Doctoral Degrees Conferred

2001–2002

ALABAMA

Auburn University (4)

DISCRETE AND STATISTICAL SCIENCES

Leach, Charles David, Hamilton decompositions of multipartite graphs.

Walsh, Matthew Phillip, A problem of network stability.

MATHEMATICS

Baggett, Donald, Short path problems in coverings and tilings.

Hill, William C., On *G*-invariant norms, an extension of a result of Berezin-Gel Faud via nonsmooth analysis and applications.

University of Alabama, Birmingham (4)

MATHEMATICS

Peacock, Robert, A local Borg-Marchenko theorem for complex potentials.

Sakata, Mayumi, Generalized eigenfunction expansions.

Sims, Robert J., Localization for one-dimensional models of disordered media.

Smith, Brian R., Asymptotically flat quasi-convex Riemannian metrics of nonnegative scalar curvature and the constraint equations in general relativity.

University of Alabama, Huntsville (1)

MATHEMATICAL SCIENCES

Phillips, Ben, Colored distance and competition parameters.

University of Alabama, Tuscaloosa (4)

MATHEMATICS

Hannoun, Noureddine, A benchmark solution for phase change with convection.

Harrison, Randall, Restricted Lie super-algebras and their universal enveloping algebras.

Monk, Barry J., A proposed theory of fuzzy random variables.

Xie, Chunping, Q_p spaces and their properties.

ARIZONA

University of Arizona (5)

APPLIED MATHEMATICS

Coombs, Daniel, Dynamics of travelling helicity fronts in bacterial flagella.

Gallas, Brandon, Signal detection in lumpy backgrounds.

Marsden, David, An investigation of the Tucson-Melbourne three-nucleon force in the nuclear many-body problem.

MATHEMATICS

Agrotis, Maria Andrea, Pure and applied reflections on the reduced Maxwell-Bloch system.

Smith, Jennifer Christian, 'An investigation of undergaduates' understanding of congruence of integers.

CALIFORNIA

California Institute of Technology (6)

APPLIED AND COMPUTATIONAL MATHEMATICS

Craciun, Bogdan, Phase boundary propagation in heterogeneous media.

Petrasek, Danny, Diffusion mediated regulation of endocrine networks.

CONTROL AND DYNAMICAL SYSTEMS

Chang, Dong-Eui, Controlled Lagrangian and Hamiltonian systems.

Fax, Alex Joseph, Optimal and cooperative control of vehicle formations.

Murphy, Todd, Control of multiple model systems.

Vela, Luz, Time-frequency analysis based on wavelets for Hamiltonian systems.

Claremont Graduate University (3)

MATHEMATICS

Abebe, Henok, Modeling the current-voltage (I-V) characteristics of the MOSFET device with quantum mechanical effects due to thin oxide near $Si/Si0_2$ interface using asymptotic methods.

Hayakawa, Carole Kay, Monte Carlo methods for the early detection of disease-induced transformation in tissue.

Hoang, Huy Trong, Experimental and numerical investigations of steady turbulent jets from round ribbed tools.

University of California, Berkeley (29)

BIOSTATISTICS

Henneman, Tanya, Estimating causal parameters in marginal structural models.

MATHEMATICS

Annin, Scott, Associated and attached primes over noncommutative rings.

Calef, Brandoch, Optimal sampling of the discrete Fourier transform.

Calegari, Francesco, Ramification and semistable Abelian varieties.

Cameron, Christopher D., A comparative analysis of methods for sampling stationary stochastic processes.

desJardins, David L., Precise coding with noiseless feedback.

Etgu, Tolga, Symplectic forms on product four-manifolds.

Goldberg, Michael J., Perturbation of the nonlinear Schrodinger equation from a linear perspective; vector-valued singular integrals from a scalar perspective.

Hadfield, Thomas Daniel, Fredholm modules over certain group C^*-algebras.

Holton, Charles G., The Rohlin property for SFT C^*-automorphisms and ergodic properties of 3-interval exchanges.

Israel, Joseph S., Amalgamation and uni-modality.

Kempe, Julia, Universal noiseless quantum computation: Mathematical theory and applications.

Koev, Plamen, Accurate and efficient computations with structured matrices.

Lippel, David Andrew, Finitely axiomatizable omega-categorical theories.

Markiewicz, Daniel W., Completely positive semigroups and their product systems.

Matusevich, Laura F., Combinatorial aspect of hypergeometric functions.

Radko, Olga, Some invariants of Poisson manifolds.

Reznikoff, Sarah A., Representations of the Temperley-Lieb planar algebra.

Serra, Antonio M., Interpolation problems in local Dirichlet spaces.

Szczesny, Matthew M., Twisted vertex operators, algebraic curves, and Prym varieties.

Wilkening, Jon A., Mathematical analysis and numerical simulation of electromigration.

STATISTICS

Armstrong, Nicola, Incorporating inference in the linkage analysis of experimental crosses.

Bulutoglu, Dursun, Projection properties of Paley designs and optimal supersaturated designs.

Fridlyand, Jane, Resampling methods for variable selection and classification: Applications to Genomics.

Ionides, Edward, Statistical analysis of cell motion.

Jornsten, Rebecka, Data compression and its statistical implications, with an application to the analysis of microarray images.

Levina, Elizaveta, Statistical issues in texture analysis.

Yang, Yee Hwa, Statistical methods in the design and analysis of gene expression data from cDNA microarray experiments.

Zhang, Xiaoyan, Statistical topics in transportation studies.

University of California, Davis (10)

MATHEMATICS

Brown, David, Stochastic spatial models of plant diseases.

Chan, Youn-Sha, Hypersingular integrodifferential equations and applications to fracture mechanics of homogeneous and functionally graded materials with strain-gradient effects.

Larson, Brons, The continuous boundary local trigonometric transform.

Mazzag, Barbara, Mathematical models in biology.

Whitlow, Darryl, Finite volume methods for incompressible flow.

STATISTICS

Aslam, Shagufta, Robust testing procedures based on s-estimate for the dispersion parameter of univariate and multivariate normal distribution and for the two-way mixed effect models.

Facer, Matthew, Nonparametric surface estimation for quantitative bioassay, survival data, and location of extrema.

Su, Chun-Lung, Asymptotic posterior approximation with applications to generalized linear mixed models.

Su, Xiao-Gang, Multivariate survival trees.

Wang, Wei, Proportional hazards regression with unknown link-function and applications to longitudinal time-to-event data.

University of California, Irvine (4)

MATHEMATICS

Bailey, Paul L., Incremental ascent of a modular tower via branch cycle designs.

Chung, Yeojin, Global regularity and inertial manifold for Moore-Greitzer model of turbo-machine engine and modeling of pulse propagation in optical fibers.

Nirschl, Nick, The computation of a curve C in P^2 with the property that the fundamental group of P^{2C} is a nonresidually finite group.

Roozee, Matthew, The use of unbounded activation functions in neural networks and neural network approaches to nuisance parameter problems.

University of California, Los Angeles (10)

MATHEMATICS

Chaffee, Lyman, Actions of the homeomorphism group of the interval.

Chang, Clement, Classification of Hermitian forms over central simple algebras with involution.

Cortez, Albert, Dynamics of diffeomorphisms of the totus.

Huckaby, David, Analysis and applications of Stewart's pivoted QLP decomposition.

Jones, Matthew, Regularity through partial elimination ideals and the canonical bundle.

Kang, Sung Ha, Mathematical approaches to color denoising and image inpainting.

Karamyan, Grant, The inverse scattering problem of fixed energy in the half space.

