Conference Program
Advances in Constructive Approximation

Nashville, TN
May 14–17, 2003

	Wednesday, May 14	
8:30	**Opening Address**	
	Session 1 Chair: *Akram Aldroubi*	
9:00	**John J. Benedetto**, *University of Maryland*, Unimodularity Constraints for Signal Representation and Waveform Design	
10:00	**Coffee Break**	
	Session 2A Dedicated to the Memory of Prof. D. Gaier Chair: *S. Ruscheweyh*	**Session 2B** Dedicated to the Memory of Prof. W. Light Chair: *Ward Cheney*
10:40	**Richard S. Varga**, *Kent State University*, My Friend and Colleague, Dieter Gaier	**Holger Wendland**, *University of Göttingen*, Solving Large Generalized Interpolation Problems Efficiently
11:05	**V. V. Andrievskii**, *Kent State University*, Dieter Gaier and the Ukrainian School of Approximation Theory	**Holger Wendland** (cont.)
11:30	**V. V. Andrievskii** (cont.)	**Gerhard Opfer**, *University of Hamburg*, Which Functions Generate Haar Spaces by Shifts?

11:55	**Lunch**		
	Session 3 Chair: *Larry Schumaker*		
13:30	**Joe Ward**, *Texas A&M University*, Discrete Least Squares Approximation by Radial Basis Functions		
14:30	**Coffee Break**		
	Session 4A Chair: *John Benedetto*	**Session 4B** Chair: *Jürgen Prestin*	**Session 4C** Chair: *Tom Lyche*
15:10	**Ming-Jun Lai**, *Univ. of Georgia*, Construction of Compactly Supported Pre-Wavelets in Sobolev Spaces	**H. N. Mhaskar**, *California State University*, Quadrature Formulas on Spherical Caps	**Ants Aasma**, *Tallinn Technical University*, Approximation in Banach Spaces by Summation Methods of Fourier Expansions
15:35	**Song-Tao Liu**, *University of Alberta*, Wavelet Bases of Hermite Cubic Splines on the Interval	**Noemi Lain Fernandez**, *University of Luebeck*, Interpolatory Polynomial Bases on the Sphere	**H. Gingold**, *West Virginia University*, Approximation of Unbounded Functions via Compactification
16:00	**David Roach**, *Murray State University*, Construction of Parameterized Orthogonal Wavelets without Parameter Constraints	**Johann S. Brauchart**, *Graz University of Technology*, Minimal g-Energy N-Point Sets	**Scott Kersey**, *Case Western Reserve Univ./Georgia Southern Univ.*, Constrained Variational Subdivision
16:25	**Qiyu Sun**, *University of Houston*, Approximation of the Ideal Low Pass Filter	**V. Baramidze**, *University of Georgia*, Numerical Investigation of Tensor Product Spherical and Radial Splines for Interpolating Volume Data	**Thomas Yu**, *Rensselaer Polytechnic Institute*, Globally C^2 Free-Form Hermite Subdivision Surfaces
16:50	**Songkiat Sumetkijakan**, *University of Maryland*, A Wavelet Set Construction and Tight Frames	**Paul C. Kainen**, *Georgetown University*, Operations Preserving Approximative Compactness	**Richard Robinson**, *Murray State University*, The Paramaterized Variable Tension Spline with Knot Removal
17:15	**Bruce Kessler**, *Western Kentucky University*, Construction and Application of a New Scaling Vector and Multiwavelets Using Macroelements	**Yanqin Fan**, *Vanderbilt University*, Efficient Estimation of Semiparametric Multivariate Copulas	**Sebti Foufou**, *Université de Bourgogne*, Dupin Cyclides and Supercyclides for CAGD Applications
18:30	**Welcome Reception, Wildhorse Saloon, 2nd Ave. (Downtown Nashville)**		

