DOCTORAL DEGREES CONFERRED

1996-1997

ALABAMA

Auburn University (12)

DISCRETE AND STATISTICAL SCIENCES
Boling, Patricia, Bowtie algorithm for Steiner triple systems.
Kirkpatrick, Kimberly, Small graph decompositions.
Pike, David A., Hamilton decompositions of graphs.
Raines, Michael Edwin, Embedding partial extended triple systems and partial totally symmetric quasigroups.
Rinker, Susan Serrano, Multi two-path designs.
Wu, Yi-Hong, Discrete logarithm cryptosystems.
Yin, Carol Moore, Generalized Steiner systems.

MATHEMATICS
DeLucia, Luis Gualberto, Dense mixed sphere packings and thin mixed sphere coverings.
Fang, Fengchun, Positive solutions of a class of boundary value problems.
Lauer, Susan Denese, Positive solutions of boundary value problems for nonlinear difference equations.
Smith, Kerry Dale, On normality, countable paracompactness and related properties.
West, Jane Elizabeth Kirchner, Subgroup transitivity in primary abelian groups.

University of Alabama, Tuscaloosa (1)

University of Alabama, Huntsville (1)

MATHEMATICAL SCIENCE
Shi, Xingzhong, Numerical investigation of the stable nocturnal boundary layer.

University of Alabama, Tuscaloosa (1)

APPLIED STATISTICS
Balgopal, Ramaswamy, Applications of the Frobenius norm criterion in multivariate analysis.

ALASKA

University of Alaska (1)

MATHEMATICAL SCIENCES
Luca, Florian, The algebra of Green and Mackey functors.

ARIZONA

Arizona State University (3)

MATHEMATICS
Han, Gil-Jun, On determinacy and unfolding of degenerate equilibria with a linear part $X' = Y, Y' = 0$.
Vaz, Paul, On the Hodge-Dorrham theorem for compact flat pseudo-Riemannian manifolds.

University of Arizona (7)

APPLIED MATHEMATICS
Samsonovich, Alexei, Attractor map theory of the hippocampal representation of space.
Warrick, Abbie Lynn, Application of wavelet and Radon based techniques to the internal wake problem in synthetic aperture radar images.
Wong, Tatyk, Contributions to the theory of stochastic orders.

MATHMATICS
Cheng, Yu-Wen, Endomorphisms of modules over valuation domains.
Dang, Son Xu, The C function for affine Kac-Moody algebras.
El Hadrami, Mohamed Lemine ould, Poisson algebras and convexity.
Keisling, John, Approach to equilibrium for Markovian infinite particle systems with exclusion interaction.

ARKANSAS

University of Arkansas, Fayetteville (1)

MATHEMATICAL SCIENCES
Tielezghi, Behman, Endomorphisms of symmetric semigroups on a finite set.

CALIFORNIA

California Institute of Technology (8)

APPLIED MATHEMATICS
Baumstein, Anatoly, Nonlinear water waves with shear.
Haroldsen, David, The numerical calculation of three-dimensional water waves using a boundary integral method.
Rathnam, Muruhan, Differentially flat nonlinear control systems.
Regelson, Moira, Problem structure/function classification using hidden Markov models.

MATHEMATICS
Binder, Ilia, Rotation spectrum of planar domains.
Jackson, Frances, Sum-dual characterizations of the translation group on IR.
Kiselev, Alexander, Absolutely continuous spectrum of one-dimensional Schrödinger operators and Jacobi matrices with slowly decreasing potentials.
Li, Xuhua, Some results on projective equivalence relations.

The above list contains the names and thesis titles of recipients of doctoral degrees in the mathematical sciences (July 1, 1996, to June 30, 1997) reported in the 1997 Annual AMS-IMS-MAA Survey by 229 departments in 155 universities in the United States. Each entry contains the name of the recipient and the thesis title. The number in parentheses following the name of the university is the number of degrees listed for that university. A supplementary list, containing names received since compilation of this list, will appear in a summer 1998 issue of the Notices.
**Claremont Graduate School**

**MATHEMATICS**


Luzardo-Flores, Jose Alberto, *Neural networks for approximation and control of continuous time nonlinear systems.*


Xiong, Kaixi, *Analysis of a class of nonlinear dynamical systems and applications to neural networks.*

**Stanford University**

**MATHEMATICS**

Abreu, Miguel Tricochet, *Topology of symplectormorphism groups of $S^2 \times S^2_1$.*

Bayroo, Afshin, *Volume growth of geodesic balls in simply connected solvable Lie groups.*

Bray, Hubert Lewis, *Isoperimetric surfaces and the Penrose conjecture in general relativity.*


Hind, Richard, *Filling by holomorphic disks with weakly pseudoconvex boundary conditions.*

Hoffman, Christopher Eric, *A Markov random field which is K but not Bernoulli and other constructions.*

Lupercio, Ernesto, *Real holomorphic Bott periodicity, loop groups and stabilization of monopoles.*

Roskies, Julie Rina, *The minimal representation of $SO(4,3)$ over a p-adic field.*


Tillinghast, John, *Statistical methods and protein sequence motifs.*

Yakhini, Zohar Hanania, *Billiard approximations for Brownian motion.*

**University of California, Berkeley**

**BIOSTATISTICS**

Hogeboom, Charlotte Jean, *Studying the relationship between change and initial value in clustered data subject to regression toward the mean.*

Percell, Sandra, *Malami's modified Kaplan-Meier estimator using the Kth nearest neighbor algorithm.*

Rizzardi, Mark, *She loves me, she loves me not: Pondering over an ordinal-valued time series of tropical flowers.*

**INDUSTRIAL ENGINEERING AND OPERATIONS RESEARCH**


Matanachalai, Sittichai, *Balancing objectives for mixed-model paced assembly lines.*


Shortle, John, *Physical and mathematical foundations of probabilistic engineering design with application to rotors.*

Tseng, Chung-Li, *On power system generation unit commitment problems.*

**University of California, Davis**

**MATHEMATICS**

Epstein, Judith Karen, *On the invariants and isoplatonic of Legendrian and transverse knots.*

Good, Joseph Henry, *Embeddings of $S(2,1)$ into the ring of differential operators.*

Kimura, Masato, *Commutative algebras of differential operators with matrix coefficients.*

Pilliod, James Edward, Jr., *A second-order unsplit method for modeling flows in two-dimensional compressible flow.*

Stocking, Michelle Marie, *Almost normal surfaces in 3-manifolds.*

Truong, Binh Xuan, *Generation of gravitational waves by acoustic wave interactions.*

Winckler, Thomas Koebye, *Stable cohomology of the invariants of the Lie subalgebra Lie(H) of the Lie algebra of Hamiltonian vector fields.*

**University of California, Los Angeles**

**MATHEMATICS**

Beineke, Jennifer, *Renormalization of certain integrals defining triple product L-functions.*

Cardona, Fernanda, *Reidemeister theory for maps of pairs.*

Chen, Jung-Kai (Alfred), *Birational geometry of irregular varieties.*


Fiorello, Rita, *Quantum homogeneous projective varieties.*

Li, Archie, *Incompressible Navier-Stokes flow about multiple moving bodies.*

Lum, Christopher, *Exact triangles in Galois cohomology and dihedral group extensions.*

Michailidis, George, *Multilevel homogeneity analysis.*

Morrill, Maria, *Non-existence of compact de Sitter manifolds.*

Petrescu, Mihai, *Existence of continuous families of complex Hadamard matrices of certain prime dimensions and related results.*

Seinetz, Rui, *Reduction mod p of quaternionic Shimura surfaces.*

Sharapov, Ilya, *Multilevel subspace correction for large scale optimization problems.*

Sweet, Ted, *One dimensional spin systems.*
Moon, Kyunghee, Gauss class groups.
Murthy, Parsh, Harmonics, subharmonics and skew product flows in time varying differential equations.
Piterbarg, Vladimir V., Expansions and contractions of stochastic flows.
Tanushkev, Miroslav S., Joint central limit theorem for renewals of competing patterns.

**COLORADO**

**Colorado School of Mines (5)**

**MATHEMATICAL AND COMPUTER SCIENCES**

Chang, Hong, An algorithm for solving the ultimate pit problem with spatial consideration and a parallel implementation.
Deng, Hongling Lydia, A complexity analysis of genetic optimization problems: Characterizing the topography of high-dimensional problems.
Pulp, Terrance James, Formulation and solution strategies for short-term scheduling of power systems research.
Morey, Christopher, Dynamically determining search parameters for Monte Carlo optimization.
Rynes, Martin Dale, Minimum-curvature C² surface generation using thin-based piecewise biquadratics.