Tanner, Jared, Adaptive high resolution recovery of smooth data from its spectral information.

Tsai, Yen-Hsi Richard, Numerical method for Hamilton-Jacobi equations and their applications.

Walter, Brian, Finite equational bases for directed graph algebras.

University of California, Riverside (5)

MATHEMATICS

Oseledets, Cyrill, Root direct limits of Lie superalgebras.

STATISTICS

Chou, Daphne, Nonparametric estimation of the generating function of the intensity function process of a doubly stochastic Poisson process.

Crosby, Heather, An efficient method of subgrouping in crossover trials and its performance evaluation by simulations.

Day, Steven, Estimators of long-term transition probabilities of multistate stochastic processes.

Lehr, Mark, Wavelet spectral density estimation of continuous-time stationary processes under random sampling.

University of California, San Diego (9)

MATHEMATICS

Bell, Jason Pierre, Affine rings of low GK dimension.

Dowla, Arif, Local block bootstrap based inference for nonstationary time series.

Ellis, Robert Brian, Chip-firing games with Dirichlet eigenvalues and discrete Green's functions.

Gromoll, Hans Christian, Diffusion approximation for a processor sharing queue in heavy traffic.

Kowalski, R. Travis, Formal equivalences between real-analytic hypersurfaces.

Marcia, Roummel, Primal-dual interior-point methods for large scale optimization.

Martin, Jeremy L., Graph varieties.

Mohanty, Yana Z., Hyperbolic polyhedra: Volume and scissors congruence.

Raphael, Benjamin J., A computational investigation of spectral sets and rational dilations over multiply-connected domains.

University of California, Santa Barbara (10)

MATHEMATICS

Alexander, Peter, Math and social justice: A capstone course for undergraduates.

Collins, Gaemus, The Orr-Sommerfeld equation: Classical and modern techniques.

Gleason, Jim, Subnormal and Fredholm tuples of operators.

Horton, Karen, Prime spectra of iterated skew polynomial rings of quantized coordinate type.

Hou, Songming, Solutions of multidimensional hyperbolic systems of conservation laws by discontinuous Galerkin methods and a derivation of the Moore-Greitzer equation using homogenization.

Maher, Joseph, Period three actions on the three sphere.

Svendsen, Anne Louise, Commuting squares and automorphisms of subfactors.

STATISTICS AND APPLIED PROBABILITY

Hsu, Chih-wen, Bayesian estimation of a covariance matrix and its application to mixed effects models.

Yang, Yuchieh, Detecting change-points and hormone pulses using partial spline models.

You, Huaxin, Classification and feature extraction methods with application to image database retrieval.

University of Southern California (6)

MATHEMATICS

Bourque, Guillaume, Algorithms for phylogenetic tree reconstruction based on genome rearrangements.

Chu, Wensong, Optical orthogonal codes and cyclic t-designs.

Hubbell, Earl, Some combinatorial problems concerning DNA arrays.

Linchenko, Vitaly, Some properties of Hopf algebras and H-module algebras.

Wu, Jing, Statistical inference for molecular data: man, motifs and microarrays.

Yaralov, Georgi, Some problems in statistics arising in signal and image processing.

COLORADO

Colorado State University (5)

MATHEMATICS

Anderle, Markus, Resource allocating radial basis function dimension reduction networks.

Badran, Abdelhamid Elmoursi, Identification of physical properties in geology, hydrology and ecology.

Cushman, Ann Louise, Cyclotomic coset association schemes.

Erdman, Melissa Claire, Cell exclusion algorithms.

Lu, Suihua, Network multiple frame assignment architectures.

University of Colorado, Boulder (4)

APPLIED MATHEMATICS

Austin, Travis, Advances on a scaled least-squares method for the 3-D linear Boltzman equation.

Carter, John, Stability and existence of traveling wave solutions of the two-dimensional nonlinear Schrödinger equation and its higher-order generalizations.

Horne, Rudy, Collision induced timing jitter and four-wave mixing in wavelength division multiplexing soliton systems.

Philip, Bobby, Asynchronous fast adaptive composite grid methods for elliptic problems on adaptively-refined curvilinear grids.

University of Colorado, Denver (3)

MATHEMATICS

Holder, LeAnn, Blocking sets of conics.

Wilson, John, Efficient solver for mixed and control-volume mixed finite element methods in three dimensions.

PREVENTIVE MEDICINE AND BIOMETRICS

Weitzenkamp, David, Heteroscedastic models for longitudinal data.

University of Northern Colorado (1)

MATHEMATICAL SCIENCES

Lassak, Marshall, The structure of beliefs: Three case studies of prospective secondary mathematics teachers.

CONNECTICUT

University of Connecticut (6)

MATHEMATICS

Horak, Jiri, Traveling waves in a nonlinear suspended beam.

Molitierno, Jason, Coefficients of ergodicity-type bounds for the algebraic connectivity of graphs.

Washington, Talitha, Mathematical model of proteins acting as on/off switches.

STATISTICS

Agarwal, Deepak, Bayesian spatial regression analysis with large datasets.

Chen, Zhen, On modeling discrete choice data.

Micheas, Athanasios, Statistical modeling and geometry of shapes.

Yale University (2)

MATHEMATICS

Muchnik, Roman, Semigroup actions of T^n.

Retakh, Alexander, Associative conformal algebras and pseudoalgebras and their representations.

DELAWARE

University of Delaware (4)

MATHEMATICAL SCIENCES

Holston, Scott, The direct method for multicriteria problems.

Mellinger, Keith, Mixed partitions and spreads of projective spaces.

Nojumi, Hassan, An extended model of asset price dynamics.

Ou, Miao-Jung, Direct and inverse acoustic scattering problems in a class of three-dimensional waveguide.

DISTRICT OF COLUMBIA

American University (6)

MATHEMATICS AND STATISTICS

Lotze, Conrad, Online mathematics and statistics tutoring: Effectiveness and implementation issues.

Ojeda Revah, Diana, Comparative study of stable parameter estimators and regression with stably distributed errors.

Rickert-Sharkey, Charlene, Secondary school students' conceptions, factors behind achievement, and problem solving strategies with stochastic problems.

Schmidt, Lara, Estimation in the presence of fractionally integrated noise; An application to atomic time scales.

Wicker, Whiting, The impact of college students' cultural and historical awareness on their perceived mathematics self-efficacy, motivation and achievement.

Wiersma, Laurell, An analysis of student performance on the Virginia Algebra I Standards of Learning Examination.

George Washington University (3)

MATHEMATICS

Dimitrov, Rumen, Computably enumerable vector spaces, dependence relations and Turing degrees.

Hough, David, The genus of partitions and C-trees.

Wargan, Krzysztof, S-adic dynamical systems and Bratteli diagrams.

Howard University (5)

MATHEMATICS

Ayine, Gabriel Bong-Baane, Topics in the differential geometry of supermanifolds.

Cameron, Naiomi Tuere, Random walks, trees and extensions of Riordan group techniques.

Matthews, Lynnell Sherri, Combinatorial interpretations of Hankel matrices and further combinatorial uses of Riordan group methods.

McLeod, Jillian Elizabeth, Notions of size in adequate partial semigroups.

Moche, Iris Gogu, The sizes of preimages of points under the natural map from $K(b(N \times N))$ to $K(bN) \times K(bN)$.

FLORIDA

Florida Institute of Technology (3)

MATHEMATICAL SCIENCES

Clary, Scott, Building a better product despite competing objectives: A characterization of product and process improvement techniques.