	Thursday, May 15	
	Session 5 Chair: *Doug Hardin*	
9:00	**Gerlind Plonka**, *University of Duisburg-Essen*, Numerical Stability of Trigonometric Transforms and Wavelet Algorithms	
10:00	**Coffee Break**	
	Session 6A Dedicated to the Memory of Prof. D. Gaier Chair: *Richard Varga*	**Session 6B** Dedicated to the Memory of Prof. W. Light Chair: *Yuan Xu*
10:40	**H.-P. Blatt**, *Katholische Universität Eichstätt-Ingolstadt*, Asymptotic Distribution of Poles and Alternation Points in Rational Approximation	**Xingping Sun**, *Southwest Missouri State University*, The Structure of Native Spaces on Spheres
11:05	**Gerhard Opfer**, *University of Hamburg*, On an Extremal Principle Related to Doubly Connected Regions Unearthed by Dieter Gaier	**Szilard Gy. Revesz**, *A. Renyi Institute of Mathematics*, Extremal Problems for Positive Definite Functions with Given Support
11:30	**Igor E. Pritsker**, *Oklahoma State University*, Asymptotic Behavior of Faber Polynomials and their Derivatives	**Leslaw Skrzypek**, *University of California*, On a Result of W. Light and its Extensions

11:55	**Lunch**		
	Session 7 Chair: *Mike Neamtu*		
13:30	**Kirill Kopotun**, *University of Manitoba*, Shape Preserving Approximation — the Final Frontier?		
14:30	**Coffee Break**		
	Session 8A Chair: *Kirill Kopotun*	**Session 8B** Chair: *Mihai Putinar*	**Session 8C** Chair: *Gerlind Plonka*
15:10	**Tom Lyche**, *University of Oslo*, Mixed Norm Condition Numbers for the Univariate Bernstein Basis	**Doron Lubinsky**, *Georgia Institute of Technology*, A Representation for the Bernstein Constant	**Shayne Waldron**, *University of Auckland*, Frames and their Symmetries
15:35	**S. Foucart**, *University of Cambridge*, On the Least Condition Number of a Basis of Quadratic Polynomials	**Peter Dragnev**, *Indiana-Purdue University*, Polynomial Approximation of the Checkmark Function	**Yuri Brudnyi**, *Technion*, Nonlinear Approximation by Libraries Generated by Refinable Functions
16:00	**Dongdong Lei**, *University of Huddersfield*, A Decomposition Method for ℓ_1 Approximation	**Michael I. Ganzburg**, *Hampton University*, The Pointwise Overconvergence Property of Continuous Functions and Polynomial Projections	**J. S. Geronimo**, *Georgia Tech*, A Two Variable Extension of the Fejer-Riesz Lemma and Orthogonal Polynomials
16:25	**Ioan Gavrea**, *Technical University Cluj-Napoca*, Esti mates in Terms of the Ditzian-Totik Modulus of Smoothness in Simultaneous Approximation by Linear Operators	**Eli Levin**, *The Open University of Israel*, Orthogonal Polynomials for Exponential Weights $x^{2\rho}e^{-2Q(x)}$ on a Half-open Interval	**Dinh-Dũng**, *Vietnam National University*, Stability in Periodic Multi-Wavelet Decompositions and Non-linear Compression
16:50	**Vasant A. Ubhaya**, *North Dakota State University*, An Algorithm for Discrete Approximation by Quasi-Convex Functions on R^m	**David Benko**, *Texas A&M University*, The Support of the Equilibrium Measure	**Peter G. Binev**, *University of South Carolina*, Near Best Adaptive Approximation
17:15	**A. V. Prymak**, *Kyiv National Taras Shevchenko University*, On 3-convex Approximation by Splines with Fixed Knots	**Theodore Kilgore**, *Auburn University*, Approximation Results for some Weighted Polynomials on Unbounded Intervals	**S. B. Damelin**, *Georgia Southern University*, Numerical Integration on q Dimensional Spheres