**Colorado State University (11)**

**MATHEMATICS**

Hahn, David Williams, Quadruple covers of algebraic varieties.
Mohammad, Hassan Mikhilf, Hopf ideals in a universal Hopf algebra, with applications.
Schneider, Kimberly, Local to global for endomorphisms.

**STATISTICS**

Brow, Eileen B., Tolerance intervals for individual bioequivalence.
Burch, Brent D., Confidence intervals and prediction intervals in a mixed linear model.
Chen, Mei-Jing, Estimation and inference on noninvertible and nearly noninvertible moving average models.
Chen, Pei, Some topics on Markov chains and their applications.
Lam, Veng Va, CISUM control chart with variable sampling scheme.
Smadi, Mahmoud M., Bayesian inference of threshold autoregressive moving average models using sample-based methods.
Terroras-Gonzalez, Gerardo, Evaluation of projection methods to predict wetland areas: The wetlands inventory of the USA.

**University of Denver (3)**

**MATHEMATICS**

Bandy, Victor, Black box multigrid for convection-diffusion equations on advanced computers.
Barth, Teri, Implementation of the conjugate gradient method using short multiple recursions.
Dean, David, An analysis of the stochastic approaches to the problems of flow and transport in porous media.
McKenna, Patricia, p-competition graphs and p-neighborhood graphs.

**University of Northern Colorado (2)**

**MATHEMATICAL SCIENCES**

Isom, Matthew, The effect of a writing-influenced curriculum on student beliefs about mathematics and mathematics achievement.
Mingus, Tabitha, A qualitative and quantitative study examining the effect of a conceptual, constructivist approach to teaching linear algebra has on students' attitudes and beliefs about mathematics.

**CONNECTICUT**

**University of Connecticut (10)**

**MATHEMATICS**

Dai, Hong, Measuring and analyzing volatility risk in individual income.
Hill, Sharon, Numerical and theoretical analysis of the variational formulation of a water wave problem.

Krog, Karl Peter, Characterization of balanced and cocommutative Burnier groups.

Pinchbeck, David, Nondiscrete groups of Möbius transformation.

Radulovic, Dragana, The bootstrap for empirical process under dependence.

**STATISTICS**

Ghosh, Sujit K., Modeling and analysis of multiple event survival data.

Larose, Daniel T., Bayesian approaches to meta-analysis.

Lou, Kuo-ren, Some aspects of Bayesian robustness.

Qiu, Ziquiang, Bayesian inference for stable processes.

Vlachos, Pantelis, Nonparametric Bayesian clinical trials design for multivariate patient response.

**Wesleyan University (2)**

**MATHEMATICS**

Bassler, Otto Bradley, “d-topological entropy and pressure for amenable group actions.”

McGrail, Tracey Baldwin, Model-theoretic results on ordinary and partial differential fields.

**Yale University (20)**

**BIOSTATISTICS**

Qi, Keqin, A model for incorporating the unspecified cases into cancer trends by histologic type.

Stack, Catherine, Fitting logistic regression models to two-stage case control data using existing methods and Bayesian techniques.

**MATHEMATICS**

Aarao, Jorge Oswaldo Gomes, A transport equation of mixed type.

Bennett, Nicholas N., Signal analysis of chirps: Detection, oscillatory kernels, and anisotropic wavelets.

Beveridge, Andrew John, Stopping rules and time reversal for finite Markov chains.

Farag, Hany M., Some affirmative results towards the Besicovitch 1/2 conjecture.

Gao, Yan, Superrigidity for isometric group actions on CAT(0) spaces.

Graham, Stephen Emerson, An extension of the Kauffman-Murasugi theorem.

Gugelmin, Ronald Jean Marie, Wavelet feature definition and extraction for classification and image.

Harwood, William Ivon, System level fault diagnosis using static, dynamic, and distributed models.

Khovanov, Mikhail Geltlevich, Graphical calculus: canonical bases and Kazhdan-Lusztig theory.

Kim, Julee, Hecke algebras of symplectic groups over p-adic fields and supercuspidal representations.

Mohlenkamp, Martin James, A fast transform for spherical harmonics.

Oh, Hee, Discrete subgroups generated by lattices in opposite horospherical subgroups.

Pelloni, Beatrice, Spectral methods for the numerical solution of nonlinear dispersive wave equation.

**STATISTICS**

Frick, Ronald D., Jr., Nonparametric control charts for multivariate data.

Lynch, Kevin, Mixture detection using oscillation properties of matched densities differences.

Reumig-Scherer, Jonathan, Mixture models for block clustering.

Xie, Qian, Minimax coding and prediction.

Xu, Yuave, Unidentifiable asymptotic problems.

**DELaware**

**University of Delaware (6)**

**MATHEMATICAL SCIENCES**

Bhore, Rafia N., Uncertainty analysis in large models.

Chitra, Rohini, A two state approach to unbalanced split plot designs.

Kovacs, Agnes, The competing risks Weibull model for the strength of single fibers.

Miller, Jacob, Finding periodic orbits of maps: Basins of attraction of numerical techniques.

Pelekianos, George, Direct and inverse scattering by an elastic inclusion.

Peratt, Barry, Mixing powers and scambing points.

**DISTRICT OF COLUMBIA**

**George Washington University (3)**

**MATHEMATICS**

Zhang, Jun, Multigrid acceleration techniques and applications to the numerical solution of partial differential solutions.

**STATISTICS**

Bautista, Oliver M., Analysis of overdamped Poisson count data.

Katsis, Athitvassos, Bayesian optimal designs for binomial experiments.

**Florida**

**Florida Atlantic University (1)**

**MATHEMATICS**

Zhou, Zhen, Decay for time dependent Schrödinger equations.

**Florida Institute of Technology (3)**

**APPLIED MATHEMATICS**

Alharbi, Abir, A neurocomputing approach to solving partial differential equations.

Richter, Stephen, System eigenvalue placement by decentralized feedback.

Wu, Limin, Regularization methods and algorithms for least squares and Kronske system least squares problems.

**Florida State University (5)**

**MATHEMATICS**

Bertoff, Natalia G., Solitary and periodic solutions of nonlinear nonintegrable equations.

Duan, Zhang, Modified cubic lattice model, diamond lattice model, and study loop entanglement of semicrystalline polyethylene.

Gao, Shangzuo, Algorithms for determination of embedding dimensions for nonlinear analysis of chaotic time series and a study of fractal dimensions of and predictabilities of weather attractors over the eastern United States.

Shusen, Ding, Conjugate A-harmonic tensors.

**STATISTICS**

Wu, Shang-Ming (Tom), Asymptotic bounds on the overflow probability in Markov-modulated fluid models.

**University of Florida (3)**

**INDUSTRIAL AND SYSTEMS ENGINEERING**

Angelas, Diana Isava, The effect of activity-based costing on traditional operations research models.

**MATHEMATICS**

Peterson, Kevin, The stress spaces of bipartite frameworks.

Wang, Xiting, A construction of diffusion processes with reflecting barrier from multidimensional Brownian motion.

**University of Miami (4)**

**MATHEMATICS AND COMPUTER SCIENCE**

Browdy, Anne, The cohomology of lattices of partitions with restricted block size.

Garcia, Felix, Periodic solutions of a class of fourth-order nonlinear ordinary differential equations.

Giovanez, Alicia, Conceptual writing and its impact on performance in mathematical processes in college algebra.

Stine, Jay, Pre-Hausdorff objects in topological categories.

**University of South Florida (6)**

**MATHEMATICS**

Belyi, Sergey, Operator-valued R-functions in the theory of linear dynamic systems.

Dhar, Subhamak, Probability measures on stochastic matrices.
Ding, Zouhua, Contribution to the theory of the existence of zeros of perturbations of nonlinear M-accretive operators in Banach spaces.

Elaggar, Mohamed, Identification of the parameters of a multivariate normal distribution by the distribution of the minimum.

Eieck, Michael, Pseudo-orthogonal complementary subspaces and hyperbolic partner graphs.

Veselov, Vladimir, A compactification of the Fatou mapping as a dynamical system.

GEORGIA

Emory University (7)

BIOSTATISTICS

Dunson, David B., Dose dependent cluster size and implications in quantitative risk assessment.

Durham, Laura K., Nonparametric exploration of waning vaccine effects using survival data.

