Doctoral Degrees Conferred

2000–2001

ALABAMA

Auburn University (10)

DISCRETE AND STATISTICAL SCIENCES

Abueida, Atif Aliyan, The full embedding problem.

Ashe, David James, Partial 6-cycle systems with any specified forest or 2-regular leave.

Foster, Michelle J., Operations on probalistic finite state source automata.

MATHEMATICS

De Pasquale, Horacio, Dual Riesz bases and the canonical operator.

Goeden-Fick, Kathleen, 2nth order boundary value problems with alternating order boundary.

Metcalf, Leigh, An extension of the Reidemeister intersection classes.

Nwogbaga, Agashi, New characterizations of Besov and Triebel-Lizorkin space.

Nyuydinkong, Griffith, On location of zeros and polar derivatives of polynomials.

Peterson, Lisa, Convergence of random measures on Polish spaces.

Zhang, Chaowen, Simple modules with character height zero and exceptional weight for the restricted special, Hamiltonian, and contact algebras.

University of Alabama, Tuscaloosa (6)

INFORMATION SYSTEMS, STATISTICS, AND MANAGEMENT SCIENCE

Busby, Kevin, Interpreting out-of-control signals from Hotelling's T^2 chart.

Kaddoura, Mawla, Density estimation through kernel estimation-based empirical characteristic function.

Meleth, Sreelatha, Analyzing data sets with a mixture of Mar and Ninr data: assessing the impact of sample size and proportion missing on estimates.

Wang, Lei, Longitudinal ecologic study with temporal-spatially correlated data: comparison of alternative models.

MATHEMATICS

Barov, Stoyu, On sets with convex shadows.

Krishnan, Srilal, Principal ideals in subalgebras of groupoid C^*-algebras.

ARIZONA

Arizona State University (5)

APPLIED MATHEMATICS

Fosser, Cecilia, Statistics in stochastic automata model for the spread of disease among mobile individuals.

Rao, Anupama, Titan, Triton, Pluto and Kuiper belt objects: a study of past and present atmospheres with grey and nongrey models.

MATHEMATICS

Shetty, Sachin, Characterization and reconstruction of finite signals using spectral information.

Wang, Chengde, Sequenceabiliity, R-sequenceability, and harmoniousness of finite groups.

Yang, Jinling, An evolutionary epidemic model with application to type A influenza.

University of Arizona (5)

MATHEMATICS

Cunningham, Geoffrey, Sums of squares in function fields of elliptic curves.

Edmunds, Jeffrey, A study of a stage-structured model of two competing species.

Kim, Seog Young, Vector bundles on an elliptic curve over a discrete valuation ring.

Marshall, David, Galois groups and Greenberg's conjecture.

Marshall, Susan Hammond, Crystalline representations and Neron models.

ARKANSAS

University of Arkansas (2)

MATHEMATICAL SCIENCES

Aberra, Dawit, The reflection principle, the Schwarz potential and quadrature.

Mann, Casey, On Heesch's problem and other tiling problems.

CALIFORNIA

California Institute of Technology (4)

APPLIED MATHEMATICS

Hu, Gang, Singularity formation in three-dimensional vortex sheets.

Louie, Michael, Numerical study of pattern forming processes in models of rotating Rayleigh-Bénard convection.

Tokman, Mayya, Magnetohydrodynamic modeling of solar magnetic arcades using exponential propagation methods.

MATHEMATICS

Killip, Rowan, Perturbations of one-dimensional Schrodinger operators preserving the absolutely continuous spectrum.

Claremont Graduate University (2)

MATHEMATICS

Verzi, Diana W., A mathematical description of diagrammatic models for structural changes in dendritic spines.

Villasana de villegas, Minaya, A delay differential equation model for tumor growth.

Stanford University (10)

MATHEMATICS

Bertelson-Volckaert, Melanie, Foliations associated to regular Poisson structures.

Butscher, Adrian, Deformation theory of minimal Lagrangian submanifolds.

The above list contains the names and thesis titles of recipients of doctoral degrees in the mathematical sciences (July 1, 2000, to June 30, 2001) reported in the 2001 Annual Survey of the Mathematical Sciences by 212 departments in 151 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 2002 issue of the *Notices*.

Castelvecchi, Davide, The foliated Morse inequalities.

Choi, Young-tun, Positively oriented ideal triangulations of hyperbolic three-manifolds.

Cotton, Peter, An analytic approach to Ornstein-Uhlenbeck processes with fluctuating parameters and applications in the modeling of fixed income securities.

Ha, Seungyeal, L'stability for systems of conservation laws with a non-resonant moving source.

Lee, Roger, Implied and local volatilities under stochastic volatility.

Sha, Xin Wei, Differential geometric performance and the technologies of writing.

Wang, Xiaodong, On the geometry of conformally compact Einstein manifolds.

SCIENTIFIC COMPUTATION & COMPUTATIONAL

Wang, Gao Feng, Coupled electromagnetic and device level investigations of metal-insulator-semiconductor interconnects.

University of California, Berkeley (32)

BIOSTATISTICS

Bryan, Jennifer, Methods for gene expression analysis using DNA microarrays.

Bureau, Alexandre, Genetic linkage analysis based on identity by descent in large pedigrees using Markov chain Monte Carlo Methods.

Pavlic, Maja, Estimating the number of components in a mixture and analysis of recurrent events with time dependent covariates in the presence of dependent censoring.

Quale, Christopher, Nonparametric and semiparametric methods for three incomplete data structures.

Weingart, Michal, Edge effect correction for the nearest neighbor method.

MATHEMATICS

Abhyankar, Kashi, Smale strategies for prisoner's dilemma type games.

Buraztyn, Henrique, Morita equivalence in deformation quantization.

Clemens, John Daniel, Description set theory, equivalence relations, and classification problems in analysis.

Davis, Benjamin L., On Poisson spaces associated to finitely generated Poisson R-algebras.

Edwards, Karen E., Stabilizations of Heegaard splittings with respect to connect-summs of 3-manifolds.

Flynn, John, Near-exceptionality over finite fields.

Gomez, Concetta, Definability in p-adic power series rings.

Greene, Devin, On certain invariants in multivariable operator theory.

Grinshpan, Anatolii, Electrostatics and Dirichlet spaces.

Heitsch, Christine, Computational complexity of generalized pattern matching.

Huang, Hsiang-Ping, Commutators associated to a subfactor and its relative commutants.

King, Oliver Davis, A mass formula for unimodular lattices with no roots.

Li, Cheng, Model-based analysis of oligonuckofide arrays.

McMurdy, Kenneth, A splitting criterion for Galonic representative associated to exceptional modular forms.

Murray, Will, Frobenius algebras, independence of field, and quadratic forms.

Mustata, Mircea, Singularities and jet schemes.

Olsson, Martin, Log algebraic stacks and moduli of log schemes.

Portilheiro, Manuel, Weak solutions for contractive nonlinear equations and prabolic relaxation limits.

Pramanik, Malabika, Weighted integrals in RZ and the maximal conjugated Calderon-Zygmund operator.

Schleimer, Saul David, Almost normal Heegard splittings.