	Friday, May 16	
	Session 9 Chair: *Ed Saff*	
9:00	**Laurent Baratchart**, *INRIA, Sophia-Antipolis*, Meromorphic Approximation of Cauchy Integrals and Inverse Source or Crack Problems	
10:00	**Coffee Break**	
	Session 10A Dedicated to the Memory of Prof. D. Gaier Chair: *N. Papamichael*	**Session 10B** Dedicated to the Memory of Prof. W. Light Chair: *Xinping Sun*
10:40	**Alexander I. Aptekarev**, *Keldysh Institute of Applied Mathematics*, On Asymptotically Sharp Alternances for the Best Rational Approximants of Analytic Functions	**Tanya Morton**, *The MathWorks Limited*, Spherical Radial Basis Functions: Theory and Application
11:05	**N. Stylianopoulos**, *University of Cyprus*, Conformal Mapping of Elongated Domains with Applications to the Solution of Laplacian Problems	**Tanya Morton** (cont.)
11:30	**W. K. Hayman**, *Imperial College*, Numerical Problems of Conformal Mappings	**Yuan Xu**, *University of Oregon*, Weighted Approximation on the Unit Sphere

11:55	**Lunch**		
	Session 11 Chair: *Jeff Geronimo*		
13:30	**Kenneth McLaughlin**, *University of North Carolina at Chapel Hill*, Asymptotics for Orthogonal Polynomials Using Riemann-Hilbert Problems and D-bar Problems		
14:30	**Coffee Break**		
	Session 12A Chair: *Ming-Jun Lai*	**Session 12B** Chair: *V. V. Andrievskii*	**Session 12C** Chair: *H. Mhaskar*
15:10	**Guenther Nuernberger**, *University of Mannheim*, Local Lagrange Interpolation by Cubic Spline Surfaces	**S. Ruscheweyh**, *Würzburg University*, Maximal Ranges of Polynomials: Advances	**Tim Goodman**, *University of Dundee*, Uncertainty Principles and Optimality on Circles and Spheres
15:35	**Frank Zeilfelder**, *University of Mannheim*, Approximation by Trivariate Splines	**Xin Li**, *University of Central Florida*, Szegő Polynomials and the Truncated Trigonometric Moment Problem	**Jürgen Prestin**, *University of Lübeck*, Optimality for Uncertainty Principles on the Sphere and on the Torus
16:00	**Tatyana Sorokina**, *Vanderbilt University*, A Trivariate Box Macro-Element	**Daniyal M. Israfilov**, *Balikesir University*, Uniform Convergence of the Bieberbach Polynomials in Closed Domains	**Q. T. Le Gia**, *Texas A&M University*, Approximation of Parabolic PDEs on Spheres Using Spherical Basis Functions
16:25	**Vera Rayevskaya**, *Vander bilt University*, Multi-sided Macro-Element Spaces Based on Clough-Tocher Triangle Splits	**M. Küçükaslan**, *Mersin University*, On the Properties of Orthogonal Polynomials over the Regions	**V. Maymeskul**, *Georgia Southern University*, Asymptotics for Minimal Discrete Riesz Energy Curves in R^2
16:50	**Leonardo Traversoni**, *Universidad Autonoma Metropolitana*, Approximation of Curves and Surfaces using Projective Duality	**E. Miña-Díaz**, *Vanderbilt University*, Zeros of Polynomials Orthogonal over Jordan Domains	**Andrei Bogatyrev**, *Inst. Numerical Math., Russian Acad. Sci.*, General Extremal Polynomials and Algebraic Curves
17:15	**J. Stolfi**, *University of Campinas*, Spline Bases on Dyadic Grids	**T. X. He**, *Illinois Wesleyan University*, Abel-Gontscharoff Interpolation and Gould's Annihilation Coefficients	**Boris Shekhtman**, *University of South Florida*, Aesthetic Approximation in Several Variables
17:15			**S. Yu. Tikhonov**, *Moscow State University*, Generalized Lipschitz Class and Fourier Series
19:00	**Banquet/Dinner Party, University Club of Nashville (Vanderbilt Campus)**		