Hernandez, Jesus, On the Tikhonov regularization method for Fredholm integral equations of the first kind with least squares solutions (in L and R).

Kim, Song Kyoo, On generalized stochastic reliability models with reserve and super-reserve machines.

Florida State University (4)

MATHEMATICS

Pastouchenko, Nikolai, Noise from the fine scale turbulence of jets in forward flight, nonaxisymmetric jets and installed jets.

Terzic, Balsa, Self-consistent models of triaxial elliptical galaxies with central cusps.

STATISTICS

Loizeaux, Marc, Bayesian inference for a spatial cluster model via perfect sampling.

Whitten, Blake, Formulations of missing-data models and likelihood-based inference.

University of Florida (8)

MATHEMATICS

Bell, Gregory, Asymptotic dimension of groups.

Lataille, Jeffrey, The elementary divisors of incidence matrices between certain subspaces of a finite symplectic space.

Lokvancic, Mahir, Semigroup perturbations of martingales.

Mocioalca, Oana, Additive summable processes and their stochastic integral.

Ssembatya, Vincent, Homeomorphisms of Knaster continua.

STATISTICS

Caffo, Brian, Candidate sampling schemes and some important applications.

Galin, Jones, Convergence rates and Monte Carlo standard errors for Markov chain Monte Carlo algorithms.

Jank, Wolfgang, Monte Carlo estimation methods in general hierarchical models.

University of Miami (1)

MATHEMATICS

Browdy, Steven, Topological censorship, the topology of black holes, and the end structure of space.

GEORGIA

Emory University (6)

BIOSTATISTICS

Hill, Elizabeth, General saddlepoint approximations to the null distributions of Moran's I-type measures of spatial autocorrelation.

Wang, Molin, Semiparametric methods to reduce the impact of nuisance parameters.

MATHEMATICS AND COMPUTER SCIENCE

Bailey, Dionne, Computational approaches to representation theorems for finitely generated real algebras.

Dementieva, Yulia, Equivalent conditions for hypergraph regularity.

Hunt, Jason, Forbidden triples in pancyclic graphs.

Peng, Yuejian, Counting small cliques in the 3-uniform hypergraph.

Georgia Institute of Technology (5)

MATHEMATICS

Burer, Samuel, New algorithmic approaches for semidefinite programming with applications to combinatorial optimization.

Martin, Russell, Paths, sampling and Markov chain decomposition.

Murali, Shobhana, Curvature, isoperimetry, and discrete spin systems.

Sitton, David, Generating random absolutely continuous distributions.

Stoyanov, Tsvetan, Isoperimetric and related constants for graphs and Markov chains.

University of Georgia (3)

STATISTICS

Shao, Qin, Inference for a class of periodic time series models and their applications.

Smith, David, Bayesian and minimum Hellinger distance approaches to inference with applications.

Wei, Xin Yu, Performance of sequential sampling schemes for some independent and dependent models.

ILLINOIS

Illinois State University (3)

MATHEMATICS

Fuller, Roberta, Assessing change in the beliefs, knowledge, and practices of an experienced elementary mathematics teacher.

Jaberg, Patricia, Elementary preservice teachers exploring teaching mathematics for understanding via action research.

Matthews, Lou Edward, Babies overboard: Complexities and challenges of incorporating culturally relevant teaching into mathematics instruction.

Northern Illinois University (5)

MATHEMATICAL SCIENCES

Al Rawwash, Mohammed, Gaussian estimation and modelling covariance in longitudina data analysis.

Benbourenane, Djamal, Value distribution for solutions of complex differential equations on the unit disk.

Sarkissian, Daniil, Theory and computations of partial eigenvalue and eigenstructure assignment problems in matrix second order and distributed parameter systems.

Sriraman, Bharath, Mathematical creativity: A qualitative study of 9th grade student's generalization processes.

Xu, Bangteng, Blocks with Abelian defect groups.

Northwestern University (7)

ENGINEERING SCIENCE AND APPLIED MATHEMATICS

Moore, Richard, A study of optical devices with parametric gain.

MATHEMATICS

Burslem, Elizabeth, Centralizers of partially hyperbolic diffeomorphisms.

Che, Charles, Quasi-periodic Lagrangian systems on the annulus.

Joukhovitski, Vsevolod, K-theory of the Weil transfer functor.

Meleshuk, Vadim, Embedding templates in flows.

Pevtsova, Julia, Infinite-dimensional modules for infinitesimal group schemes.

Williams, Alan, Asymptotic stability of nonsymmetric neural networks by sink symmetrization.

Southern Illinois University, Carbondale (1)

MATHEMATICS

Wang, Jiantian, Estimation of quality adjusted survival functions and mean lifetime medical cost.

University of Chicago (5)

MATHEMATICS

Ahlin, Ashley Reiter, The large scale geometry of nilpotent-by-cyclic group.

Degni, Christopher, Positive orthogonal sets for $SP(4)$.

Wilson, Lawrence, Powerful groups of prime power order.

STATISTICS

Servidea, James, Bridge sampling with dependent random draws: Techniques and strategy.

Strahs, Andrew, Statistical problem in human genetics: Multipoint fine-scale linkage disquilibrium mapping by the decay of haplotype sharing.

University of Illinois, Chicago (5)

EPIDEMIOLOGY AND BIOSTATISTICS

Raman, Rema, Mixed-effects regression models for three-level ordinal response data with heterogeneous variances.

MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

Hrencecin, David, On filamentations and virtual knot invariants.

Kim, Jon-Lark, Construction of new self-dual codes and quantum codes and their connections.

Schwartzman, Leslie, FGP fine grained persistence for user structured data, a tool and its software design.

Yang, Min, Universal optimality in cross-over design and statistical methods in assessing agreement.

University of Illinois, Urbana-Champaign (13)

MATHEMATICS

Argiris, Georgios, Counting and the ergodic averages.

Aschenbrenner, Matthias, Ideal membership in polynomial rings over the integers.

Ayaragarnchanakul, Jantana, Divergence in ergodic theory.

Bauer, Mark, Function field arithmetic and related algorithms.

Kaur, Manmohan, Ternary rings of operators and their linking C^*-algebras.

Lawton, Linda, Decision problems in the lattice of Π_1^0 classes.

Loukaki, Maria, Normal subgroups of odd order monomial P^AP^B-groups.

Moosa, Rahim N., Some model-theoretic results in algebraic and complex analytic geometry.

Myung, Sung, Motivic polylogarithms for the Good Willie-Lichtenbaum complex.

Ramamurthi, Radhika, Coloring problems on graphs and hypergraphs.

Richardson, Andrew, Some duality results in homological algebra.

Shin, Kwang, On some Schrödinger eigenvalue problems from mathematical physics.

STATISTICS

Hartz, Sarah, A Bayesian framework for the unified model for assessing cognitive abilities: Blending theory with practicality.

INDIANA
Indiana University, Bloomington (6)

MATHEMATICS

Cabral, Marco, Numerical and analytical study of attractors for some Navier-Stokes related equations.

Crowley, Diarmuid, The classification of highly connected manifolds in dimensions 7 and 15.

Hill, Ellen, A Ginzburg-Landau model for Josephson junctions in a ring.

Lee, Ha-Young, The classical limit of the relativistic Vlasov-Maxwell system in two space dimensions.

Shafikov, Rasul, Analytic continuation and boundary regularity of holomorphic mappings.

Zhu, Jin, Least squares estimators for the spatial regression model.

Indiana University-Purdue University (1)

MATHEMATICAL SCIENCES

Mukhin, Dmitry, Properness and von-Neumann–Morgenstern utility functions.