Schneiderman, Robert Roland, 4-dimensional intersection numbers of knots and links in 3-manifolds.

Shomron, Noam, Representations of Cartan type Lie superalgebras.

Smith, Greg, Computational methods for studying sheaves.

Vladimirsky, Alexander, Fast methods for static Hamilton-Jacobi partial differential equations.

Wasserman, David Robert, Epimorphisms and dominions in varities of lattices.

Yakimov, Milen, Geometry of complex reductive Poisson-Lie groups.

Zoble, Aaron, Stationary reflection and the determinacy of inductive games.

University of California, Davis (11)

MATHEMATICS

Casey, Michael, Stochastic limit laws for stochastic programming.

Henry, Jennifer, On generating a diminimal set of polyhedral maps on the torus.

Parsons, Regina, The effects of increased attention to the calculus foundations when teaching definite integrals.

Starr, Shannon, Some properties for the low-lying spectrum of the ferromagnetic, quantum XXZ spin system.

Thoo, John, Nonlinear waves in random media.

Tyler, Eiko, Manifolds on which analysis meets topology—a historical approach.

Williams, Matthew, Numerical methods for tracking interfaces with surface tension in 3-D mold-filling processes.

STATISTICS

Chang, Lin Jen-Jen, Simulation and synthesis of high-dimensional data and related issues.

Dubin, Joel, Nonparametric methods for multivariate longitudinal data.

Hanson, Timothy, Applied Bayesian semiparametric methods with special application to the A.F.T. model and to hierarchical models for screening.

Nguyen, Danh, Statistical analysis of gene expression data from DNA mocroarrays based on partial least squares and related dimension reduction.

University of California, Irvine (2)

MATHEMATICS

Landrigan, Michael, Log-dimensional properties of spectral measures.

Yang, Roger, Newton polygons of L-functions of polynomials of the form $X^d + \lambda X$.

University of California, Los Angeles (14)

MATHEMATICS

Barakat, Wissam, Levy randon fields on symmetric Riemannian spaces of noncompact type.

Barquero, Pedro, Norm principle for algebraic group.

Caibou, Frederic, Rate equations in materials sciences and simulation of multiphase flows.

Carter, Jamylle, Dual method for total variation-based image restoration.

Emerson, Nathaniel, The combinatorics of polynomials with disconnected Julia sets.

Fischman, Ami, On the image of lambda-adic Galois representations.

Gray, Maolison, Remote sensing of atmospheric parameters using forward scattering.

Kisisel, Ali, The hamiltonian structure of discrete KP equations.

Li, Chun Che, Kuznietsov trace formula and asymptotic behaviour of Hecke eigenvalues.

Nguyen, Duc, A boundary condition capturing method for incompressible flame discontinuities.

Nikshych, Deritri, Quantum groupoids, their representation categories, symmetries of von Neumann factors, and dynamical quantum groups.

Sherman, David, The application of modular algebras to relative tensor products and noncommutative L^p modules.

Wu, Hsin Tai, On p-adic Hilbert modular adjoint L-functions.

Zarikian, Vrej, Complete one-sided M-ideals in operator spaces.

University of California, San Diego (11)

MATHEMATICS

Aksoylu, Burak, Adaptive multilevel numerical methods with applications in diffusive bimolecular reactions.

Gallo, Teresa, Combinatorial bases for modules of coinvariants.

Halleck, Ezra, Magic square subclasses as linear diophantine equations.

Langley, Thomas, The plethysm of two Schur functions at hook, near-hook, and two-row shapes and a class of (q, t)-symmetric functions arising from plethysm.

Little, David, q-enumeration of classical combinatorial structures.

Marquez, Francisco, On Cayley graphs for subgroups of $GL(3, p)$.

McElroy, Tucker, Statistical inference for model parameters of time series exhibiting the Noah and Joseph effects.

Minei, Marvin, Three block diagonalization methods for the finite graph.

Ribando, Jason, Probabilistic methods for efficient triangulations of the n-cube.

Szczepanski, Amy, From Jacobson rings to the Jacobson conjecture.

Tuba, Imre, Braid representations and tensor categories.

University of California, Santa Barbara (5)

STATISTICS & APPLIED PROBABILITY

Acharyya, Suddhasatta, Some problems in nonparametric resampling inference.

Hau, Seonkoo, Portfolio mangement with stable distributions.

Karcher, Peter, Markov chain Monte Carlo stochastic approximation algorithms and generalized non-parametric mixed effects models.

Ke, Chunlei, Semi-parametric nonlinear regression and mixed effects models.

Mackey, Howard, Diagnostic for binary response mixed models.

University of Southern California (6)

MATHEMATICS

Goukasian, Levon, Lyapunov exponents for small perturbations of nilpotent and Hamiltonian systems.

Nestler, Andrew, Algebraic K-theory of curves and surfaces over finite fields.

Stroila, Matei, Arithmetic rigidity and algebraic cycles.

Uzun, Hasan, On maximum local roughness of random droplets in two dimensions.

Will, Oliver, Statistical inference in the fossil record.

Zou, Xiaorong, Geometry of the frame bundle.

COLORADO

Colorado School of Mines (1)

MATHEMATICAL AND COMPUTER SCIENCES

Wang, Lan, Estimation of multi-valued Green's function by dynamic ray tracing and true amplitude Kirchoff inversion in 4-D heterogeneous media.

Colorado State University (6)

MATHEMATICS

Erdmann, Melissa Claire, Cell exclusion algorithms.

Martin, Shawn Bryan, Techniques in support vector classification.

STATISTICS

Bronson, Douglas, Bootstrapping stochastic systems in survival analysis.

Streett, Sarah, Some observation driven models for time series.

Thompson, Sandra, Bayesian model averaging and spatial prediction.

Trindade, Adao Alexandre, Modified algorithms for multivariate subset autoregression.

University of Colorado, Boulder (8)

APPLIED MATHEMATICS

Akmaev, Slava, Phylogenetic approach to molecular structure prediction.

Bloechle, Brian, On The Taylor dispersion of reactive solutes in a parallel-plate fracture-matrix system.

Chartier, Timothy, Element-based algebraic multigrid (AMGe) and spectral AMGe.

Codd, Andrea, Elasticity-fluid coupled systems and elliptic grid generation (ECG) based on first-order system least squares (FOSLS).

Jarman, Ken, Stochastic immiscible flow with moment equations.

MacMillan, Hugh, First-order system least squares and electrical impedance tomography.

Robins, Vanessa, Computational topology at multiple resolutions.

Trubatch, David, Topics in solitons and inverse scattering: I. Discretization of the vector nonlinear Schrödinger equation. II. A new class of "reflectionless" potentials of the nonstationary Schrödinger equation and solutions of the Kadomtsev-Petviashvili I equation.

University of Colorado, Denver (7)

BIOSTATISTICS

Ellison, Misoo, Estimation of responder cell frequency and binomial three-level nonlinear mixed effects model in limiting dilution assays.

Joseph, Coll, Multivariate generalized linear mixed models with serial correlation: a state space approach with applications in HIV/AIDS.

Mikulich, Susan, Application of multivariate growth curve and univariate mixed models approaches to the cosinor analysis of spontaneous motility data.