	Saturday, May 17	
	Session 13 Chair: *S. Ruscheweyh*	
9:00	**Mihai Putinar**, *University of California at Santa Barbara*, A Renormalized Riesz Potential: History and Applications	
10:00	**Coffee Break**	
	Session 14A Dedicated to the Memory of Prof. D. Gaier Chair: *S. Ruscheweyh*	**Session 14B** Dedicated to the Memory of Prof. W. Light Chair: *Holger Wendland*
10:40	**E. Wegert**, *TU Bergakademie Freiberg*, Boundary Interpolation with Solutions of Nonlinear Riemann-Hilbert Problems	**D. V. Pai**, *Indian Institute of Technology Bombay*, On Well-Posedness of some Problems in Approximation Theory
11:05	**N. Papamichael**, *University of Cyprus*, Dieter Gaier's Contributions to Numerical Conformal Mapping	**A. Le Méhauté**, *University of Nantes*, Almost Interpolation for Radial Basis Functions
11:30	**N. Papamichael** (cont.)	**Roland Opfer**, *Göttingen*, Multiscale Kernels

11:55	**Lunch**		
	Session 15 Chair: *Thomas Bagby*		
13:30	**Len Bos**, *University of Calgary*, Multivariate Markov/Bernstein Inequalities with Applications to Interpolation and Approximation		
14:30	**Coffee Break**		
	Session 16A Chair: *Laurent Baratchart*	**Session 16B** Chair: *Boris Shekhtman*	**Session 16C** Chair: *Joe Ward*
15:10	**G. López Lagomasino**, *Universidad Carlos III de Madrid*, Hermite-Pade Approximation and Simultaneous Quadrature Rules	**Vladislav Babenko**, *Dnepropetrovsk National University*, Inequalities of Landau–Kolmogorov Type for Multivariate Functions	**A.-J. Lopez-Moreno**, *University of Jaen*, Saturation for Derivatives of Linear Positive Operators
15:35	**J. Mínguez**, *Universidad de La Rioja*, Multipoint Padé and Szegő-Padé Approximants for Stieltjes Functions	**Yuliya Babenko**, *Vanderbilt University*, Inequalities of Kolmogorov type for Special Classes of Functions	**Svenja Lowitzsch**, *West Virginia University*, Divergence-free Radial Basis Functions: Theory and Application
16:00	**Vasiliy Prokhorov**, *University of South Alabama*, On Best Approximation by Rational Functions	**Friedrich Littmann**, *University of Illinois at Urbana-Champaign*, Entire Extremal Majorants	**Octavian Agratini**, *"Babes - Bolyai" University*, Linear Operators: Iterates and Extensions Generated by a Probability Density Function
16:25	**A. Martínez-Finkelshtein**, *University of Almería*, Information Entropy of Polynomials Orthogonal on an Interval	**D. Dryanov**, *University of Montreal*, Bernstein Type Inequalities	**P. N. Agrawal**, *I. I. T. Roorkee*, Approximation by Micchelli Combination of a New Sequence of Linear Positive Operators
16:50	**F. Seyfert**, *INRIA*, A Bounded Extremal Problem of Mixed (L^2, L^∞) Type	**S. Van De Car**, *University of Central Florida*, Turan Type Inequalities for Rational Functions in Integral Norms	**Lyle Noakes**, *University of Western Australia*, Interpolation and Trajectory Generation for Rigid Bodies
17:15	**Fahreddin G. Abdullayev**, *Mersin University*, Convergence of Bieberbach Polynomials inside Domains of the Complex Plane	**Kiddnan Kobindarajah**, *Eastern University, Chenka lady, Sri Lanka*, Marcinkiewicz -Zygmund Type Inequalities on all Arcs of the Circle	**A. Zhensykbaev**, *Institute of Mathematics, Almaty*, Interpolation and Smoothing Methods of Multivariate Functions