Purdue University (15)

MATHEMATICS

Ghosh, Yashowanto, Limit theorems for non-negative integer-valued random walks with non-localized reflection.

Kotzev, Boris, Vanishing of the first Dolbeault cohomology group of line bundles on complete intersections in infinite-dimensional projective space.

Long, Xiang, Variance reduction for numerical solutions of stochastic differential equations.

Sun, Xiaodong, Ruin probabilities for general insurance models.

Tamas, Csilla, Analytic rigidity of K-trivial extremal contractions of smooth threefolds.

You, Dahae, Inequalities for Schrödinger operators and laws of the iterated logarithm.

Zhang, Jianfeng, Some fine properties of solutions to backward stochastic differential equations with applications.

STATISTICS

Chicken, Eric, Nonparametric regression and density estimation in Besov spaces via wavelets.

Korosteleva, Olga, Limit theorem for the spread of branching process with stabilizing drift.

Lee, Kiseop, Hedging of options when the price process has jumps whose arrival rate depends on the price history.

Li, Jianjun, On some statistical inference problems using empirical Bayes approach.

Mukherjee, Bhramar, Optimal designs for estimating the path of a stochastic process.

Munneke, Brian, Null model methods for cluster analysis of gene expression data.

Tang, Dejun, Choice of priors for hierarchical models: Admissibility and computation.

Wilber, Jayson, Variable selection methodology for high-dimensional multivariate binary data with application to microbial community DNA fingerprint analysis.

University of Notre Dame (5)

MATHEMATICS

Berenstein, Alexander, Dependence relations on homogeneous groups and homogeneous expansions of Hilbert spaces.

Chen, Yu, The embedding theorem of generalized Verma modules and its applications.

Lesperance, Joshua, Gorenstein liaison of curves in $\mathbb{P}^4$.

Monico, Christopher, Semirings and semigroup actions in public-key cryptography.

Smarandache, Roxana, Algebraic constructions of convolutional codes.

IOWA
Iowa State University (12)

MATHEMATICS

Becker, Joy, Computational complexity of digraph decomposition and the congruence extension property of algebras.

Choi, Ji Young, Multi-restricted numbers and powers of permutation representation.

Chrysafinos, Konstantinos, Analysis and finite element approximation of parabolic saddle-point problems and applications to optimal control.

Ju, Lili, Probabilistic and parallel algorithms for centroidal Voronoi tessellations with application to meshless computing and numerical analysis on surfaces.

Lee, Jeehyun, Optimization-based domain decomposition methods for multidisciplinary simulation.

Vojtechovsky, Petr, Finite simple Moufang loops.

STATISTICS

Azevedo, Kari, Using factor source estimates in latent variable analysis.

Chan, Victor, Degradation-based reliability in outdoor environments.

Fernandez, Soledad, An algorithm to sample genotypes in complex pedigrees.

Liu, Xiao-Hu, Kernel smoothing for spatially correlated data.

Ryan, Kenneth, Engineering application of Bayesian statistical methods.

Sinharay, Sandip, Bayesian factors for variance component testing in generalized linear mixed models.

University of Iowa (17)

APPLIED MATHEMATICAL AND COMPUTATIONAL

Chen, Wei, Pricing fixed income securities with a class of Markov regime switching processes.

Daescu, Dacian, Theoretical and practical aspects of data assimilation for air pollution models.

Forman, Sean, Torsion angle selection and emergent non-local secondary structure in protein structure prediction.

Hong, Li, Nonlinear algorithms for image resolution enhancement and image compression.

BIOSTATISTICS

Dehkordi-Vakil, Farideh, A Bayesian method for estimating smooth monotone functions.

Kolluri, Sheela, A model for longitudinal Poisson count data with informative dropout.

Saha, Chandan, Quantifying the asymptotic bias in the linear mixed-effects model under informative dropout, drop-in and other missing data patterns.

Smith, Brian, A Bayesian framework for analyzing exposure data from the Iowa radon lung cancer study.

MATHEMATICS

Beaugris, Louis, A construction of the generators of cyclic codes over $\mathbb{Z}_m$ and related results.

Li, Wei, Degenerated equations with diffusion and convection effects.

Smith, Eric, Weakly prime ideals.

Viola, Maria Grazia, Non-outer conjugate $\mathbb{Z}_9$-actions on a free group factor.

Yugang, Xiao, On S-automata where the lattice of right congruences on S is semiatomic.

STATISTICS AND ACTUARIAL SCIENCE

Bognar, Matthew A., Bayesian estimation of a potential function in a pairwise interacting point process.

Kuo, Hsun-chih Sean, Estimation of survival functions and multinomial parameters under order constraints.

Lee, Hangsuck, Pricing exotic options with application to equity-indexed annuities.

Logue, Mark W., Complications of an unknown genetic model in the presence of heterogeneity for linkage analysis.

KANSAS

Kansas State University (4)

MATHEMATICS

Narayanan, Bharath, Representations of quantized function algebras of Kac-Moody algebras.

O'Brien, Timothy, A skein-theoretic construction of invariants of 3-manifolds associated to the quantum group $UQ(G2)$.

Schroeder, W. Christopher, Cyclic coverings of regular affine maps.

STATISTICS

Zhang, Ying, Parameter estimation in continuous and discrete-time queueing models.

University of Kansas (3)

MATHEMATICS

Benyi, Arpad, Bilinear singular integrals and pseudodifferential operators.

Ciuperca, Catalin, Generalized Hilbert coefficients and the S_2-ification of a Rees algebra.

West, Eric, Primes associated to multigraded modules.

Wichita State University (6)

MATHEMATICS AND STATISTICS

Bsharat, Mohammad, On the existence of balanced arrays with two symbols.

Hervas, David, An inverse boundary value problem for a quasilinear elliptic differential equation.

Kim, Tae-Eun, Capillary surface interfaces in annular domains.

Lorenzo-Gonzalez, Edgardo, Statistical inference about some restricted classes of life distributions.

Valdivia, Nicolas, Inverse problems in scattering theory and acoustics.

Zeng, Hong-Biao, Convergence of spectra of mesoscopic system collapsing onto a graph.

KENTUCKY

University of Kentucky (7)

MATHEMATICS

Davis, Anna, A relative version of the finiteness obstruction theory of Wall.

Morgan, Christopher, On univalent harmonic mappings.

Sills, Andrew, Computer assisted explorations of Rogers-Ramanujan type identities.

Sullivan, Sharon, Examples of combinatorial designs.

STATISTICS

Chen, Kun, Censured empirical likelihood ratio and its computation.

Diaz, Francisco, A semiparametric model to investigate growth trend of certain stochastic processes.

Pavlov, Dmitri, Identifying special disease clusters in nonhomogeneous populations.

LOUISIANA

Louisiana State University, Baton Rouge (5)

MATHEMATICS

Flory, Simone, On the stabilization and regularization of rational approximation schemes for semigroups.

Guneri, Cem, Artin-Schreier families and 2-D cyclic codes.

Luttamaguzi, Jamiiru, A monotone follower control problem with a nonconvex functional and some related problems.

Somodi, Marius, Bounding the wild set (counting the minimum number of wild primes in Hilbert symbol equivalent number fields).

Walker, Uroyoan, On k-conjugacy classes of maximal tori in semisimple algebraic groups.

Louisiana Tech University (2)

MATHEMATICS AND STATISTICS

Chen, Qing, Modeling and experimental verification of growth of an axisymmetric cylidrical rod by three dimensional laser induced chemical vapor deposition.