Tooze, Janet, Analysis of repeated measures data with clumping at zero.

Xu, Xuesheng, The analysis of longitudinal binary data using a state space approach.

MATHEMATICS

Doherty, Faun, Topics on domination graphs of tournaments.

Emsermann, Markus, Variance reduction with quasi control variates.

University of Northern Colorado (4)

MATHEMATICAL SCIENCES

Fatholah, Kassemi, Pre-service teacher's conceptual understanding of rational numbers.

Medina, Elsa, Student understanding of span, linear independence, and basis in an elementary linear algebra class.

Perrine, Vicki, Effects of a problem-solving mathematics classroom on the proportional reasoning of preservice teachers.

Zderad, Jon, Understanding a student's oral, written and pictoral mathematical voice through engagement in and reflection on classroom episodes.

CONNECTICUT

University of Connecticut (11)

MATHEMATICS

Englert, Burkhard, A necessary and sufficient condition for embedding principally decomposable finite lattices into the c.e. degrees preserving greatest element.

Galperin, Yevgeniy, Uncertainty principles as embeddings of modulation spaces.

Han, Lixing, Trust region methods for unconstrained optimization.

Kang, Sheon Young, Numerical solution of integral equations with non-smooth kernels and applications.

Kanuni, Muge, Dense ideals and maximal quotient rings of incidence algebras.

Pascu, Mihai, Probabilistic approaches to eigenvalue problems.

Rasoanaivo, Guy, Stochastic modeling for long-term care insurance.

Stricevic, Slaven, Continuous time models.

STATISTICS

Banerjee, Sudipto, Multivariate spatial modeling in Bayesian settings.

Kottas, Athanasios, Bayesian nonparametric and semiparametric modeling using dirichlet process mixing: full inference with novel applications.

Patra, Kaushik, Innovative approaches to reliability and survival analysis.

Wesleyan University (2)

MATHEMATICS

Recoder-Nunez, Luis, Three classes of dense subspaces of products.

Tysdal, Kimberly, Dependent edges in acyclic orientations of graphs.

Yale University (6)

MATHEMATICS

Comerford, Mark D., Properties of Julia sets for the arbitrary composition of monic polynomials with uniformly bounded coefficients.

Coppi, Andreas, Least-square generalized quadratures and a fast stable numerical method for the Calderon commutator.

Liakhovskaia, Anna V., Structure and representations of small quantum groups.

Malkin, Anton, Geometric methods in the theory of Hall algebrasCT;Yale University;Mathematics.

Yun, Aaram, Discrete subgroups of the special linear group with thin limit sets.

STATISTICS

Novak, Laura, Classification and prediction of stock price behavior.

DELAWARE

University of Delaware (3)

MATHEMATICAL SCIENCES

Berensel Tanoglu, Gamze, Phase boundaries and anisatrophy via multiple order parameter theory for an FCC alloy.

Li, Pingqian, Boundary value problems for generalized n hypercomplex equations.

Naire, Shailesh, Gravitationally-driven drainage of thin films.

DISTRICT OF COLUMBIA

George Washington University (2)

MATHEMATICS

Ankney, Rachelle, The geometries $PG(n-1,q) \setminus PG(k-1,q)$.

Pirnazar, Amir, Girth, genus, and fractional chromatic number.

Howard University (2)

MATHEMATICS

Farmer, Shurron M., The analysis of a two-age-class single species, discrete-time climax population model.

Fleming, Jeffrey S., Weighted and parameter dependent Bergman projection, Bergman kernel, and D-bar equations on weakly pseudo convex complete Kahler manifolds.

FLORIDA

Florida Institute of Technology (2)

MATHEMATICAL SCIENCES

Terbeche, Mekki, Sequential design for estimation.

Yakar, Coskun, Stability analysis of nonlinear differential systems with initial time difference.

Florida State University (7)

MATHEMATICS

Arsuaga, Javier, Using knots as an assay for DNA organization inside bacteriophase P4 capsids.

Denny, Jeffrey, Geometry of proteins with applications to solid-state NMR.

Felkel, Brian, Decay estimates on oscillatory integrals with polynomial phase.

Jia, Hong-qi, Classification of QC Hopf algebras.

Szecsei, Denise, A convolution property of some measures with self similar fractal support.

Vazquez, Maria, Tangle analysis of site-specific recombination: Gen and Xer systems.

STATISTICS

Zhang, Shaojun, Building tracking portfolios and modeling risk management programs.

University of Central Florida (2)

MATHEMATICS

Al-Habash, Ammar, The aperture averaged scintillation of the intensity of a gaussian laser beam propagated through strong optical turbulence and reflected by various targets.

Boissy, Young, Parameter estimates for fractional autoregressive spatial processes.

University of Florida (9)

MATHEMATICS

Bodmann, Bernhard, Path integrals.

Riazati, Farzan, On the lattice of Π_1^0 classes.

Shaska, Tanush, Curves of genus two covering elliptic curves.

Tomerlin, Andrew, Representation and realization of bounded holomorphic functions defined on a polydomain.

White, Richard, An algebraic characterization of Minkowski space.

Yi, Tae-il, A classification of tree and applicaton of topology and graph theory to neurosurgery.

STATISTICS

Cantrell, Amy, On the strong law of large numbers for sums of random elements in Banach spaces.

McGoff, Philip, A unified approach to process optimization.

Robinson, Kevin, Quantile dispersion graphs for design comparisons for logistic models and other modelling issues.

University of South Florida (6)

MATHEMATICS

Benko, David, Approximation by weighted polynomials.

Dai, Ming, Identification of the parameters of a multivariate normal distribution by the distributions of maximum.

Jelsovsky, Daniel, Quandle cohomology and state-sum invariants of knots.

Maymeskul, Victor, On some problems in complex and multivariate approximation and interpolation.

Roberts, Henry, Predicting the performance of software via the power law process.

Yanez, George, Statistical modeling of epidemic disease propagation via branching processes and bayesian inference.

GEORGIA

Emory University (9)

BIOSTATISTICS

Allen, Andrew, Multivariate random length and missing data.

Price, Dionne, Survival models for heterogeneous populations with cure.

MATHEMATICS & COMPUTER SCIENCE

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

Brania, Abdelkrim, The controlled modulus condition and quasiconformality in metric spaces.

Hynds, Emily, 2-factors and line graphs.

Kanarsky, Margarita, On quasicircles and dilatations of quasisymmetric homeomorphisms.

Robinson, Maria, Classification of Heegaard splittings for (compact nonorientable surface) $\times S^1$.

Skokan, Jozef, Uniformity of set systems.

Xu, Taixi, Finite dimensional completely integrable Hamiltonian systems associated with soliton equations.

Georgia Institute of Technology (9)

MATHEMATICS

Baker, Anthony, Bounding entropy and finding symbolic dynamics via the spectrum of the Conley index.

Gonzalez, Luis, Some generalizations of the Knaster-Kuratowski-Mazurkiewics theorem.

Harrelson, Dyana, Dependence and limit theorems for stationary infinitely divisible sequences.

Jacobs, Denise, Multiwavelets in higher dimensions.

Labate, Demetrio, Time-frequency analysis of pseudodifferential operators.