Stenberg, Maya R., Discrete time nonparametric estimation for chain of events data subject to interval censoring and truncation.

MATHEMATICS AND COMPUTER SCIENCE

Fuller, Allen George, On $[K_1,3,Z_2]$-free graphs.

Goddard, Edward (Ted) Wayne, Ordered sets: Colorings and complexity.

Thoma, Lubos, Essays in extremal combinatorics.

Vysoptina, Victoria, Generalized solution of the boundary-value problem on $S^N$ for polyhedrons with prescribed integral curvature.

Georgia Institute of Technology (4)

MATHEMATICS

Dai, Wanyang, Brownian approximations for queuing networks with finite buffers: Modeling, heavy traffic analysis and numerical implementations.

LaDue, Mark Douglas, Quantization error problems for classes of trigonometric polynomials.

Leeds, Kevin Nathaniel, Dilation equations with matrix dilation.

Venkatagiri, Shankar, The peak-crossing bifurcation in lattice dynamical systems.

University of Georgia (7)

MATHEMATICS

Granath, Jon, Frobenius pseudoprimes.

Sneath, David, Homeomorphisms of three-manifolds containing genuine laminations.

Yin, Huasong, Deformation of special subvarieties of divisors associated to double covers of genus three curves.

Zhang, Hong, Asymptotic analyses of Levy flow.

HAWAII

University of Hawaii (1)

MATHEMATICS

Sun, Bohao, Stratifications and sufficiency of weighted jets.

IDAHO

Idaho State University (2)

MATHEMATICS

Molinsky, Michael, Math outside the math department: Is it inevitable?.

Pringle, Brian Craig, Splines.

University of Idaho (4)

MATHEMATICS

Bloomsburg, Pete, A refinement of the Erdos-Szekeres theorem.

Meerdink, Ken, An unavoidable tangle approach for the Kawauchi-Nakanishi conjecture.

Sabo, Dusty, Multiple transverse matchings and skewered matchings.

Stockett, Samuel, A symmetry based decomposition and topologies of fuzzy numbers.

ILLINOIS

Northern Illinois University (4)

MATHEMATICAL SCIENCES

Diamantopoulos, John C., The asymptotic form of the Itilmarsh-Weyl $\lambda$-lambda function.

Hetti-Arachchige, Chandanie, On numerical solutions of the Sylvester-observer equation and the multi-input eigenvalue assignment problem.

Kanderman, David B., Preserve teachers' levels of understanding variables and functions within multiple representations.

Lin, Tsair-Chuan, Nonparametric regression with time series errors.

Northwestern University (10)

INDUSTRIAL ENGINEERING AND MANAGEMENT SCIENCE

Biller, Stephan, Evaluation and selection of projects in decentralized production/distribution systems.

Statistics

Li, Shouyi, Statistical methodology in dose-response study.

Williams, Gigi, Test of homogeneity of AIDS cases and estimation of the incubation period with interval censored data.

Zheng, Shen, Estimation of product of means and some queueing system performance measures.

Dutta, Goutam, A multi-period optimization based decision support system for strategic and operational planning.

Kim, Eungab, Stochastic scheduling for manufacturing systems.

Melkote, Sanjay, Integrated models of facility location and network design.

Stubb, Robert, Branch and cut methods for mixed 0-1 convex programming.

Summers, Gary, Industrial dynamics: An evolutionary model for an interactive simulation.

Mathematics

Fiske, Michael, Non-autonomous systems applicable to neural computation.

Li, Ming-Chia, Structural stability for numerical methods.

Pemmaraju, Satyanarayana, $\eta$-periodic homotopy at $p = 3$.

Statistics

Chiu, Yi-Lin, Measures of association and regression models for ordinal variables.

Southern Illinois University, Carbondale (2)

MATHEMATICS

Barham, Abdelrahim M., Robust confidence intervals for functions of variances and variance components.

Xie, Songfeng, Approximation by bivariate splines with minimal support.

University of Chicago (14)

MATHEMATICS

Guidici, Barry Danzero, Spectral extreme for graphs.

Gurevich, Alex, Boundary regularity for free boundary problems.

Haase, Mark M. Christopher, Extra smoothness conditions for the wave equation.

Han, Bing, On Bloch-Kato conjecture of Tamagawa number for Hecke characters of imaginary quadratic field.

Marden, Michael, Addition and subtraction of ideals.

Mandell, Michael, $E_n$ algebras on p-adic homotopy theory.

Marcouli, Mattilde, Three-dimensional aspects of Seiberg-Witten gauge theory.

Tamvakis, Haralampos, Arithmetic intersection theory on flag varieties.

Wang, Dehua, Initial boundary value problems for nonlinear Euler-Poisson equations.

Wu, Jiahong, The viscosity limits for individual and statistical solutions of the Navier-Stokes equation.

Mathematics

Fang, Dongping, Modeling the correlation structure of the TOMS ozone data and lattice sampling design for isotropic random fields.

Lazar, Nicole A., Some inferential aspects of empirical likelihood.

Picka, Jeffrey David, Variance-reducing modifications for estimators of dependence in random sets.
University of Illinois, Chicago (14)

MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

Cheng, Hancheng, Median unbiasedness inference in finite population sampling.
Crigler, Hairong, Confidence intervals for finite population quantile intervals.
Dang, Yumei, Hypercomplex iterations distance estimation for generalized Mandelbrot sets.
Fabijonas, Bruce, Secondary instabilities of linear flows with elliptic streamlines.
Hewitt, Beatrice, On the homotopical classification of KO-module spectra.
Krebes, David, An obstruction to embedding A^r-tangles in links.
Markve, Ely, Exponential instabilities of adiabatic vortex rings with swirl.
Park, Henry, Optimality of selection procedures.
Qian, Zhongqi, Cyclic codes over Z_4.
Siadat, Mohammad Vali, Building study and work skills in a college mathematics classroom.
Sorgo, Teodore, Volumes of hyperbolic Haken manifolds.
Su, Guoqin, On the existence and construction of difference schemes and orthogonal arrays.
Xiang, Nian, Normal estimates of Banach valued valued random series and their applications in harmonic analysis.
Zhang, Qinglong, A unified framework for index of spatial relationships.

University of Illinois, Urbana-Champaign (21)

MATHEMATICS

Balanzario-Gutierrez, Eugenio Pacelli, On Béurling’s theory on generalized numbers.
Bauer, Robert Otto, Martingales in filtering and geometry.
Chappell, Glenn G., Optimization on products of combinatorial structures.
Chen, Chien-Hsiung, Worked products of metric spaces of curvature bounded from above.
Dai, Mingde, Dynamics of iterated functions systems: Hausdorff dimension and related topics.
Fitzgerald, Kevin Francis, Double cross-products of Hopf algebras, discrete quantum groups and amenable groups.
Folguera, Alejandra, Second and third order systems of integrable equations of the Davey-Stewartson type.
Hu, Zhu-Xin, On Taïbi’s color-tiling problem.
Huang, Sen-Shan, On the Rogers-Ramanujan and Ramanujan-Göllnitz-Gordon continued fractions.
Kotlica, Sonja, Verification of Dade’s conjecture for Janko group J3.
Lee, Ji-Lin, Count and tree in uniform NC1.
Niamsup, Piyapong, Julia sets and symbolic dynamics of certain rational and entire functions.
Parra, Carlos Mario, Uniformity and bounded arithmetic below P.
Rohde, Gareth Scott, Alternating automata and temporal logic of ordinals.
Speissegger, Patrick Urs, The field of reals with Gevrey functions is model complete and O-minimal.
Staiger, Ivan, Baker’s transformation.
Voelklein, Arthur Anderson, O-minimal homology.

STATISTICS

Jiang, Hai, Applications of computational statistics in cognitive diagnosis and IRT model.
Tsukahara, Hideatsu, Weak convergence and the prediction process.
Wu, Hongsheng, Some issues in item response theory.
Zhang, Jinming, Some fundamental issues in item response theory with applications.

Indiana University (8)

MATHEMATICS

Gloor, Philip, Oscillatory singular integral operators on Hardy spaces.
Kovac, Raimundo, Composition operators in Lorentz spaces.
Kwong, Chi-Shun, Mapping cones construction and Gold pairs.
Lee, Kisuk, Some homological invariants over local rings.
Ni, Hongjie, Some numerical methods for Vlasov equations.
Rosa, Ricardo, Attractors for weakly dissipative equations. Inertial manifolds and normal hyperbolicity. Approximate inertial manifolds of exponential order.
Wang, Xiaoming, Asymptotic behavior of solutions to the Navier-Stokes equations at large time and/or small viscosity.
Ziane, Mohammed, Asymptotic analysis of the Navier-Stokes equations. Applications to climatology.