Pokorny, Kian, Fuzzy product-limit estimators: Soft computing in the presence of very small and highly censored data sets.

Tulane University (3)

BIOSTATISTICS AND EPIDEMIOLOGY

Khader, Yousef, Factors associated with gingivitis and periodontitis in a dental teaching clinic population in northern Jordan.

MATHEMATICS

Liu, Hong, Goodness-of-fit tests for accelerated life models with right censored data.

Macias-Diaz, Jorge, Generalizations of the Pontryagin-Hill theorems to projective modules.

University of Louisiana at Lafayette (5)

MATHEMATICS

Arazyan, Alvard, Inferences on the reliability of a series system.

Munoz, Humberto, Interval slopes and twin slope arithmetic in nonsmooth optimization.

Jones, Julie, Protopological groups and other generalizations of topological groups.

Tian, Haiyan, Single-point blow-up of solutions for degenerate nonlinear parabolic problems.

Thomson, Jessica, Inferential procedures for some discrete distributions.

MARYLAND

Johns Hopkins University (10)

BIOSTATISTICS

Fan, Ming-Yu, Measures of relative importance and related statistics.

Hsu, Fang-Chi, Multipoint linkage, disequilibrium mapping approaches based on the case-parent trio design.

Huang, Chiung-Yu, Modeling and estimation for recurrent event data with dependent censoring.

Lu, Shou-En, Marginal analysis and cohort case-control design for clustered failure time data.

Travison, Thomas, Global effects estimation for multidimensional outcomes data.

MATHEMATICAL SCIENCES

Lim, Alvin, Transportation network design problems: An MPEC approach.

Tzitzouris, James, Numerical resolution of multi-rigid body systems with spatial Coulomb friction via NCP-based fully-implicit time-stepping methods.

MATHEMATICS

Harvey, Matthew, Adams operations in the topological K-theory of orbifolds.

Lee, Jung-Jo, Bounding ranks of elliptic curves.

Yang, Hemin, The hit problem for $w(4)$ over F_2 by differential operator algebra.

University of Maryland, Baltimore (2)

MATHEMATICS AND STATISTICS

Dajani, Aref, Contributions to statistical inference for some fixed and random models.

Song, Yoon, The p and globally uniquely solvable properties in semidefinite linear complementarity problems.

University of Maryland, College Park (23)

MATHEMATICS

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Giacobbe, Andrea, Convexity of multi-valued momentum maps and the Gel'fand-Cetlin system.

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Montana State University (2)

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University of Montana (3)

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University of Nebraska, Lincoln (3)

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Dartmouth College (2)

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NEW JERSEY

New Jersey Institute of Technology (5)

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NEW MEXICO

New Mexico State University (4)

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City University of New York, Graduate Center (6)

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Rensselaer Polytechnic Institute (4)

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Iasonos, Alexia, A multivariate analysis based on frequency domain decomposition and Hilbert space projection in the presence of missing data.

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NORTH CAROLINA

Duke University (3)

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North Dakota State University (3)

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OHIO

Bowling Green State University (2)

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Case Western Reserve University (5)

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Demko, Catherine, Determinants of sun exposure and protective behaviors among US adolescents: Results from the National Longitudinal Study of Adolescent Health.

Jean-Baptiste, Rachel, Psychosocial factors affecting end stage renal disease patient compliance with hemodialysis attendance.

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MATHEMATICS

Previts, William, Advances in topological groups.

Kent State University (7)

MATHEMATICAL SCIENCES

Brunkalla, Kai, Perturbation of hypercyclic and supercyclic operators.

Chalmers, James, A geometric approach to Boltzmann's law.

Downey, Lawrence M., Jr., Some problems in linear and multi-linear operator theory.

Feng, Bao Q., Matrix inequalities.

Kover, Janice S., Perturbation of norm attaining operators.

McVey, John Kenneth, Bounding the number of character degrees using generalized relative primeness conditions.

Snell, Heather Lynn, A new matrix method for the Alexander invariant and the Hosokawa polynomial.

Ohio State University (7)

MATHEMATICS

Aydin, Nuh, New quasi-cyclic and quasi-twisted codes and an optimal family of polynomial codes.

Barbacioru, Catalin, Generalization of the Volkenborn integral.

Beli, Constantin, Integral spinor norm groups over dyadic local fields and representations of quadratic forms.

Breitenbucher, John, Third order mock theta functions for multivariable symplectic hypergeometric series.

Fiala, Nick, Some topics in combinatorial design theory and algebraic graph theory.

Jalics, Jozsi, Existence of slow waves in mutually inhibitory thalamic neuronal networks.

STATISTICS

Satoshi, Miyata, Adaptive Free-Korot splines and inference.

Ohio University (1)

MATHEMATICS

Liu, Chuan, K-networks and mappings.

University of Cincinnati (5)

EPIDEMIOLOGY AND BIOSTATISTICS

Deng, Chunqin, Statistical tests for hormesis in aquatic toxicology experiments.

Huang, Bin, Statistical assessment of the contribution of a mediator to an exposure outcome association.

Leonard, Anthony C., Hypothesis testing with the similarity index.

Pei, Huiling, Exploring bootstrap applications to linear structured equations.

MATHEMATICAL SCIENCES

Stancescu, Daniel, Bootstrap methods for the estimation of the variance of partial sums.

University of Toledo (4)

MATHEMATICS

Cao, Rongmei, Lagrangian submanifolds of 8-dimensional almost symplectic manifolds.

Ling, Yi, Theory and applications of 2-D non-separable wavelet interpolation and approximation.

Shi, Hongbo, Finitistic dimension of monomial algebra.

Zhong, Guan, Some results about empirical likelihood methods.

OKLAHOMA

Oklahoma State University (2)

MATHEMATICS

Tong, Simei, Complemented subspaces of L_p determined by partitions and weights.

STATISTICS

Kim, Jong Min, New approaches to randomized response technique.

University of Oklahoma (1)

MATHEMATICS

Goodman, Russell, Deformations of simple representations of two generator HNN extensions.

OREGON

Oregon State University (1)

STATISTICS

Park, Byungsung, Testing hypotheses using unweighted means.

Portland State University (1)

MATHEMATICAL SCIENCES

Burdon, Marcia, Embedded 2-polyhedra with regular neighborhoods which have sphere boundaries.

University of Oregon (5)

MATHEMATICS

Brandl, Katherine, Primitive and Poisson spectra of non-semisimple twists of polynomial algebras.

Brooksbank, Peter, Constructive recognition of the finite simple groups.

Kelm, Travis, LOT complexes and the Whitehead conjecture.

Oberbroeckling, Lisa, Generalized inverses in certain Banach algebras.

Woods, Tadg, Lorentz wave maps.

PENNSYLVANIA

Bryn Mawr College (2)

MATHEMATICS

Huddell, Walter III, Smooth approximation of singular perturbations of the Laplacian.

Salzman, Amber, The arithmetic genus of threefolds defined by extended Hilbert modular groups.

Carnegie Mellon University (3)

MATHEMATICAL SCIENCES

Bunimovich, Daniil, Modelling and pricing of collateralized debt obligations.

Halldorsson, Bjarni, Algorithms for biological sequence problems.

VanDieren, Monica, Categoricity and stability in abstract elementary classes.

Lehigh University (3)

MATHEMATICS

Fraboni, Michael, Some q-convexity properties of coverings of complex manifolds.

Marano, Lisa, On the global and local modulus of continuity of Brownian motion.

Shimkus, Thomas, Immersions of 2-torsion lens spaces.

Pennsylvania State University (10)

MATHEMATICS

Dumitrascu, Constantin Dorin, A new approach to bivariant K-theory.