McShine, Lisa, Random sampling of combinatorial structures.

Rivera, Roberto, On properties of completely flexible loops.

Thomson, Jan McDonald, Cyclically 5-connected graphs. Their relevance to Tutte's 4-flow conjecture.

Vougalter, Vitali, Diamagnetic behavior of sums of Dirichlet eigenvalues.

University of Georgia (11)

MATHEMATICS

Croot, Ernest, Unit fractions.

Cutter, Pamela, Finding prime pairs with particular gaps and square free parts of polynomials.

Khalil, Dina, On the p-divisibility of class numbers of quadratic fields.

Xu, Xiangming, Construction of two dimensional non separable orthonormal wavelets of short support.

Zhang, Mucheng, Calculation of transfer maps and associated primes.

STATISTICS

Berenhaut, Kenneth, Geometric renewal conversion rates and discrete life time distribution class.

Fukasawa, Takeshi, Inference for nonlinear state space models.

Lee, Li-Jen, Modeling the malaria epidemic.

Qi, Yongcheng, Abyesian minimum helligner distance approaches to inference with application.

Smith, David, Bayesian & minimum hellinger distance approaches to inference of applications.

Smith, Wendy, Asymptotic & small sample properties for dependent bootstrappling.

HAWAII

University of Hawaii (1)

MATHEMATICS

Higa, Jonathan, Application of logic to probability.

IDAHO

Idaho State University (2)

MATHEMATICS

Priddy, Jerry, An algorithm to construct generator matrices for shortened cyclic codes.

Skoug, Muriel, On certain classes of cones of linear transformations on matrices.

ILLINOIS

Illinois State University (6)

MATHEMATICS

Benson, Carol, Assessing students' thinking in modeling probability contexts.

Lannin, John, Developing middle school students' understanding of recursive and explicit reasoning.

Leonard, Bill, Implementation of a computer algebra system in the calculus classroom: a multiple case study.

Marshall, Gerald, Using the history of mathematics to improve secondary student's attitudes toward mathematics.

Muckerheide, Paul, Becoming standards-like: changes in elementary preservice teachers through reflective intervention.

Polaki, Victor, Using instruction to trace Basotho elementary students' growth in probabilistic thinking.

Northern Illinois University (5)

MATHEMATICAL SCIENCES

Butler, Svetlana, Q-functions, extreme points and density theorems in the space of quasi measures.

Molefe, Daniel, Survival function estimation when lifetime and censoring time are dependent.

Park, Hyung Kor, Studies on matrices under phi maps.

Riehl, Suzanne, Spectral functions associated with Sturm-Liouville and Dirac equations.

Weiss, Matthias, Limit point action of discrete Mobius groups.

Northwestern University (11)

MATHEMATICS

Mauger, Justin, The cohomology of Lie algebras associated with p-groups.

Moar, Scott, Trapping regions for unstable manifolds via prime ends.

Pushin, Oleg, Steenrod operations in motivic cohomology.

Qian, Tifei, Heteroclinic orbits and chaotic invariant sets for monotone twist maps.

Stawiska, Margarete, Repellers for regular polynomial endomorphisms C^k.

Thatcher, Scott, Rank-two Hecke eigenfunctions on elliptic curves.

Wiseman, James, Sofic shifts and the Conley index.

Wu, Tao, On Grayson's motivic complexes.

STATISTICS

Huang, Shuguang, Higher-order inference in models for census survival data.

Li, Hua, An exponential response model for bivariate association.

Liu, Xian-Iang, Model selection in unbiased equations.

University of Chicago (14)

MATHEMATICS

Bolt, Michael, Vanishing properties and spectral analysis in the Kerzman-Stein theory.

Cushman, Matthew, The motivic fundamental group.

Fausk, Halvard, The non-positive equivariant stems.

French, Christopher, The equivariant J-homomorphism.

Hemmer, David, Extensions of hook and completely splittable modules for the symmetric group.

Li, Paul, On the universal embeddings of the binary symplectic and unitary dual polar spaces.

Oberman, Adam, Level set motion by advection, growth, and mean curvature as a model for combustion.

Ou, Winston, Natural extremal operators on BMO and A^∞: symmetries and near-reciprocities.

Prasad, Amritanshu, The almost unramified discrete spectrum for split groups over a rational function field.

Schmitz, David, Finite subgroups of formal groups.

STATISTICS

Craiu, Virgil Radu, Multivalent framework for approximate and exact sampling and resampling.

Song, Seongjoo, Options and discontinuity: an asymptotic decomposition for trading algorithms.

Wit, Ernst, The categorical imperative: extendibility considerations for statistical models.

Zhang, Lan, From Martingales to ANOVA: implied and realized volatility.

University of Illinois, Urbana-Champaign (23)

MATHEMATICS

Baxter Bauer, Kristine, On Hopf algebra type and rational decompositions of functors.

Chaoha, Phichet, Obstructions for constructing the Taylor tower of finite degree functions of spectra.

Chiang, River, Complexity one Hamiltonian Su(2) actions.

Choi, Geumlan, A certain generalization of Rogers Ramanujan continued fraction.

Hill, Christopher, Uniform distribution, Behrend sequences, and some spaces of arithmetic functions.

Ho, Kejia, Kolmogorov complexity, strong reducibilities, and computably enumerable sets.

Hyeon, Donghoon, Moduli questions for augmented bundles.

Jiang, Tao, Some problems in structural and extremal graph theory.

Kahng, Byunqik, Dynamics of sympletic piecewise affine elliptic rotation maps on tori.

Kapitza, Paul, On small geometric invariants of 3-manifolds.

Kilmurray, Donough, Geometry on affine actions.

Lee, Donghi, Some conjectures on free groups in combinatorial group theory.

Pomper, Markus, Double dual types of Banach spaces.

Retzlaff, Todd, The rate of decay of concentration functions on locally compact groups.

Scalari, Alberto, Stationary discs and CR geometry.

Sohn, Jaebum, q-continued fractions and related q-series.

Steichen, Jennifer, Heavy traffic limit theorems for the closed Lu-Kumar network.

Yi, Jinhee, The construction and applications of modular equations.

Yifan, Yang, Topics in analytic, combinatorial and probabilistic number theory.

STATISTICS

Froelich, Amy Goodwin, Assessing unidimensionality of test items and some asymptotics of parametric item response theory.

Galfalvy, Hanga, Censored regression models with applications for infrastructure degradation studies.

Liu, Li, Building a nonparametric model after dimension reduction.

Trachtenberg, Felicia, Contributions to estimation in item response theory.

INDIANA

Indiana University, Bloomington (7)

MATHEMATICS

Jadallah, Hala, The onset of superconductivity in a domain with a corner.

Jakelic, Dijana, Structure of some representations of quantum groups, their crystal bases and completions.

Kim, Se-Goo, Polynomial splittings of Casson-Gordon invariants.

Kostov, Stoyko, Norm-ideal perturbations and simultaneous diagonalization of sets of operators.

Oh, Myunghyun, Stability analysis of periodic solutions ov viscous conservation laws.

Perdomo, Oscar, First eigenvalue and index: two characterizations of Clifford minimal hypersurfaces of spheres.