Purdue University (24)

INDUSTRIAL ENGINEERING

Brady, Thomas F., Jr., Prescriptive simulation: A heuristic approach.
Kleywegt, Anton, Dynamic and stochastic models with freight distribution applications.
Warren, Greame M. H., Analysis of some fluid models and a queuing network analyzer for polling systems.

University of Notre Dame (8)

MATHEMATICS

Blower, David M., Blowup rate of the solution of a general parabolic equation with a nonlinear boundary condition.
Jung, Eun-Kyoung, Holomorphic curves in projective varieties.
Kamat, Padmini, Unstable curves on an open manifold without boundary.
Kim, Byunghan, Simple first order theorems.
MeAllister, Alex. Computability in structures representing a Scott set.
Vajiac, Bogdan. An end theorem for stratified spaces.
Vassiladou, Sophia. Homotopy formulas for 'a' and subelliptic estimates for the 'a'-Niemann problem.
York, Eric Von. Algebraic description and construction of error correcting codes, a systems theory point of view.

KANSAS

Kansas State University (6)

MATHEMATICS

Ayyad, Anwar. The distribution of solutions of the multiplicity congruence \( x_1^2 x_2 x_3 \cdots x_n \equiv c \pmod{p} \).
Munshi, Idris. Almost orthogonality properties of mixed characters.

STATISTICS

Al-Zaid, Munther. Iterative two-stage procedures for fitting mixed effects models.
Bond, Marjorie. Using prior knowledge of the intraclass correlation to increase the power of hypothesis tests for treatment means.
Sherfey, Brian. Near replicate clustering criteria for nonreplicated regression lack of fit tests.

University of Kansas (3)

MATHEMATICS

Stanley, Adrienne. D-spaces and a Dowker space.
Wang, Zhennong. Neural network for identification and control of stochastic systems.

Wichita State University (3)

MATHEMATICS AND STATISTICS

Elayyan, Aleaddin. Some inverse problems in parabolic PDE.
Kadakal, Ercan. On the successive approximation of solutions to some elliptic free boundary problems.
Lissiano, Serguei. Some mathematical problems of tomography and radiation treatment.

KENTUCKY

University of Kentucky (16)

MATHEMATICS

Dorf, Michael. The inner mapping radius and construction of harmonic, univalent mappings of the unit disk.
Hebble, Robert. Hamiltonicity of squeezed spheres.
Robertson, Robert. An inverse boundary value problem in linear elasticity.
Schueller, Laura. Pairs of quadratic forms over arbitrary fields.
Tolle, John. Location of inhomogeneities in elastic media.
Tung, Stewart. Monge, optimality, and feasibility sequences in capacitated transportation problems.

Vandenhouwen, Ronald. Stability for the biharmonic and polyharmonic obstacle problems.
Xu, Jinzhong. Flat covers of modules.
Yi, Okyeon. Local nilpotence of envelopes and universal enveloping algebras.

STATISTICS

Chen, Yeh-Ling. The nonlinear least trimmed squares regression estimator.
Gibson, Onecla M.. Influence measures for multivariate analysis.
Ma, Zhenxu. Likelihood estimation for mixture models via the EM algorithm.
Mehra, Munish. Proportional hazards in surviving fractions model.
Mendiondo, Marta. S. Approximation of infinite-dimensional linear programming problems.

LOUISIANA

Louisiana State University, Baton Rouge (9)

MATHEMATICS

Colwell, Nancy. Some lifting problems in arithmetic equivalence.
Cook, Darwyn. A Muntz-Szasz theorem for nilpotent Lie groups.
Fitzgerald, Jeanne. Applications of Gröbner bases to linear codes.
Guissé, Amadou B.. Lie theory of differentiable transformations on branch type manifolds.
Kim, Joehoo Park. A polynomial invariant of links in a solid torus.
Leo, John William. Matroid connectivity.
Lim, Yongdo. Jordan algebras and Lie semigroups.
Natov, Jonathan Paul. Pure framed braids and 3-manifolds.
Stevens, Wayne. On the homology of branched cyclic covers of knots.

Tulane University (2)

MATHEMATICS

Bottino, Dean. An immersed boundary model of ameboid deformation and locomotion.
Hanlon, Bryce. An interpretation of the n-th Leech cohomology group.

University of Southwestern Louisiana (7)

MATHEMATICS

Lim, Wook. Some second order decision theoretic results on correlation estimation.
Lin, Jyh-Juan. Some results on improved normal mean vector estimation.
University of Maryland, College Park (18)

MATHEMATICS
Alvarez, Sergio Andres, Interface motion by curvature and diffusion.
Barnett, John, Zero-crossings of non-Gaussian processes with applications to estimation and detection.
Crook, Sharon, The role of delay in oscillatory models of olfactory cortex.
Dodd, Jeffrey, Convective stability of shock profile solutions of a modified KdV-Burgers equation.
Foklanos, Konstantinos, Categorical time series: Prediction and control.
Galitzer, Amy, On the moduli space of closed polygonal linkages on the 2-sphere.
Hsieh, Po-Hsun, Submanifolds of Kahler manifolds and their normal bundles.
Kapovitch, Vitali, Convergence of manifolds with lower curvature bound.
Kolda, Tamara Gibson, Limited-memory matrix methods with applications.
Lu, Shing-Liang, A convection-diffusion problem with tangential characteristic curves.
Ormes, Nicholas, Strong orbit realization for minimal homeomorphisms.
Pierce, David, On the model theory of function fields.
Previte, Joseph, Graph substitutions.
Rowe, Errol, Probabilistic approach to a class of partial differential equations systems.
Sovergion, Brett, Nilpotent isotropy groups of compact hyper Lorentz manifolds.
Wang, Li, Emel, Studies of an elliptic inverse boundary value problem and applications to defect determination.
Wang, Weichung, Iterative methods in interior point algorithms for linear programming.
Xia, Eugene Zhu, The moduli of flat PGL(2,R) structures on Riemann surfaces.

Massachusetts
Boston University (5)

MATHEMATICS
Campbell, Duff, Einstein series, Dedekind symbols and p-adic L-functions.
Chiu, Amy Hui-Lin, Quadratic Newton's method and matings of polynomials.
Russell, Heidy Kwan, Robustness and power of one-step analysis versus two-step analysis applied to multiple endpoints data.
Teodorescu-Frumosu, Mihail Antoniu, Mathai-Quillen formality and Lefschetz theory.
Teverovsky, Vadim, Detection and estimation of long range dependence.

Brandeis University (5)

MATHEMATICS
Dworkin, Morris, Generalizations of root polynomials.

Hiss, Karin, Degree of orbits and linear slices.
Kluczynki, Michael, Exact sequences of Schur complexes.
Leibman, Leonard, p-adic lattices in representations of PGL(2,Z_p).
Peng, Huai, Matrix models, Toda lattice and random matrices.

Clark University (1)

MATHEMATICS AND COMPUTER SCIENCE
Chang, Jun, Zeta functions attached to irreducible representations of classical groups over finite fields.

Harvard University (36)

BIOSTATISTICS
Anderson, Janet, Missing outcomes in clinical trials: Considerations for failure-time and longitudinal data.
Boucher, Helene, Design and analysis of group sequential clinical trials with survival data.
Chen, Li, Statistical methods for the analysis of correlated observations.
Daskalakis, Constantine, Analysis of categorical data in psychiatric epidemiological studies.
Goggins, William, II, Monte Carlo EM methods for analyzing survival data in the presence of interval censoring.
Higgins, Karen, Statistical methods for nonlinear models with measurement error with application to pharmacokinetics and calibration in immunoassay.
Kim, Soyeon, Covariates in survival studies, topics in design and analysis.
Kleinman, Kenneth, Applications of Markov chain Monte Carlo to longitudinal repeated measures: Missing data and semi-parametric effects models.
Liang, Qing Jane, The proportional hazards model and interval-censored data.
Okamoto, Akiko, Penalized likelihood estimation for censored data models and investigation of likelihood methods for nonignorably missing data.
Scharfstein, Julie Alper, Cost-effectiveness analysis and aids: Methods and application.
Zeng, Qi, Topics in calibration inference for immunoassay.