Emerson, Heath, An example of non-commutative Poincare duality arising from hyperbolic dynamics.

Kim, Hee Jung, Almost complex structures arising in contact geometry.

Lemin, Vladimir, On some properties of ultrametric spaces and their applications to category theory and computer science.

Smolka, Linda, On the motion of Newtonian and non-Newtonian liquid filaments: Stretching, beading, blistering, pinching.

Zhang, Bin, Equivariant theories and algebraic varieties.

Zhang, Sheng, A linear shell theory based on variational principles.

STATISTICS

Li, Haihong, Improving point estimation for models with many nuisance parameters.

Mao, Changxuan, Mixture models for species and population size estimation.

Mosquin, Paul, The analysis of Bayesian finite mixtures and discrete choice models.

Temple University (6)

MATHEMATICS

Al-Rasasi, Ibrahim, A mean value theorem for class numbers of quadratic extensions of function fields.

Hartenstine, David, Regularity of a class of weak solutions to the Monge-Ampere equation.

Loveridge, Clark, Measure of planes separating convex bodies in three dimensions.

Ludwick, Kurt, Survival of modularity under congruence restrictions.

Lyansky, Yan, Phase transition for the hard-core stochastic Ising model.

Xu, Jianjun, Studies of some high order finite/spectral element methods for viscous incompressible flow.

University of Pennsylvania (10)

MATHEMATICS

Atria, Matias, Two new algorithms for computational number theory.

Frye, Stephen, On the topological classification of toric varieties.

Glass, Darren, Orthogonal epsilon constants for tame actions of finite groups on surfaces.

Rojkovskaia, Natasha, Quantum family algebras.

Yan, Ning, Representation theory of the finite unipotent linear groups.

STATISTICS

Diaz-Tena, Nurra, Multiple imputation for estimation of $AR(1)$ process parameters.

Gong, Hanfeng, Density estimation by free-knot spline functions.

Long, Chuan, Ensemble methods for classification and prediction in noisy environments.

Pozdnyakov, Vladimir, Heath-Jarrow-Morton model and its application.

Zhang, Ren, Non parametric density estimation via wavelets.

University of Pittsburgh (13)

BIOSTATISTICS

Gause, Christine, Methods for combining covariate data obtained by multiple sampling schemes in occupational cohort studies.

Li, Wei, Resampling approach for estimating prediction error and for adjusting logistic regression coefficients for covariate measurement error.

Valenta, Zdenek, Estimation of the survival function for Gray's piecewise constant time-varying coefficients model.

Yin, Yanming, Tree-structured model for interval-censored survival data.

MATHEMATICS

Buliga, Marius G., On the enumeration of colored spanning trees in a graph.

Burch, Kimberly, Matching equivalencies and chemical graph theory.

Kapadia, Devendra, A class of conformally Einstein spacetimes.

Lattanzio, John, Critical colorations.

Tanriverdi, Tanfer, Boundary-value problems in ODE (the Fanno model for turbulent compressible flow, eigenfunction expansions).

Wang, Luyan, On permutation polynomials.

STATISTICS

Lee, Youngju, Assessment and improvement of neural networks.

Matus, Claudia, Statistical analysis of stereological estimators.

Sylvester, Marc, Estimation of a common mean from a series of similar interlaboratory experiments.

RHODE ISLAND

Brown University (13)

APPLIED MATHEMATICS

Dance, Sarah, Particle sedimentation in viscous fluids.

Jung, Jae-Hun, Multi-domain spectral penalty method for hyperbolic systems: Theory and applications.

Kutliroff, Gershom, Approximation in an adaptive cosine basis and its application to image compression.

Lu, Conglin, Curvature-based multiscale shape analysis and stochastic shape modeling.

Lucena, Brian, Dynamic programming tree-width and computation on graphical models.

Moeser, Jamison, Stable pulse propagation in optical fibers with varying dispersion.

Pang, Tao, Stochastic control theory and its applications to financial economics.

Romeo, Monica, Stability analysis of traveling pulses composed of concatenated kinks.

Yan, Jue, Discontinuous Galerkin finite element methods for PDES with higher order derivatives.

MATHEMATICS

Bekyel, Ebru, Minimal Weierstrass equations for elliptic curves over global fields.

Hwang, Hyung Ju, On the Rayleigh-Taylor instability and regularity for the Vlasov-Poisson system in a convex domain.

Soulé, Steven, Branched extensions of codimension one maps.

Vassilakis, Theodore, On a conjecture of Bando-Siu.

University of Rhode Island (2)

MATHEMATICS

McGrath, Lynn, Investigation of some difference equations.

Saadi, Mary, Results on tree tolerant representations.

SOUTH CAROLINA

Medical University of South Carolina (3)

BIOMETRY AND EPIDEMIOLOGY

Carter, Rickey, Relative risk models for data in which the success probabilities approach one.

Durkalski, Valerie, The analysis of clustered matched-pair data under an equivalence design.

White, Nicole, DIVergent Alignments (DIVA): Multiple alignment techniques for proteins with less than 20% identity.

University of South Carolina, Columbia (13)

EPIDEMIOLOGY AND BIOSTATISTICS

Gray, Brian R., Modeling nonstationary and spatially-correlated oyster infection prevalence data.

Harshaw, Charles Clinton, The tetrahedron volume scan: A tool for the detection of spatial-temporal disease clusters.

Pierce, Kristen J., Semi-parametric multiple imputation applied to stratified survival data.

Swann, R. Suzanne, Analyses of stratified longitudinal studies using generalized estimating equations with data missing at random.

Uddin, Molla A., Attributable fraction, its properties and applications.

MATHEMATICS

Allen, Martha, Generalization of the irreducibility of I. Schur.

Burton, Tamara, Domination of DOT-critical graphs.

Iwasa, Akira, Metrizability of trees.

Karaivanov, Borislav, Nonlinear piecewise polynomial approximation: Theory and algorithms.

Kumchev, Angel, Diophantine problems involving prime numbers.

Liu, Jiangguo, Efficient numerical techniques for advection dominated transport equations.

STATISTICS

Al-Saidy, Obaid, Confidence bands for low-dose risk estimation with quantal response data.

Pan, Wei, One-sided confidence bands for low-dose risk estimation with nonquantal data.

TENNESSEE

University of Memphis (4)

MATHEMATICAL SCIENCES

Gao, Yuan, Mot. f-based protein structure and function prediction.

McCauley, Thomas Lee, Neutral schemas: Toward a comprehensive mechanism of mind.

Peabody, Luke, Combinatorial reconstruction and polynomial invariants.

Yang, Congjun, Indexes for nearest neighbor queries and related problems.

University of Tennessee (3)

MATHEMATICS

Chailos, George, On reproducing kernals and invariant subspaces of the Bergman shift.

Joshi, Hem Raj, Optimal control problems in PDE and ODE systems.

Krohn, Cynthia, An individual-based approach to population dynamics with applications to sockeye salmon and iteroparous organisms.

Vanderbilt University (5)

MATHEMATICS

Bahls, Charles Patrick, Even rigidity in coxeter groups.

Greer, Meredith, A population model of Prion dynamics.

Lin, Amy Hsiao-Chun, The dynamics of the interactions between solid tumors and the immune system: A deterministic model.

Maróti, Miklós, The variety generated by tournaments.

Stewart, Sarah Ann, Some families of subnormal operators with finite rank self-commutators.

TEXAS

Baylor University (6)

INSTITUTE OF STATISTICS

Chen, Peter, Error rate approximation and estimation for the linear discriminant function for the small training-sample-size case.