Wojnar, Gregory, Generalized Wishart distributions on convex homogeneous cones.

Purdue University (13)

MATHEMATICS

Asgari, Mahdi, On holomorphy of local Langlands L-functions.

Jackson, Michael, Vector bundles over BG whose Euler classes are effective.

Ko, Yangsuk, Analysis of solutions to a Ginzburg-Landau system for layered superconductors.

Mendez, Pedro, Sharp estimates of Dirichlet heat kernels of the Laplacian, fractional Laplacian and applications.

Osawa, Ryo Ichi, A surface, integral points an automorphism groups.

Patyi, Imre, Analytic cohomology vanishing in infinite dimensions.

Shin, Eunjee, On the analysis of a non-isothermal model for superconductivity.

Vassilev, Dimiter, Yamabe equations on Carnot groups.

Wu, Lih-Ing, On bifurcations of codimension greater than two arising from a childhood disease model.

Zhuang, Gongyuan, Convergence analysis of a domain decomposition method for separable PDE.

STATISTICS

Mukhopadhyay, Nitai Das, Bayesian model selection for high dimensional models with prediction error loss and 0-1 loss.

Tsai, Wen-Chi, Some contributions to stochastic geometry.

Yan, Liqing, Convergence of the Euler scheme for stochastic differential equations with irregular coefficient.

University of Notre Dame (3)

MATHEMATICS

Arana, Rebekah, A Jordan algebraic approach to primal-dual algorithms and an exterior point algorithm for linear programming.

Brown, Karen, Extensions of "thickened" verma modules of the Virasoro algebra.

Vassiliev, Evgueni, Expansions of rank 1 structures.

IOWA

Iowa State University (10)

MATHEMATICS

Dai, Jack, Some results in probability and theoretical computer science.

Majumdar, Ruchira, On relationships between the Lyapunov spectrum and the Morse spectrum.

Thompson, Heather, Investigating and representing inquiry in a college mathematics course.

STATISTICS

deMacedo, Marcia Maria Almeida, Modern applied statistics and animal populations in geographically complex landscapes: data visualization and modeling.

Kim, Jae-Kwang, Variance estimation after imputation.

Liu, Ho Hui Grace, Efficiency of Markov chain Monte Carlo algorithms for Bayesian inference in random regression models.

Peiris, Laknath, Comparison of half-sib and full-sib reciprocal recurrent selection and their modifications in simulated populations.

Wallendorf, Michael John, Finite mixture models of heterogeneous capture probabilities for mark-recapture estimation of closed population size.

Wang, Junyuan, Topics in small area estimation with application to the National Resources Inventory.

Zhu, Jun, Asymptotic inference for spatial distribution function.

University of Iowa (8)

APPL. MATH. & COMPUTATIONAL

Iancu, Mirela, On the null space method for solving differential-algebraic equations.

Schuette, Matthew, Modeling the transmission of the varicella-zoster virus.

BIOSTATISTICS

Ludington, Elizabeth, Sex-specific recombination in linkage analysis.

Nichols, Sara, Iterative logistic ridge regression.

STATISTICS & ACTUARIAL SCIENCE

Chen, Yeh-Fong, The aspects of order restricted statistical inference.

Jiang, Yanming, Likelihood based methods for detecting linkage in the presence of linkage disequalibrium.

Li, Ming-Chung, Multivariate non-linear time series modeling.

Najim, Christopher Adeeb, Strong and weak asymptotic properties of a random graph model.

KANSAS

Kansas State University (7)

MATHEMATICS

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Hayrapetyan (Airapetyan), Ruben, Non-linear problems and applications.

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University of Kentucky (8)

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LOUISIANA

Louisiana State University, Baton Rouge (8)

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MARYLAND

Johns Hopkins University (11)

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Shimansky, Igor, A study of the internal layer for a singularly perturbed convection-diffusion problem.

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Boston University (12)

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Northeastern University (3)

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Tufts University (1)

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MICHIGAN

Central Michigan University (1)

MATHEMATICS

Seaman, Carol, Students' use of spatial visualization with the aid of technology in the learning of three-dimensional calculus concepts.

Michigan State University (12)

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Baldridge, Scott, Seiberg-Witten invariants of 4-manifolds with circle actions.

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Draghici, Liliana, Some aspects of polya tree and Dykstra-Lund priors.

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Michigan Technological University (1)

MATHEMATICAL SCIENCES

Chateauneuf, Mark, Covering arrays.

Oakland University (1)

MATHEMATICS & STATISTICS

Hou, Xeuzhang, Analysis and control of a torsional flexible robot arm—an operator approach.

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Dabija, Marius, Algebraic and geometric dynamics in several complex variables.

Ehsani, Dariush, The solution of the d-bar Neumann problem on non-smooth model domains.

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Koelling, Melinda, Dynamics of generalizations of the Toda lattice.

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Sutton, Craig, Applications of representation theory to dynamics and spectral geometry.

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Xu, Hongquan, Optimal factor assignment for asymmetrical fractional factorial designs: theory and applications.

Xu, Li-An, Contributions to some statistical problems in advanced manufacturing.

Zhang, Rong, Isotonic density estimation with smoothing.

Zhu, Yu, A theory of experimental design for multiple groups of factors.

Wayne State University (3)

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Ghaussi-Mujtaba, Homa, Optimal scheduling for multi-item single machine with stochastic demand.

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Xu, Bin, Transform domain processing: algorithms and applications.

Western Michigan University (3)

MATHEMATICS & STATISTICS

Erwin, David, Cost domination in graphs.

STATISTICS

Hanson, Boyd, A comparison of methods of detection of qualitative interaction in multicenter trials.

Zeitler, David, Empirical spectral analysis of random number generators.

MINNESOTA

University of Minnesota, Minneapolis (5)

STATISTICS

Binns, Pamela, Aperiodic response time distributions in queues with guaranteed deadlines for periodic tasks.

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Dobbin, Kevin, Stochastic permutation models for treatment selection processes with applications to causal inference.

Sherfesee, Lou, A nonparametric approach to population classification and ROC curve estimation.

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University of Minnesota (6)

BIOSTATISTICS

Zhu, Li, Hierarchical modeling of patio-temporally misaligned data.

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Boutin, Mirelle, On invariants of Lie group actions and their application to some equivalence problems.

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Shim, Seong-A, Uniform bounds and global behaviors of solutions of cross-diffusion systems.

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MISSISSIPPI

Mississippi State University (1)

MATHEMATICS & STATISTICS

Wang, Liancheng, Mathematical analysis of global dynamics of SEIR type epidemiological models.

University of Mississippi (1)

MATHEMATICS

Aldridge, Gwen, Bayesian bootstrap procedures for clustered binary data having unbalanced design.

MISSOURI

St. Louis University (1)

MATHEMATICS & COMPUTER SCIENCE

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University of Missouri, Columbia (1)

STATISTICS

Kim, Hyun-Joo, Model selection criteria based on kullback information measures for weibull, logistic, and nonlinear regression frameworks.

University of Missouri, Kansas City (1)

MATHEMATICS & STATISTICS

Delaware, Richard Raymond, Sets whose Hausdorff measure equals method I outer measure.