ENGINEERING AND APPLIED SCIENCES
Bassiri, Farid G., Random walks on finite groups with multiplicity two.
Epstein, Russell A., Learning object representations from greyscale images.
Gaudet, Samuel, Extensional dynamics of liquid bridges and filament stretching devices.
Hu, Yu, Efficient data parallel implementations of highly irregular problems.
Jewett, Megan E., Models of circadian and homeostatic regulation of human performance and alertness.
Lau, Tak Wing, Probability models and selection methods for stochastic optimization.
Lee, Lillian J., *Similarity-based approaches to natural language processing.*


Shalaby, Nadia, *Fast parallel orthogonal transform.*

**MATHEMATICS**

Chen, Xi, *Rational curves on K3 surfaces.*

Conrad, Keith, *p-adic gamma functions.*

Fulman, Jason, *Probability in the classical groups over finite fields: Symmetric functions, stochastic algorithms, and cycle indices.*

Grinberg, Mikhail, *A generalization of Springer theory using nearby cycles.*

Loke, Hung Yean, *Exceptional Lie groups and Lie algebras.*

Luu, Nathan, *Random walks on the symmetric groups generated by conjugacy classes.*

Oler, Adi, *Abelian L-functions twisted by algebraic tori at s = 0.*

Pak, Igor, *Random walks on groups.*


Turetsky, James, *Short time behavior of logarithmic derivatives of the heat kernel.*

Vakil, Ravi, *Enumerative geometry of curves via degeneration methods.*

Vishik, Alexander, *Integral motives of quadrics.*

**STATISTICS**

Thurston, Sarah, *Error analysis of food stamp microsimulation models.*

Wu, Yinghian, *Modeling general mixture components, with application to schizophrenic eye-tracking.*

**Massachusetts Institute of Technology (25)**

**MATHEMATICS**

Andrews, Daniel Matthew, *Scheduling techniques for packet routing, load balancing and disk scheduling.*

Benczúr, András, *CUT structures and randomized algorithms in edge-connectivity problems.*

Bona, Miklos, *Exact and asymptotic enumeration of permutations with subsequence conditions.*

Christensen, John Daniel, *Ideals in triangulated categories: Phantoms, ghosts and skeleta.*


Gagné, Mathieu, *Compactified Jacobians of integral curves with double points.*

Ingalls, Colin James, *Deformations of orders.*

Kucan, Jakov, *Metatheorems about convertibility in typed lambda calculi: Applications to CPS transform and "free theorems".*

Laures, Gerd, *The topological q-expansion principle.*

Metzler, David Scott, *Topological invariants of symplectic quotients.*

Patrick, David Michael, *Noncommutative ruled surfaces.*

Postnikov, Alexander E., *Enumeration in algebra and geometry.*

Taylor, Brian David, *Generalized straightening laws for products of determinants.*


Vasy, Davide, *The strongly attracting character of large amplitude nonlinear resonant acoustic waves without shocks.*

Vasy, Andras, *A numerical study.*

Wang, Jianhua, *Equisistant resolution of singularities and semistable-reduction in characteristic 0.*

Wolf, Ethan, *Statistical prediction schemes for the collid-collic motif.*

Wolfgang, Harry Lewis, III, *Two interactions between combinatorics and representation theory: Monomial immanants and Hochschild cohomology.*

Yan, Catherine Huafei, *The theory of commuting Boolean algebras.*

Zanger, Daniel Zvi, *Regularity and boundary variations for the Neumann problem.*

Zhang, Yihao Lisa, *An analysis of network routing and communication latency.*

**OPERATIONS RESEARCH**

Christodoulakis, James D., *Solution methods for multi-processor network scheduling problems with application to railroad operations.*

Miller, Michael G., *Optimal allocation of resources to clinical trials.*

Patterson, Sarah, *Dynamic flow management problems in air transportation.*

Teo, Chung-Phaw, *Constructing approximation algorithms via linear programming relaxations: Primal dual and randomized rounding techniques.*

**Northeastern University (8)**

**MATHEMATICS**

Al-Jasem, Waled, *On using struction in computing the stability number.*

Du, Xi, *On isometric immersions of space forms in space forms.*

Green, Michael, *Lé cycles on analytic spaces.*

Lang, David, *Adjacency codes of graphs: Weights, dimensions, representations.*

Noel, Alford, *Nilpotent orbits and stable parabolic subalgebras.*

Rausch, Randall, *The kte method for accelerating vortex method solutions of Euler's and Navier-Stokes' equations.*

Sadaka, Hanai, *Maximization of empirical Shannon information in testing significant variables of linear model.*

Shulman, Laura, *A statistical characterization of the concentration fluctuations due to turbulence in a circular jet.*

**Tufts University (2)**

**MATHEMATICS**

Qian, Jinghua, *The p-varation of partial sum processes and empirical processes.*

Zhang, Zhenhua, *Permutations and dynamics on the interval.*

**University of Massachusetts, Amherst (2)**

**MATHEMATICS AND STATISTICS**

Berglund, Jan-Olof Jorgen, *Energy minimizing surfaces in various 3-manifolds.*

Blau, Philip, *Lie isomorphisms of prime rings.*

**Worcester Polytechnic Institute (1)**

**MATHEMATICAL SCIENCES**

Kimball, Lucia, *Optimal unit commitment and economic dispatch with transmission and energy constraints.*

**MICHIGAN**

**Michigan State University (12)**

**MATHEMATICS**

Flowers, Nell Henry, *Core-free maximal subgroups of locally finite groups.*

Foreman, Brendan J., *Variational problems on complex contact manifolds with applications to twistor space theory.*

Iwam, Eleny-Nicolea, *Gurus one enumerative invariants in P^*. In a generic curve with a finite number of distinct components, the number of k-invariants is a polynomial function of the degree of the curve.*

Jiao, Hengli, *Global existence and blow-up of solutions to nonlinear wave equations.*

Liu, Rufeng, *The asymptotic behavior of stochastic evolution equations.*

Park, Jongil, *Seiberg-Witten invariants of rational blow-downs and geography problems for irreducible 4-manifolds.*

Tjandra, Maria, *Compact composition operators on some basic invariants in Banach spaces.*


Zhang, Yingjie, *Hausdorff dimension of invariant sets for expanding and hyperbolic systems.*

Zhao, Xiaoming, *Regularity and stability for periodic solutions of nonlinear Klein-Gordon and Schrödinger equations.*

**STATISTICS AND PROBABILITY**


Yuan, Chao, *Uniform behavior of stochastic approximation methods.*

**University of Michigan, Ann Arbor (26)**

**BIOSTATISTICS**

Lunetta, Kathryn, *Models and experimental design for radiation hybrid mapping.*
Yang, Iisoon, Latent class marginal models for the analysis of cross-classified categorical data.

INDUSTRIAL AND OPERATIONS ENGINEERING

Allen, Theodore Tetraut, Optimal design of experiments for parameter design and/ or finite element analysis.

Chen, Wei-Wang, Managing variation in chemical batch processes.

Donohue, Christopher J., Stochastic network programming and the dynamic allocation problem.

Murray, John, Hortatory operations the colloquium: Modeling a human-machine system using knowledge engineering techniques.

Sobek, Durward Kenneth II, Core beliefs that shape product development systems; explaining Toyota and Chrysler differences.

Tsung, Fu-Gee, Run-to-run proportional integral-derivative control and monitoring schemes.

Yen, Chih-Kuan, New strategies for device dispatching in trip-based material handling systems.

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Allen, Seth W., On nonsingular, cyclide transition surfaces.

Belcastro, Sarah-Marie, Picard lattices of families of K3 surfaces.

Bldigare, T. Patrick, Hyperplane arrangement face algebras and their associated Markov chains.

Chiu, Mihai A., Perfect matchings, spanning trees, plane partitions and statistical physics.

Comar, Timothy D., Hyperbolic Dehn surgery and convergence of Kleinian groups.

Goer, Henry A., Permutation models and forcing extensions.

Kantor, Michael J., SL(2,7) subgroups of E8(C) and their actions on a maximal torus.

MacRimmon, Brian C., Strong F-regularity and boundedness questions in tight closure.

Martin, Gregory G., The distribution of prime primitive roots and dense Egyptian fractions.

McDermott, Moira A., Tight closure, plus closure and Frobenius closure in cubical cones.

Nair, Arvind N., Weighted cohomology of arithmetic groups.