Erickson, Janelle, Bayesian methods for bioequivalence studies.

Morley, Kathleen, Bayesian methods for linear calibration.

Paul, David, Mathematical modeling in public education.

Price, Karen, Bayesian analysis of time-to-pregnancy data.

Stephens, Dwight, Systematic bi-strata cluster sampling applied to preventive health care utilization rates.

Rice University (10)

COMPUTATIONAL AND APPLIED MATHEMATICS

Gao, Liyan, Ellipsoidal approximation to polytopes and computational study of Lenstra's algorithm.

Gray, Genetha, A variational study of the electrical impedance tomography problem.

Husband, Summer, Programming the nanocell, a random array of molecules.

Jamrog, Diane, A new global optimization strategy for the molecular replacement problem.

Zhou, Yunkai, Numerical methods for large scale matrix equations with applications in LTI system model reduction.

MATHEMATICS

Berger, Scott, Edge length minimizing polyhedra.

Harvey, Shelly, Higher-order polynomial invariants of 3-manifolds giving lower bounds for the Thurston norm.

Morgan, Simon, Variational problems in singular spaces.

Xia, Qinglan, Minimization problems in transport theory and intersection homology.

STATISTICS

Glenn, Nancy, Robust empirical likelihood.

Southern Methodist University (1)

STATISTICAL SCIENCE

Lee, Eui Kyoo, Bayesian hierarchical spatiotemporal models with application to the modeling of Hanford Site tritum concentrations.

Texas A & M University (17)

MATHEMATICS

Bacuta, Cristina, A geometry intervention in engineering and science calculus II: Supporting the calculus reform.

Bilgin, Gulendam, Near-rings of functions.

Diao, Zijian, Quantum computing and quantum search algorithms.

Garcia, Cesar, Renormings via asymptotic uniform convexity and the approximation property on near Hilbertian spaces.

Holcomb, Trae, Contributions to a general theory of codes.

Kim, Chisup, On iteration and approximation methods or anisotropic problems.

Lowitzsch, Svenja, Approximation and interpolation employing divergence-free radial basis functions with applications.

Shauger, Stephen, Graphs with cycle lengths in a given infinite set.

Stovall, Sarah, Torsion sections of composite order on elliptic surfaces.

Tomov, Stanimire, Adaptive methods for finite volume approximations.

Zhang, Xiaofei, Wavelet sets and frame sets.

STATISTICS

Clark, Jason, Linearly constrained local polynomial regression.

Dey, Monisha, A new jacknife method for unbalanced variance component problems with applications in quantitative genetics.

Huang, Chungfeng, Topics in spline smoothing.

Kim, Hyoung Moon, Bayesian spatial data analyses and their applications.

Sha, Naijun, Bolstering cart and Bayesian variable selection methods for classification.

Sukasih, Amang, Goodness-of-fit tests and related diagnostics for response probability models in the analysis of complex survey data.

Texas Tech University (4)

MATHEMATICS AND STATISTICS

Cole, Leah, Applications of special function theory to complex analysis.

Kesinger, Jacob, Mathematical models for host-pathogen genetics in plant pathusystems.

Peterson, Cheryl, Asymptotic and spectral analysis of nonselfadjoint operators generated by a coupled Euler-Bernoulli/Timoshenko beam model.

Richardson, Clint, Concentration of area in half planes.

University of Houston (3)

MATHEMATICS

Foster, Sylvia, The asymptotic and integral closures of elements of a multiplicative lattice relative to a module.

Ladipo, Kehinde, A wave equation approach to numerical simulation of natural convection in rectangular enclosures.

Lipnikov, Konstantin, Numerical methods for the Biot model in poroelasticity.

University of North Texas (4)

MATHEMATICS

Berlinkov, Artemi, Dimensions in random constructions.

Huettenmueller, Rhonda, The Pettis integral and operator theory.

Lindsay, Larry, Quantization dimension for probability distributions.

Rees, Michael, Topological uniqueness results for the special linear and other classical Lie algebras.

University of Texas, Arlington (1)

MATHEMATICS

Griffin, Byron, A study of stochastic iterative processes under random structural perturbations.

University of Texas, Austin (14)

MATHEMATICS

Bowen, Lewis, Density in hyperbolic space.

Finotti, Luis, Canonical and minimal degree liftings of curves.

Hayes, Leslie, The plus closure of an ideal.

Jiang, Jiaosheng, Bounded operators without invariant subspaces on certain Banach spaces.

Krashen, Daniel, Birational isomorphisms between Severi-Brauer varieties.

Leasure, Jason, Geodesics in the complex of curves of a surface.

Leininger, Christopher, Essential surfaces in hyperbolic three-manifolds.

Monica Torres, Razo, Plane-like minimal surfaces in periodic media with inclusions.

Socha, Katherine, Modal expansions of surface wave model equations.

Valdinoci, Enrico, Plane-like minimizers in periodic media: Jet flows and Ginzburg-Landau.

Visarraga, Darrin, Heat transport models with distributed microstructure.

Yuan, Juan-Ming, Studies in recurrence and singularity formation in nonlinear dispersive wave equations.

TEXAS INSTITUTE OF COMPUTATIONAL AND APPLIED MATHEMATICS

Eaton, Frank Joseph, A multigrid preconditioner for two phase flow in porous media.

Overfelt, James, Numerical modeling of Stokesian emulsions.

University of Texas, Dallas (3)

MATHEMATICAL SCIENCES

Gill, Ryan Scott, Introduction to generalized broken-line regression.

Johnson, Joel, Tensor algebras, displacement structure, and some classes of stochastic processes.

Nita, Bogdan, Pure gravitational radiation with twisting rays.

UTAH
University of Utah (5)

MATHEMATICS

Cytrynbaum, Eric, Using low dimensional models to understand cardiac arrhythmias.

Dereaux, Martin, Complex surfaces of negative curvature.

Dumett, Miguel, A numerical method for solving anisotopic elliptic boundary value problems on irregular domains in two and three dimensions.

Hohn, Michael, On the solution of mixed boundary value problems in elasticity.

Kucuk, Ismail, Variational approach to optimization of elastic structures.

VERMONT
University of Vermont (2)

MATHEMATICS AND STATISTICS

Ricciardi, Karen L., Optimal groundwater remediation design subject to uncertainty.

Yaw Aidoo, Anthony, Studies on a prototype channel geometry for acetylcholine receptor channel.

VIRGINIA
College of William and Mary (1)

MATHEMATICS

Evans, Diane, Algorithms for operations on probability distributions in a computer algebra system.

Old Dominion University (1)

MATHEMATICS AND STATISTICS

McKaig, Iain, Mathematical models of quiescent solar prominences.

University of Virginia (4)

MATHEMATICS

Fulgham, Bernard, The scalar center for quadratic Jordan algebras.

Haack, Aaron, Free closures of projective remoteness configurations.

Li, Weiping, Algebraic groups and support varieties.

STATISTICS

Chattopadhyay, Somesh, Simultaneous hormone pulse time and secretion/elimination estimation: An alternating metropolis and diffusion scheme.

Virginia Commonwealth University (3)

BIOSTATISTICS

Massie, Tammy, Testing genetic hypothesis on bivariate dose using repeated measures logistic regression.

Massie, Tristan, Variance estimation and influence functions for threshold models.

Shih, Margaret, Titrating and evaluating multiple drug regimens with subjects.

Virginia Polytechnic Institute and State University (9)

MATHEMATICS

Drumright-Clarke, Mary Ann, Numerical simulations that characterize the effects of surfactant on droplets in shear flow.