Washington University (4)

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Napoli, Joseph, Optimal communication strategies for robotic networks.

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Jacklitch, Jim, Homeomorphisms of one-dimensional hyperbolic attractors.

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Johnson, Luther, The topology of laminations.

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University of Montana (1)

MATHEMATICAL SCIENCES

Oberg, Todd, In investigation of undergraduate calculus students' conceptual understanding of the definite integral.

NEBRASKA

University of Nebraska, Lincoln (9)

MATHEMATICS & STATISTICS

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Strei, Teresa, Global regularity of nonlinear wave equations.

NEW HAMPSHIRE

Dartmouth College (2)

MATHEMATICS

Laison, Joshua D., Tube representations of ordered sets.

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University of New Hampshire (2)

MATHEMATICS

Gerson, Hope, Making connections: compartmentalization in pre-calculus students' understanding of functions.

Gutmann, Timothy, Mathematics and socio-cultural behavior. A case study of the enculturation of a new mathematician.

NEW JERSEY

New Jersey Institute of Technology (4)

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Chen, Jerry, Analysis of discrete dynamical systems models for competing species.

James, Adrienne, A dynamical model of the distributed interaction of intracellular signals.

Ma, Xiaoqun, Efficient inversion methods in underwater acoustics.

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Princeton University (13)

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Alis, Omer, Inverse problems in quantum mechanics.

DeVos, Matthew, Flows on graphs.

Gunturk, C. Sinan, Harmonic analysis of two problems in signal quantization and compression.

Lvou, Alexey, Combinatorial techniques for database searching.

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Rutgers University, New Brunswick (3)

STATISTICS

Shoung, Jym-Ming, Isotonic regression and mode estimation.

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Rutgers University, Newark (2)

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Ingalls, Brian, Comparisons of stability notions for nonlinear control systems with outputs.

Martin, Ryan, On graph packing, induced subgraphs and intersecting hypergraphs.

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NEW MEXICO

New Mexico State University (1)

MATHEMATICAL SCIENCES

Rhodes, Mark, An algorithm for the computation of adjoints of monomial ideals.

University of New Mexico (6)

MATHEMATICS & STATISTICS

Barcan, Mugurel A., The affine line modulo isogeny.

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NEW YORK

City University of New York, Graduate Center (5)

MATHEMATICS

Bak, Daniella, Properties of shuffle groups and their relation to cryptography.

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Clarkson University (1)

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Boswell, Carroll, Classification and solution of sixth degree equations.

Columbia University (4)

BIOSTATISTICS

Hsu, Yanzhi, Repeated measures with censored data.

Xu, Dong, Optimal path-dependent estimator for bivariate survival functions.

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Lu, Hao, Topics in Bayesian and computational statistics.

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Jonsson, Gudbjorn, Eigenvalue methods for accurate solution of polynomial equations.

Kim, Yohan, Estimation of smooth volatility functions in option pricing models.

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Ganguli, Suman, Effective completeness of theorems for modal logics.

Meloon, Brian, Construction of Markov partitions for linear and nonlinear automorphisms of tori.

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Stenson, Cathrine, Linear inequalities for flag F-vectors of polytopes.

Waltz, Anke, On the Bellows conjecture.

White, Walker, Characterizations for computable structures.

Courant Institute, New York University (13)

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Aguilar, Juan Carlos, Anisotropic adaptive refinement algorithms for finite element methods.

Aslanidi, Konstantin, Two rotating black holes in the stationary axially symmetric case.

Ding, Yu, Continuity of some analytic objects under measured Gromov-Hausdorff convergence.

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Ethridge, Frank, Fast algorithms for volume integrals in potential theory.

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Rensselaer Polytechnic Institute (4)

MATHEMATICAL SCIENCES

Fredricks, Andrew, Parabolic equations for transversely isotropic media.

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State University of New York, Albany (1)

MATHEMATICS & STATISTICS

Rocca, Charles, Finite and boundary test elements.

State University of New York, Binghamton (8)

MATHEMATICAL SCIENCES

Ardanza-Trevijano, Sergio, Exotic smooth structures on non-locally symmetric negatively curved manifolds.

Evan, Joe, Permutability in direct product of finite groups.

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Schuetz, Dirk, Torsion properties of the Novikov complex.

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Sunik, Zoran, On a class of periodic spinal groups of intermediate growth.

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State University of New York, Buffalo (3)

MATHEMATICS

Du, Zhengdong, Precise computation of Hopf bifurcation and some applications.

Joita, Cezar, Projections of Runge domains, covering spaces with parameters and traces of locally hyperconvex Stein domains.

Nichita, Florin, Non-linear equations, quantum groups and duality theorems.

State University of New York, Stony Brook (19)

APPLIED MATHEMATICS & STATISTICS

Chang, Chu-Fei, Multi-sensory virtual design environments.

Estkowski, Regina, The complexity of polygonal simplification with applications to geographic information systems.

Hwang, Woon Jae, A study of the 2-dimensional Riemann problem for a 2×2 hyperbolic conservation law.

Jean, Enrique, Modeling and molecular dynamics simulation of amorphous silicon crystallization: application in device fabrication.

Koh, Ying Ying, Automated recognition algorithms for neural studies.

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Ozcan, Cevriye, Statistical process control of the contaminants for AR(1) process by using exponentially weighted moving average of the cumulative distribution function.

Podnar, Hrvoje, Networks with threshold based discounting.

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MATHEMATICS

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University of Rochester (2)

BIOSTATISTICS

Huang, Peng, Design and analysis of triangular stopping boundaries for Brownian motion.

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Coppenbarger, Matthew, Absolute continuity of free Hamiltonian and almost exponential decay of resonances in non-relativistic quantum mechanical graphs.

NORTH CAROLINA

Duke University (5)

MATHEMATICS

Ashih, Aaron, Spatial and stochastic models for population growth with sexual and asexual reproduction.

Wang, Sung Ho, Legendrian submanifold path geometry.

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Ashih, Heidi, Joint estimation of mammographic sensitivity and tumor growth.

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Matthews, John III, An analytical and numerical study of granular flows in hoppers.

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Minimair, Manfred, Resultants of composed polynomials.

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Wang, Yonghong, Multiple internal layer solutions in singularly perturbed boundary value problems.

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Brooks, Elizabeth, Dynamics and management of sub-divided populations.

Budsaba, Kamon, Statistical analysis and modeling of pharmacokinetic data from percutaneous absorption.

Chen, Shuquan, Seed growth modeling and nitrogen partition of soybean under water stress.

Cowell, Lindsay, Analysis of somatic hypermutation and other diversification mechanisms of the immune system.

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Grau, Eric, Robust estimation of autocorrelation parameters in the AR(1)$\times$AR(1) model.

Hartford, Alan, Computational approaches for maximum likelihood estimation for nonlinear mixed models.

Huh, Seungho, Sample size determination and stationarity testing in the presence of trend breaks.

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Kim, Hyon-Jung, Nonparametric spatial analysis in spectral and space domains.

Kim, Yuntae, Evaluation of frequentist and bayesian inferences by relevant simulation.

