16:15	Bin Han , <i>University of Alberta, Edmonton, Canada</i> , Wavelet Analysis Under the Unifying Roof of Nonhomogeneous Wavelet Systems	
	Session C-20A Chair: <i>Peter Binev</i>	Session C-20B Chair: <i>Les Skrzypek</i>
17:15	Andreas Weinmann , <i>TU Graz, Austria</i> , Geometric Subdivision Schemes and Interpolatory Multiscale Transforms Between Manifolds	Klaus Schiefermayr , <i>Upper Austria University of Applied Sciences, Austria</i> , Inequalities for the Deviation of Minimal Residual Polynomials and Inverse Polynomial Images
17:35	Sebti Foufou , <i>Qatar University, Qatar</i> , An Algorithm to Construct 3D Triangles with Circular Edges	J. Vybíral , <i>RICAM, Linz, Austria</i> , Johnson-Lindenstrauss Lemma for Circulant Matrices
17:55	Binod Prasad Dhakal , <i>Butwal Multiple Campus, Tribhuvan University, Nepal</i> , Approximation of a Function Belonging to Generalized Lipschitz Class by Euler-Cesáro Means of Fourier Series	
18:15	End of Conference	