Olsen, Peder A., Negative eigenvalues of the Schrödinger equation: An approach through fractional integration and Morrey spaces.

Patil, Vijay, On I. Symmetry breaking under perturbations and II. Relativistic fluid dynamics.

Szaro, John P., Isotropy of semisimple group actions on manifolds with geometric structure.

Treatman, Stefan G., Euclidean systems.

STATISTICS

Lu, Hong, Inference for acceleration transforms in stress testing with applications to models based on reliability kinetics.

Meyer, Mary, Shape restricted inference with applications to nonparametric regression, smooth nonparametric function estimation, and density estimation.

Wayne State University (2)

MATHEMATICS

Chen, Ciping, On matching factors of graphs.

Shao, Yongheng, Nonsmooth sequential analysis in infinite dimensions: Theory and applications.

Western Michigan University (6)

MATHEMATICS AND STATISTICS


Emerson, Allen, Gender discourse in small learning groups of college-level development mathematics students.

Hansen, Lisa, Domination in digraphs.

Terpstra, Jeffrey, A robust estimate for an autoregressive time series.

Vandell, Robert, Integrity of digraphs.

Wang, Meili, Statistics graphics: Applications to the R and GR methods in linear models.

MINNESOTA

University of Minnesota, Minneapolis (20)

BIOSTATISTICS

Kwak, Minjung, Exact and asymptotic tests for multiply-matched case-control studies.

Ma, Zhenfeng, Stochastic process models for partially censored data, with applications to end-stage renal disease.

Sengupta, Anjana, Analysis of longitudinal binary data.

Shen, Wei, Triple-threat estimates.

MATHEMATICS

Bae, Hyeong Ohk, Dynamics of evolutionary equations under time discretizations.

Bailey, Guy David, Tilings of zonotopes: Discriminantal arrangements, oriented matroids and enumeration.

Hagen, Aaron, The dynamics of time discretizations.

Kinney, William, Oscillations in singularly perturbed systems and the Conley index.

Liao, Jie, Zero-one laws for random and non-random environments.

Liu, Lili-Peng, Geometric flows on compact manifolds.

Mitrea, Dorina Irena-Rita, Layer potential operators and boundary value problems for differential forms on Lipschitz domains.

MISSISSIPPI

Mississippi State University (2)

MATHEMATICS AND STATISTICS

Geoffroy, Pedro Jose, Poisson regression for overspersed and correlated data.

Givavuangsawat, Sumalee, Statistical inference in the presence of correlated data.

University of Mississippi (1)

MATHEMATICS

Summerville, Jamie Lee, Bialyovectors of Riesz-like homomorphisms between partially ordered vector spaces.

MISSOURI

St. Louis University (1)

MATHEMATICS AND COMPUTER SCIENCE

Johnson, Robert A., Jr., Construction of higher dimensional orbifolds and their orbifold invariants.

University of Missouri, Columbia (11)

MATHEMATICS

Hailey, Craig, An upper bound for the second eigenvalue of the Dirchlet Schrödinger operator with fixed first eigenvalue.

Kelly, Annala, Weakly analytic vector-valued measures.

Mystkowski, Miroslaw, On spectral properties of Schrödinger-type operators.

Ratnaeealan, Ratnam, Trace relations for one-dimensional Schrödinger operators.
Renger, Walter, Limits of soliton solutions.
Robdera, Mangatiana, On the analytic complete continuity property of Banach spaces, and convolution operators.
Utkutepe, Unal, Positive solutions of nonlinear elliptic equations on Euclidean plane.
Voepel, Tammy, Variable transformations for difference equations.
Wodzak, Michael, Uniform distribution and entire functions.
Zeng, Min, On procedures for finding the interior eigenvalues of large nonsymmetric matrices.

STATISTICS
Chen, Yi-Ju, Distribution results for tests based on ranks.

University of Missouri, Kansas City (2)
MATHMATICS AND STATISTICS
Kardos, Judit, Measure and porosity of subsets of the real line.
Londre, Tristan, Accuracy of a two-sided parallel Jacobi scheme for singular value decompositions.

Washington University (10)
MATHMATICS
Fernandez, Luis, Superminimal 'surfaces in spheres.
Gonzalez, Cristobal, Differential inequalities associated with weighted symmetrization processes on the real line.
Li, Xinwei, Transference and related techniques in harmonic analysis.
Lin, Peng, Hankel and Toeplitz operators on some weighted spaces of entire functions.
Luong, Bao, A $T(b)$ theorem for the Poincaré upper half-space and hyperbolic geometry.
Nguyen, Tristan, Holomorphic curves in $\mathbb{C}^n$ minus a general hypersurface.
Tourville, Suzanne, An analysis of a numerical method for solving the two-dimensional Navier-Stokes equations.
Weiland, David, Calderón-Zygmund operators and smooth molecules.
Woodley, Anita, Subgroups of the two-dimensional Cremona group.

SYSTEMS SCIENCE AND MATHEMATICS
Shoells, Gregg Allan, Dynamics and control of an underwater robotic vehicle with an n-axis manipulator.

MONTANA
Montana State University (9)
MATHMATICAL SCIENCES
Brown, Scott, The mathematics learning log and its effects on mathematics achievement, anxiety, and communication.
Helfgott, Michel, Integrated calculus.
Kilday, Beth, Perceptions of graduate teaching assistants and their students on collaborative learning in reform calculus and its relationship to instruction and achievement.
Larson, Chris, Using iconic modeling and technology with American Indian reservation students.
Luebeck, Jennie, Mentoring through telecommunications: An early career program for rural mathematics and science teachers.
Oursland, Mark, Comparing the cognitive differences resulting from modeling instruction: Using computer microworld and physical object instruction to model real world problems.
Swanson, Wendy, Negative binomial estimation and testing: Comparison to minimum disparity methods.
Tiwari, Sunil, Biofilm growth in a homogeneous porous medium.
Willard, Teri, Mathematics portfolios, NCTM goals, and students’ perceptions; a complex analysis.

University of Montana (2)
MATHMATICAL SCIENCES
Long, William Michael, Asymptotic analysis of the solution of a spherical bubble in the case of a fast reaction.
Sangadji, Compact Toeplitz operators on Fock spaces.

NEBRASKA
University of Nebraska, Lincoln (8)
MATHMATICS AND STATISTICS
Al-Khaled, Kamel, Theory and computation in hyperbolic model problems.
Fitchett, Stephanie, Generators of fat point ideals on the projective plane.
Morell, Mike, Disconjugacy of a third-order linear difference equation.
Olsen, Cheryl, On graphical designs.
Ruyte, Robert, Pseudovarieties of inverse monoids.
Szansislo, Zsuzsanna, On the Bollobás inequality.
Wang, Kaicheng, Rewriting reduction and pruning reduction on Munn trees.
Yamamura, Akihiro, HNN extensions of inverse semigroups.

NEW HAMPSHIRE
Dartmouth College (3)
MATHMATICS
Frechette, Sharon, Decomposition of spaces of half-integral weight cusp forms.
Gunter, Lawrence, Transformation monoids of algebraic number rings.
Veenstra, Tamara, Characterizing Siegel modular forms.

University of New Hampshire (3)
MATHMATICS
Cullinan, Michael J., Contributions to the theory of neighborhoods and its applications.
Neveu, Lawrence Valery, Contributions to the theory of distance functions and its application in general topology.
Soucy-McCrane, Sharon Marie, Student interactions and mathematics discourse: A study of the development of discussions in a fifth grade classroom.

NEW JERSEY
New Jersey Institute of Technology (1)
MATHMATICS
Pelesko, John, Diffusive and wave-like phenomena in thermal processing of materials.

Princeton University (23)
APPLIED AND COMPUTATIONAL MATHMATICS
Gandhi, Amar S., From level to level: Course-graining/scaling in ecology.
Palsson, Eirikur, The CAMP signaling system in dicyctostelem discodeum.
MATHMATICS
Caraballo, David George, A variational scheme for the evolution of polycrystals by curvature.
Chung, Kin Yan, On variational schemes modeling surface diffusion.
Dolgopyat, Dmitry, On statistical properties of geodesic flows on negatively curved surfaces.
Feng, Zuwei Thomas, On certain families of multivariable exponential sums and their monodromy groups.
Fraser, Andrea Jolla, Marciniec Iwo multipliers on the Heisenberg group.
Fung, Francis Yeh Chei, On the relation between Springer fibers of the general linear group and Kazhdan-Lusztig theory.
Gilbert, Anna Catherine, Multiresolution homogenization schemes for differential equations and applications.
Green, Linda Elizabeth, Incompressible surfaces in three-dimensional manifolds that fiber over the circle.
Honda, Ko, On harmonic forms for generic metrics.
Karnaukh, Anton, Spectral count on compact negatively curved surfaces.
Kosygin, Denis, Statistical properties of spectra of Laplace-Beltrami operators on Liouville surfaces.
Maley, Franklin Miller, Hall polynomials for classical groups.
Miller, Stephen David, Cusp forms on $SL_2(\mathbb{Z}), SL_3(\mathbb{R})/SO_3(\mathbb{R})$.
Pakianathan, Jonathan, On the cohomology of certain p-groups associated to Lie algebras.