Kung, Maggie (Meifen), Information-based group sequential tests with lagged or censored data.

Licata, Amy, Physiologically based pharmacokinetic models for gasoline oxygenates: implementing statistical and mathematical analyses.

Martell, Leah, Data reduction and model selection with wavelet transforms.

Nasution, Marlina, Estimating survival from joint analysis of resighting and radio-telemetry data in wildlife populations.

Novick, Steven, Parametric modeling in the presence of measurement error: Monte Carlo corrected scores.

Peak, Shannon, Development of a bioenergetic growth model to determine the effect of feed allocation program on male broiler breeder growth and performance.

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Zhu, Lei, Statistical decoding and designing of pooling experiments based on chemical structure.

University of North Carolina, Chapel Hill (20)

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Dominik, Rosalie, Statistical approaches to the evaluations of barrier contraceptive effectiveness.

Galanko, Joseph, Nonparametric analysis of covariance with discrete noncomcomitant covariables.

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Komoltri, Chulaluk, Stopping boundaries in interim analyses in clinical trails.

McBride, Mark, A study of behaviors of test statistics in the binary logistic regression model, the proportional odds ordinal logistic regression model, and the proportional hazards model.

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Amirdganova, Anna, Topics in stochastic fluid dynamics.

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Spaniolo, Greg, Ricels formula and Palm properties with applications to structural reliability.

University of North Carolina (1)

MATHEMATICS

Cui, Sufang, Model checking techniques in survival analysis.

NORTH DAKOTA

North Dakota State University (2)

MATHEMATICS

Krygin, Andrei, Some properties of coboundaries in measurable dynamics.

STATISTICS

Galster, Dwight, Analysis of data equally spaced on a circle.

OHIO

Bowling Green State University (3)

MATHEMATICS & STATISTICS

Evani, Atchutalakshmi, Results on the universal K-Bruhat order.

Kamburowska, Grazyna, Fitting engineering data with non-regular transformed models.

Taylor, Ronald, Cyclicity of the operator algebra of a Banach space.

Kent State University (5)

MATHEMATICS & COMPUTER SCIENCE

Baer, Mark E., Summability methods based on geometric series.

Barrick, George E., Analysis of numerical methods for $1 - D$ liquid crystal display optics.

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Lewis, Bryan W., Krylov methods for signals, systems and control.

Osikiewicz, Beth-Allyn, Norm estimates for operators on Hp and lp.

Ohio State University (17)

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Barbu, Adrian, On the cohomology of GLN (IFP) with IFP.

Butkevich, Sergey, Convergence of averages in ergodic theory.

Iskhakov, Igor, On hyperbolic surface tesselations and equivalent spacelike convex polyhedral surfaces in Minkowski space.

Korchagina, Inna, Three theorems on simple groups.

Marchenko, Vadim, On orbital stability of synchronous solutions of some singularly perturbed dynamical systems of relaxation-type oscillators with excitatory coupling.

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Pavlov, Savva, Some examples of liftings for finite groups of Lie type.

Pham, Lan, Regularizations of periodic vortex sheets.

Pohlman, Matthew, Numerical study of heat transfer and fluid flow for steady crystal growth in a vertical Bridgman device.

Qian, Jin, Combinatorial inequalities.

Stacklin, Thomas, Random partitions of integers into squares.

Xie, Xuming, Rigorous results in steady finger selection in viscous fingering.

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Millen, Brian, Nonparametric tests for umbrella alternatives.

Rogers, James, Confidence sets for multiplicity problems: two applications.

Stark, Gregory, Imperfect ranking models and their use in the evaluation of ranked-set sampling procedures.

Sung, Iyue, Importance sampling kernel density estimation.

Williams, Brian, Sequential design of computer experiments to minimize integrated response functions.

Ohio University (3)

MATHEMATICS

Kalantan, Lutfi, On kappa-normality.

Ludwig, Lewis, Two generalizations of normality: alpha-normality and beta-normality.

Pavlov, Oleg, Examples in set-theoretic topology.

University of Akron (1)

MATHEMATICS AND COMPUTER SCIENCE

Wu, Yan, Numerical simulation and wavelet-based control on coupled Lorenz systems.

OKLAHOMA

Oklahoma State University (2)

STATISTICS

Blum, James, Conservative confidence regions for kernel estimates of the varying coefficient model.

Butler-McCullough, Desiree, Selecting the *T*-best of several Birnham-Saunders populations.

University of Oklahoma, Health Sci. Ctr. (2)

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Stroehla, Berrit, Nutrition and blood levels in native American and white children living in rural Oklahoma.

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University of Oklahoma (5)

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Anderson, Frank, Small-group learning in a university precalculus course.

Davidson-Rossier, Leslie, Formulation of static and dynamic layered beam systems with an inverse problem.

Dogan, Hamide, A comparison study between a traditional and experimental first year linear algebra program.

Zeng, Lei, Existence and stability of solitary-wave solutions of equations of Benjamin-Bona-Mahony type.

OREGON

Oregon State University (3)

MATHEMATICS

Fassett, Jonathon, Inverse limits and full families.

Georgieva, Bogdana, Noether-type theorems for the generalized variational principle of Herglotz.

Glantz, Wayne Lawrence (Chris Wayne), A singular integral operator along a hypersurface.

Portland State University (1)

MATHEMATICAL SCIENCES

Schabel, Carmen, An introduction model to improve proof writing in college number theory.

University of Oregon (3)

MATHEMATICS

Duckworth, W. Ethan, The double coset problem in algebraic groups.

Johnson, Inga Jo, The effect of multiplication by powers of two on the root invariant.

Sklar, Jessica, Binomial rings and algebras.

PENNSYLVANIA

Carnegie Mellon University (4)

MATHEMATICAL SCIENCES

Egriboyun, Feyzullah, Optimal investment and consumption with reallocation and drawdown constraints.

Foss, Mikil, On Lavrentiev's phenomenon.

Konjevod, Goran, Generalizing set cover: approximation algorithms for group Steiner trees and related problems.

Vecer, Jan, Options on a traded account.

Lehigh University (1)

MATHEMATICS

Fisher, Michael, Topics in V_1-periodic homotopy theory.

Pennsylvania State University (11)

MATHEMATICS

Asaeda, Marta, The spindle algebra of the exotic subfactor and the symptotic system.

Kalinin, Boris, Rigidity of invariant measures and joinings for higher-rank abelian actions.

Lovejoy, Jeremy, Arithmetic and combinatorial properties of partition functions.

Sadovskaya, Victoria, Dimensional properties of dynamical systems with discrete and continuous time.

Ulyanov, Alexander, Polydiagonal compactification of configuration spaces.

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Banga, Sennin, Confidence intervals for the benchmark dose in dose response models.

Leeds, Mark, Error structures for dynamic linear models.

McGrath, "Herb" Richard, Dispension effects in unreplicated fractional factorials.

Nadar, Mustafa, Multivariate sign and rank methods based on the Oja criteria function.

Park, Chanseok, Robust statistical procedures based on quadratic inference function.

Yucel, Recai, Computational tools for missing values in multivariate longitudinal and clustered data.

Temple University (7)

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Beck, Matthias, The arithmetic of rational polytopes.