Hartman, Gregory, Graphs and noncommutative Koszul algebras.

Massey, Thomas Christopher, Development of a flexible Galerkin finite element method for hyperbolic PDE's and a posteriori discontinuous finite element error estimation for two-dimensional hyperbolic problems.

STATISTICS

Clark, Seth, Model robust regression based on generalized estimating equations.

Dorai-Raj, Sundardas, First- and second-order properties of spatiotemporal point processes in the space-time and frequency domains.

Liang, Hong, Adaaptive Fourier analysis for unequally-spaced time series data.

Lipkovich, Ilya, Bayesian model averaging and variable selection in multivariate ecological models.

Waterman, Megan, Linear mixed model robust regression.

Wilcock, Samuel, A new nonparametric procedure for the k-sample problem.

WASHINGTON
University of Washington (20)

APPLIED MATHEMATICS

Bale, Derek, Wave propagation algorithms on curved manifolds with applications to relativistic hydrodynamics.

Dolven, Eric, Seaquake waves-standing wave dynamics with Faraday excitation and radiative loss.

Fogarty, Tiernan, Finite volume methods for acoustics and elasto-plasticity with damage in a heterogeneous media.

Lee, Long, Immersed interface methods for incompressible flow with moving interfaces.

Mudavanhu, Blessing, Renormalization approach for solving weakly nonlinear differential equations.

Rossmanith, James, A wave propagation method with constrained transport for ideal and shallow water magnetohydrodynamics.

BIOSTATISTICS

Dodd, Lori, Regression methods of areas and partial areas under the receiver-operating characteristic curve.

Hu, Chengcheng, Semiparametric failure-time regression with mismeasured or missing covariates.

Meier, Amalia, Discrete proportional hazards models for uncertain outcomes.

Moodie, Felicity Zoe, A new framework for nonparametric estimation of the bivariate survivor function.

Nan, Bin, Information bounds and efficient estimates for two-phase designs with lifetime data.

MATHEMATICS

Cokus, Shawn, Qualitative linear algebra and computational complexity.

Garfield, Peter, The bigraded Rumin complex.

Hampton, Marshall, Concave central configurations of the four body problem.

Mihalisin, James, Polytopal graphs and digraphs.

Packer, Asa, On certain optimal containment problems involving convex sets.

Tamasan, Alexandru, A two dimensional inverse boundary value problem in radiation transport.

Williams, Gordon, Petrie schemes.

STATISTICS

Bates, Samantha C., Bayesian inference for deterministic simulation models for environmental assessment.

Song, Shuguang, Estimation with bivariate interval-censored data.

Washington State University (2)

MATHEMATICS

Hagerty, Gary, Finding a few eigenvalues of large sparse non-symmetric matrices.

Tian, Mei "Emily", Pattern formation analyses of thin liquid films.

WEST VIRGINIA

West Virginia University (6)

MATHEMATICS

Espinoza, Benjamin, Whitney preserving maps.

Li, Xiangwen, Cycle cover, group coloring with related problems.

Li, Xuechao, Chords of longest circuits of graphs.

Luo, Rong, Edge coloring of simple graphs and edge-face coloring of simple plane graphs.

Montgomery, Bruce, Dynamic coloring of graphs.

Plotka, Krzysztof, Set-theoretic and algebraic properties of certain families of real functions.

WISCONSIN

Medical College of Wisconsin (1)

BIOSTATISTICS

Shu, Youyi, Multistate survival models: Theory and applications.

University of Wisconsin, Madison (24)

MATHEMATICS

Baker, Joni, Some topological results on ultrafilters.

Bloss, Matthew, Partition algebras and permutation representations of wreath products.

Christlieb, Andrew, Computational methods for long mean free path environments.

Hamblin, James, On solvable groups satisfying the two-prime hypothesis.

Hsieh, Liang-Yu, On minimum rank matrices having prescribed graph.

Li, Xiantao, Computation of the semiclassical limits of the Schrödinger equation and related problems.

Mazaheri, Mohsen, Valuation and robustness in stochastic volatility environments.

Poddar, Mainak, Orbifold Hodge numbers for Calabi-Yau hypersurfaces.

Uribe, Bernardo, Twisted K-theory and orbifold cohomology of the symmetric product.

Vovkivsky, Taras, Groups acting on trees and algebraic K-theory.

Wiles, Peter, Coordinating mathematical and pedagogical content in preservice teacher education.

STATISTICS

Brumback, Lyndia, Flexible random time transformations for functional data.

Buhr, Kevin, A Brownian particle system with local time interaction.

Cho, Hyungjun, Tree-structured regression modeling for censored data.

Huang, Li-Fei, Confindence regions for the ratio of percentiles.

Huang, Yufen, Transformations, regression geometry and R^2.

Lin, Pei Sheng, Analysis of cross-classified spatial date with autocorrelation.

Park, Soomin, Analysis of longitudinal data with informative missingness.

Shen, Lei, Analysis of longitudinal data: Measurement error, confounding and model misspecification.

Shi, Yuanjun, Monte Carlo techniques for design and analysis of group sequential clinical trials with multiple primary endpoints.

Wang, Chen, Joint analysis of quality of life and survival.

Wang, Hansheng, Two-way contingency table with marginally and conditionally imputed non-respondents.

Wang, Jin, Testing hypothesis and estimation in the presence of omitted confounders.

Yang, Yüyan Jessie, Two-level factorial and fractional factorial designs in blocks of size two.

University of Wisconsin, Milwaukee (3)

MATHEMATICAL SCIENCES

Ilicasu, Fatma Olcay, High order methods for singular perturbation problems.

Radcliffe, David, Unique presentation of Coxeter groups and related groups.

Soleski, Tatiana, Wavelet based computerized tomography.

Doctoral Degrees Conferred 2001–2002

Supplementary List

The following list supplements the list of thesis titles published in the February 2003 *Notices*, pages 264–80.

ARIZONA

Arizona State University (6)

MATHEMATICS

Archibald, Richard, Boundary detection and reconstruction in magnetic resonance imaging.

Dunn, Charles, Extensions of a simple competitive graph coloring algorithm.

Kuo, Yu-Ju, Interior point algorithms for second order cone problems with applications.

Loladze, Irakli, The importance of being stoichiometric: Population dynamics from the perspective of chemical elements.

Marthaler, Daniel, Two problems from nonlinear dynamical systems.

Zela, Dritan, A continuum spine model for the horizontal cell-to-cone feedback in cat outer retina.

COLORADO

University of Colorado (3)

MATHEMATICS

Caravone, Curtis, On the convergence of model-free policy iteration algorithms for reinforcement learning: Stochastic approximation under discontinuous mean dynamics.

Caulk, Suzanne, Explicit action of Hecke operators on Hilbert-Siegel modular forms.

Kornelson, Keri, Local solvability of Laplacian difference operators arising from the discrete Heisenberg group.

GEORGIA

University of Georgia (2)

MATHEMATICS

Bindner, Donald, On the space spanned by the powers of an operator and its adjoint.

Liu, Ruihua, Hierarchial control and filtering of stochastic markovian system.

NORTH CAROLINA

Duke University (1)

MATHEMATICS

Collins, Anne D., Configuration spaces in robotic manipulation and motion planning.

PENNSYLVANIA

Carnegie Mellon University (2)

STATISTICS

Ghiuvea, Cristian, Pricing of generalized American options with applications to energy derivatives.

Ianus, Iuliana, Approximate robust Bayesian inference with applications to sample size calculation.