Skinner, Christopher Mclean, Deformations of reducible Galois representations.

Sosnikov, Alexander Boris, Global level spacings distribution for large random matrices from classical compact groups: Gaussian fluctuations.

Such, Ondrej, Monodromy of Atiy and Kosterman sheaves.

Tao, Terrence, Three regularity results in harmonic analysis.

Vatsal, Vinayak, Hasasawa theory, modular forms and Artin representations.

Wise, Daniel T., Non-positively curved square complexes, aperiodic tilings and non-residually finite groups.

Yip, Nungkwan, Stochastic perturbations in curvature driven flows.

Rutgers University, New Brunswick (16)

MATHEMATICS


Barron, Katrina, The supergeometric interpretation of vertex operator superalgebras.

Bennett, James, The reducts of some infinite homogeneous graphs and tournaments.

Cedro Fengya, Donna Jean, Identification of interfaces and small inhomogeneities from boundary measurements of electrostatic potentials and currents.

Chitour, Yacine, Applied and theoretical aspects of the controllability of nonholonomic systems.

Doering, Luisa Rodriguez, Multiplicities, cohomological degrees and generalized Hilbert functions.

Georgiev, Galin, Combinatorial constructions of modules for infinite-dimensional Lie algebras.

Han, Zhonghong, Local solvability of analytic pseudodifferential complexes in top degree.

Losada, Maria E., Measurability of category and the cofinality of the infinite symmetric group.

Ostheimer, Gretchen, Algorithms for polycyclic-by-finite groups.

Peck, Aleksandar, Limitations on conclusions from combinatorial optimization methods.

Reimer, David, Five coloring theorems.

Toth, Arpad, Equidistribution of roots of quadratic congruences.

Zhu, Meijun, Moving sphere method and sharp Sobolev inequality.

Statistics

Manco, Gregory, Testing and confidence regions for parameters of order restricted spaces.


Stevens Institute of Technology (2)

MATHEMATICAL SCIENCES

McGuire, Linda, An extension of Dirac’s theorem.

Mishier, Michael, Some algebraic properties of the monodromy groups of certain transcendental functions.

NEW MEXICO

New Mexico State University (1)

MATHEMATICAL SCIENCES

Zarret, Debra, Generalized echelon and co-echelon spaces.

NEW YORK

City University of New York, Graduate Center (10)

MATHEMATICS

Castron, Francis, Exponential sums and L-functions over finite fields.

Dias, Olen, Effective computations with dense structured matrices and applications to polynomial evaluation and interpolation.

Huang, Shuechin, Subgroups of Hecke groups and Hecke polynomials.

Huang, Xiaolin, Algorithms for fast rectangular matrix multiplications and their applications.

Stein, Gregory, Factoring cyclotomic polynomials over finite fields.

Sui, Mei, Measureable laminations and holomorphic dynamics.

Touhey, Patrick, A phantom dissertation.

Veifier, Anthony, Moduli spaces of hyper-elliptic Riemann surfaces.

Wyatt, Katherine, Decomposition methods for dissipative linear programming and fixed-income portfolio selection.

Yao, Wei-Chen, The arithmetic and geometry of Bianchi groups.

Clarkson University (1)

MATHEMATICS AND COMPUTER SCIENCE

Lakoba, Taras, Perturbations and stability of solitary waves in nonlinear optics.

Columbia University (11)

BIOSTATISTICS

Bagiella, Emilia, Estimating a survival distribution from case control family data.

Leu, Cheng-Shih, Some theorems concerning a sequential elimination procedure of selecting the best one of several binomial population or multinomial categories.

Vaughan, Roger D., The units of analysis problem in quasi-experiments: Analysis of cluster-designed, pair-matched binary data in school based research.

Mathematics

Carbone, Lisa, Lattices in the automorphism group of a tree.

Comes, Andrew, Asymptotic estimates for oscillatory integral operators.

Diamantis, Nikolaos, Special values of higher derivatives of L-functions.

Hamidi-Tehrani, Hessam, Algorithms in the mapping class groups.

Leung, Man-Chung, Relative Bessel coefficients over a finite field.

Liu, Zhejiang, Oscillatory integrals and Radon transforms.

Mimar, Arman, Some generalizations of the Ihara-Serre-Tate theorem.

Oliveira, Bruno Namorado, Lifting curves on surface deformations and Hodge theory.

Cornell University (15)

APPLIED MATHEMATICS

Alouf, Hassan Asraf, Different types of SPDEs: Existence, uniqueness, and Girsanov’s theorem.

Hough, Patricia D., Stable and efficient solution of weighted least-squares problems with applications in interior point methods.

Sin, Carlos A., Strictly local martingales and hedge ratios on stochastic volatility models.

Toh, Kim Chuan, Matrix approximation problems and nonsymmetric iterative methods.

Zeng, Randolph Scott, An analysis of the nonlinear quasi-periodic Mathieu equation.

Mathematics

Baggett, Jeffrey, Non-normal dynamics and hydrodynamic stability.

Bueler, Edward, The heat kernel weighted Hodge Laplacian on noncompact manifolds.

Cai, Tianwen (Tony), Nonparametric function estimation via wavelets.

Dunlap, Richard, Superconvergence points in locally uniform finite element meshes for second order two point boundary value problems.

Schneck, Henry Koeving, Homological methods in the theory of splines.

Statistics

Borkowf, Craig, The empirical and parametric: Bivariate quantile-partitioned distributions.

Ding, Aigong, Prediction intervals and confidence intervals for neural networks and HELP.

Jiang, Wexin, Aspects of misspecification in statistical models: Applications to latent variables, measurement error, random effects, omitted covariates and incomplete data.

Levine, Richard, Optimizing convergence rates and variances in Gibbs sampling schemes.
Wu, Yuhai, Minimax estimation of nonparametric regression through white noise problem.

New York University, Courant Institute (14)

MATHEMATICS
Chen, Kangyan (Connie), Applications of the method of complex characteristics.
Csiszmadia, Gyorgy, The distribution of distances among n points.
Grigorescu, Ilii, Self-diffusion for Brownian motions with local interaction.
Keich, Uri, Stationary approximations to non-stationary stochastic processes.
Lee, Hyeong-Gi, Optimal shape design of quasi-one dimensional transonic duct.
Lin, Ta-Chia, Ginzburg-Landau vortices in superconductors and defects in biaxial nematic liquid crystals.
Nicolae, Bogdan, Kinematic and MHD dynamo action with multiple velocity modes.
Perera, Kanishka, Critical groups of pairs of critical points produced by linking subsets.
Ramirez, Alejandro, Relative entropy and mixing properties of some infinite dimensional processes.
Ryan, Reade, Large deviation analysis of Gaussian fields and the statistics of Burger's turbulence.
Schultz, Peter, Nonlinear wave equations on multidimensional lattices.
Teytel, Mikhail, Degeneracies in the spectra of self-adjoint operators.
Toth, Géza, Extremal problems in combinatorial geometry and graph theory with algorithmic applications.
Wodarski, Krzysztof, Numerical simulations of Hele-Shaw flow in a time-dependent gap.

Rensselaer Polytechnic Institute (9)

DECISION SCIENCE AND ENGINEERING SYSTEMS
Goyal, Anil, Towards a robust financial aid modeling approach.
Lee, Young, Strategic and tactical models for multi-destination traffic routing in telecommunication networks.
Voss, Pieter, Estimating steady state mean from short observed time series with initial transient.

MATHEMATICAL SCIENCES
Coury, Robert, Energy conservation and interface conditions for parabolic approximations to the Helmholtz equation.
Jonsson, Elias, Partial Dirichlet to Neumann maps in the approximate reconstruction of conductivity distributions.
Longfritz, Michael, Stochastic representation of ocean environments using empirical orthogonal functions with acoustic applications.
Schultz-McLoughlin, Mary Ann, Olga Taussky-Todd, Grande Dame of Mathematics.
Weckesser, Warren, Stability of the relative equilibria in a class of mechanical systems with rotational symmetry.

