

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 undergraduates' 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/SiO₂ 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.

The above list contains the names and thesis titles of recipients of doctoral degrees in the mathematical sciences (July 1, 2001, to June 30, 2002) reported in the 2002 Annual Survey of the Mathematical Sciences by 217 departments in 149 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 2003 issue of the *Notices*.

Israel, Joseph S., Amalgamation and unimodality.

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.

Svendson, Anne Louise, Commuting squares and automorphisms of sub-factors.

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, Naomi 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 longitudinal data analysis.

Benbourenane, Djamel, 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.

Straus, Andrew, Statistical problem in human genetics: Multipoint fine-scale linkage disequilibrium 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 $P^A P^B$ -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.

Chrysaftinos, 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 $UQ(G_2)$.

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 multi-graded 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, Censored 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.

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

Luttamaguzi, Jamiiru, A monotone follower control problem with a non-convex 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 cylindrical 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.

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Ohio University (1)

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University of Toledo (4)

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OKLAHOMA

Oklahoma State University (2)

MATHEMATICS

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University of Oklahoma (1)

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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.

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

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PENNSYLVANIA

Bryn Mawr College (2)

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Carnegie Mellon University (3)

MATHEMATICAL SCIENCES

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Lehigh University (3)

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

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- Buliga, Marius G.*, On the enumeration of colored spanning trees in a graph.
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Brown University (13)

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University of Rhode Island (2)

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- McGrath, Lynn*, Investigation of some difference equations.
- Saadi, Mary*, Results on tree tolerant representations.

SOUTH CAROLINA

Medical University of South Carolina (3)

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

University of Memphis (4)

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Baylor University (6)

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University of Houston (3)

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Bowen, Lewis, Density in hyperbolic space.

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

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University of Texas, Dallas (3)

MATHEMATICAL SCIENCES

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

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Nita, Bogdan, Pure gravitational radiation with twisting rays.

UTAH

University of Utah (5)

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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)

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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.

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

Virginia Polytechnic Institute and State University (9)

MATHEMATICS

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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.

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Garfield, Peter, The bigraded Rumin complex.

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

Mihalisin, James, Polytopal graphs and digraphs.

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STATISTICS

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

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Washington State University (2)

MATHEMATICS

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

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WEST VIRGINIA

West Virginia University (6)

MATHEMATICS

Espinoza, Benjamin, Whitney preserving maps.

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Li, Xuechao, Chords of longest circuits of graphs.

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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.

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

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