State University of New York, Albany (4)

MATHEMATICS AND STATISTICS
Bourguet, Steven, Problems in dynamics: Free homeomorphisms, invariants, and difference equations.
Evans, Richard, Bayesian influence when pooling of data is uncertain.
Mascelli, Augustine, Discrete Pflagramm-Lindelöf theorems.
Schwartz, Kenneth A., Groups generated by face-pairing maps on polyhedra.

State University of New York, Buffalo (5)

MATHEMATICS
Chen, Shaw-Quey, Solvability of convolution equations in spaces of distributions on R^n with restricted support.
Gidea, Marian, The discrete Conley index for non-variant sets and detection of chaos.
Jeng, Jyh-horn, Existence and uniqueness of the family of solutions of the planar Benard problem on the hexagonal lattice with nonslip boundary conditions.
Krzyzanski, Wojciech, Analysis of a model of membrane potential for a skin receptor nerve.
Nie, Fusheng, Products of Toeplitz operators and products of Hankel operators on the unit sphere.

State University of New York, Stony Brook (24)

APPLIED MATHEMATICS AND STATISTICS
Chou, Chung Chiang, Parallel simulated annealing and applications.
Graham, Mary Jane, A numerical study of Richtmyer-Meshkov instability driven by cylindrical shocks.
Harnett, Joan, Capital accumulation with population dynamics.
Hwang, Kwangjo, Exact distributions of extreme value statistics for urn models with epidemiologic applications.
Kent, Kathryn, Stable cost allocations on minimum spanning tree networks.
Kone, Fatoumata, Estimating the volatility of stock markets.
Levis, Herbert, The fleet coordination problem.
Li, Qian, Wave interactions and bifurcation for front tracking in three dimensions.
Min, Daehee, Maximum likelihood estimation of parameters for mixture of two gamma distribution.
Pass, Andrea, The analysis of continuous interfaces using compressible multicomponent flow with front tracking.
Son, Sungil, Study of shock-accelerated instability through non-linear analysis.
Sun, Kent, Diffusion problems in fluid flow models.
Wang, Yuan, Parallel simulation and optimization for inventory systems and bio-systems.

MATHEMATICS
Donley, Robert, Intertwining operators into cohomology representations for semisimple Lie groups.
Hockman, Christopher, Monotonicity and the construction of quasiconformal conjugacies in the real cubic family.
Hwang, Seungsu, Characterizations of various classes of Einstein metrics.
Jaffe, Thalia, Singular Kähler-Einstein metrics.
Klarreich, Erica, Semiconjugacies between Kleinian group actions on the Riemann sphere.
Lorek, Wladyslaw, Generalized Cauchy-Riemann operators in symplectic geometry.
Lu, Peng, A rigorous definition of fiberwise quantum cohomology and equivariant quantum cohomology.
Marques, Carlos, Self-dual Hn-cellular structures.
Sung, Myong-Hee, Kähler metrics of positive scalar curvature on ruled surfaces.
Wenstrom, LeRoy, Scaling laws for quadratic maps.

Syracuse University (4)

MATHEMATICS
Lin, Yachen, Feed-forward Nenzal network-learning algorithm, statistical properties, and applications.
Modall, Laksmi, A uniform property for finite sets of points in projection space.
Porter, Mary, The effects of writing to learn mathematics on conceptual understanding and procedural ability in introductory college calculus.
Tribboli, John, A journey through numeracy: Correlates of mathematical success at the collegiate level.

University of Rochester (7)

MATHEMATICS
Gaggero, Jose Andres, Asymptotic mean square of the product of the second power of the Riemann zeta function and a Dirichlet polynomial.
Hyun, Jung-Soon, Exponential decay for a class of potentials.
Wang, Jeffrey Hongyu, On the braid groups for R^n and the Mobius band.
Xicotencatl, Miguel Alejandro, Orbit configuration spaces, infinitesimal braid relations in homology and equivariant loop spaces.
Statistics
Huison, Alan. *Quantile function estimation and applications.*
Jeong, Jong. *New applications in frailty models in survival analysis.*

NORTH CAROLINA
Duke University, Raleigh (6)
Mathematics
Filip, Anne-Marie. *Existence and modulation of traveling waves in particle chains.*

Statistics and Decision Sciences
Li, Frank (Saïsli). *Time deformation models: Theory and practice.*
Su, Fusheng. *Limit theorems on deviation probabilities with applications in two-armed clinical trials.*

North Carolina State University, Raleigh (18)
Mathematics
Marszalek, Wieslaw. *Analysis of partial differential algebraic equations.*
Zhang, Yue. *Mathematical formulation of vibrations of a composite curved beam structure: Aluminium core material with viscoelastic layers, constraining layers and piezocermic patches.*

Operations Research
Wu, Peisiang. *Neural networks and fuzzy control with applications to textile manufacturing.*
Zhang-Lo, Shuzhi. *ATM network topological design and network modification.*

Statistics
Bobashev, Georgiy Vladimirovich. *Endogenous and exogenous factors in the dynamics of childhood infectious diseases.*
Cummins, David Jesse. *Confidence bands for nonparametric curve estimates.*
Devanarayan, Viswanath. *Simulation extrapolation methods for heteroscedastic measurement error models with replicate measurements.*
Jayawickrama, Judith Nilmini. *Adjustment for carryover in crossover designs: Use of weighted estimation and hypothesis testing as an alternative to classical-two-stage procedures.*

University of North Carolina, Chapel Hill (5)
Mathematics
Hammack, Richard. *Topology of the space of morphisms from an affine curve to a semisimple group.*
Kjeseth, Lars. *BRST cohomology and homotopy Lie-Rinehart pairs.*
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NORTH DAKOTA
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OHIO
Bowling Green State University (4)
Mathematics and Statistics
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Oregon State University (5)

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Clemson University (4)

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University of Memphis (6)

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University of North
Texas (2)

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University of Texas,
Arlington (3)

MATHEMATICS
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Austin (17)

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University of Texas, Dallas (2)

MATHEMATICAL SCIENCES
Murphy, Craig, Diophantine equations and the direction-of-arrival problem for phase interferometers.
Zeng, Guoping, Nonlinear observers for output tracking.

UTAH

University of Utah (6)

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Yang, Jumung, Properties of robust model selection.

VERMONT

University of Vermont (1)

MATHEMATICS AND STATISTICS
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VIRGINIA

University of Virginia (14)

APPLIED MATHEMATICS AND MECHANICS
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University of Wyoming (5)

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Adams, Michael, Generalized orthogonal arrays and related structures.

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West Virginia University, Morgantown (4)

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Lewis, Heather Ames, Homotopy and distance-regular graphs.
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University of Wisconsin, Milwaukee (9)

MATHEMATICAL SCIENCES

Abroell, Sigrid, Asymptotic behavior and design of a sieve estimator for a Gaussian mean function.
Balsor, Tobias, New approximations for avoiding Gibbs phenomenon in wavelet subspaces.
Chen, Daning, Multipliers on certain function spaces.
Diestelkamp, Wibcke, Projections, decompositions and parameter inequalities for orthogonal arrays.
Fischer, Hanspeter, Visual boundaries of right angled Coxeter groups and reflection manifolds.
Nathan, Malita, The weighted continuous Galerkin method for initial value problems.
Peterson, Hans-Juergen, A spline estimate of the score function in Adaptive L-estimation for linear regression.

Price, Kenneth, Enveloping algebras of Lie color algebras.
Shen, Xiaoping, Wavelet based numerical methods.

WYOMING

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MATHEMATICS

Desai, Alpana, Homogenization analysis applied to biofilm growth in porous media.
Lister, Lisa, Graph decomposition.
Liu, Mingjun, Mathematical theory and numerical methods for the valuation of American options.
Wo, Shaochang, The mathematical modeling and numerical approaches for microbial permeability modification of enhanced oil recovery processes.

STATISTICS

Seier, Edith, A family of skewness and kurtosis measures.


Supplementary List

The following list supplements the list of thesis titles published in the January 1998 Notices, pages 45–63.

COLORADO

University of Colorado, Boulder (1)

MATHEMATICS

Azmi, Fatima Moon, Computation of the equivariant cocycle of the Dirac operator.