Cheng, Yun, Probability and mathematical finance I. Long range self-avoiding random walks above critical dimension II. Finite horizon optimal investment and consumption with transaction cost.

Edlin, Anne, Extensions and applications of the Goulden-Jackson method to self-avoiding walks, square and cube free words, probability, entropy, cyclic words and related sequences.

Nekoranik, Paul, Line bundles over *b*-holomorphic complex curves.

Tefera, Akalu, Improved algorithms and implementations in the multi-WZ theory.

Vogel, Judith, A flexible quasi-minimal residual for solving large systems of linear equations.

Wang, Cheng, High order finite difference method for incompressible flow.

University of Pennsylvania (8)

MATHEMATICS

Borodin, Alexei, Harmonic analysis on the infinite symmetric.

Lehr, Claus-Georg, Reduction of wildly ramified covers of curves.

Lin, Yen-Chi (Roger), Neighborhood germs of compact Riemann surfaces.

Zhang, Yuan-Sheng, Enumeration of permutations with forbidden templates.

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Li, Shuxiang, On wavelet analysis and some distribution results.

Mao, Wenxin, Free knot polynomial spline confidence intervals.

Ming, Kewei, Matching with variable set sizes in observational studies.

Wang, Liansheng, Sensitivity analysis in observational studies.

University of Pittsburgh (7)

MATHEMATICS

Ezekiel, Soundararajan, Computational fractal methods for image analysis and compression.

Gao, Congyu, A free boundary problem in the limit of slow-diffusion fast-reaction systems.

Iliescu, Traian, Large eddy simulation for turbulent flows.

Jaradat, Mohammed, On the edge-chromatic numbers, the basis number and the Hamiltonian decomposition of the graph products.

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Jonghyeon, Kim, Simulation-based approaches to measurement error models.

Meyer, Oded, Cumulative meta-analysis of clinical trials: from a retrospective exercise to a dynamic process.

Sill, Michael, Estimation and inference for drop-the-losers designs.

RHODE ISLAND

Brown University (8)

APPLIED MATHEMATICS

Dukic, Vanja, Hierarchical Bayesian models for discrete data analysis.

Huang, Shih-Hsiu, Compositional approach to recognition using multi-scale computations.

Ma, Xia, Hierarchical Galerkin and nonlinear Galerkin models for laminar on turbulent wakes.

Menon, Govind, Geometric methods for the Maxwell-Bloch equations and the kinetics of martensitic phase transitions.

Teng, Chun-Hao, Numerical methods for wave equations in complex geometries.

Winkler, Sean, Lagrangian dynamics in geophysical fluid flows.

MATHEMATICS

Sarkis, Ghassan, Dynamical systems and formal groups.

Wazir, Rania, Arithmetic on elliptic three-folds.

University of Rhode Island (3)

MATHEMATICS

Arciero, Michael, Some limit theorems for Szego polynomials.

Radin, Michael A., Global stability, boundedness and periodicity character of certain difference equations.

Sparks, Rebecca, Rational functions whose zeros and poles are constrained by conditions arising in control.

SOUTH CAROLINA

Clemson University (11)

MATHEMATICAL SCIENCES

Albright, Russell, Independence properties and learning in graph-theoretic probability modes.

Brumbaugh-Smith, James, Diversified network routing via minimax objectives.

Clark, Kelle, Bounds for the minimum weight of the dual codes of some classes of designs.

Clark, Steven, Stochastic control models for research and development projects.

Field, Arthur, Applying Monte Carlo simulation techniques to amusement park queuing protocols to reduce waiting time and enhance customer satisfaction.

Fitch, Mark, Slope critical configuarions generated from regular polygons.

Hadavas, Paul, Exploiting network substructures and persistency in solving 0-1 and general nonconvex optimization problems.

Olaya, Javier, A method of selecting variables in nonparametric regression.

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Segars, Roy, Location problems with barriers using rectilinear distance.

Whitaker, Thomas, Improved numerical methods for shade sorting in apparel manufacturing.

Medical University of South Carolina (2)

BIOMETRY & EPIDEMIOLOGY

Hebert, Renee, Application of a Markov model to assess the impact of nonrandom missing data on the analysis of longitudinal clinical trial data.

Venner, Bradley, Modeling the carcinogenic effects of extended external exposures to ionizing radiation.

University of South Carolina, Columbia (6)

EPIDEMIOLOGY & BIOSTATISTICS

Moore, Charity, Logistic regression with incomplete covariate data in complex survey sampling.

MATHEMATICS

He, Qingmi, A theoretical study of three dimensional nonlapping domain decomposition methods.

Lane, Brendan, Multiresolution analysis for the registration of images.

Mitra, David, Sequences unconditionally basic in both l_1 and l_2.

Williams, Richard, The irreducibility of a certain class of Laguerre polynomials.

STATISTICS

Gleaton, James U. Jr., Application of Jaynes' maximum entropy formalism to the reliability of complex systems: bundles of brittle elastic fibers.

TENNESSEE

University of Tennessee (6)

MATHEMATICS

Cummings, Peter, Analysis of finite element based numerical methods for acoustic waves, elastic waves, and fluid-solid interactions in the frequency domain.

Daniel, Doug, Uniqueness and summability of two-dimensional Walsh series and their generalizations.

Kolodynski, Slawomir, Group invariant stable processes.

Kouchekian, Sherwin, Unbounded Bergman operators.

Redmond, Shane, Generalizations of the zero-divisor graph of a ring.

Wang, Mei-Lui, Speeds of invasion for models with Allee effects.

Vanderbilt University (1)

MATHEMATICS

Gramling, Karen, Interassociates of cyclic and free semigroups.

TEXAS

Rice University (9)

COMPUTATIONAL & APPLIED MATHEMATICS

Dash, Sanjeeb, On the matrix cuts of Lovász and Schrijver and their use in integer programming.

Klampfl, Erica, A mixed integer nonlinear formulation for improving membrane filtration water treatment plant design.

Sinkevich, Olena, Optimization for parameter estimation with application to transmission electron microscopy.

MATHEMATICS

Bellis, Amy, Using complexity bounds to study positive Heegaard diagrams of genus two.

Berger, Scott, Variational problems for lower dimensional energies and with constraints.

Clark, Gregory, Stable homotopy invariance of Teichner's sec invariant.

Crowley, Katherine, Discrete Morse theory and the geometry of nonpositively curved simplicial complexes.

Lampazzi, Amy, Divisibility of Conway polynomial of links.

Lin, Chun-Chi, Variational problems with multiple-valued functions and mappings.

Southern Methodist University (3)

MATHEMATICS

Antohe, Valeria, Computational methods for Hamiltonian systems.

Jiang, Qiaoyuan, Characteristic finite element methods for degenerate parabolic problems and their application to two-phase in porous media.

STATISTICAL SCIENCE

Lee, Euikyoo, Bayesian hierarchical spatiotemporal models with application to the modeling of Hanford site tritum concentrations.

Texas A & M University (15)

MATHEMATICS

Arnold, Richard, Homogenization and global existence of solutions to reaction-diffusion systems.

Bacuta, Constantin, Interpolation between subspaces of Hilbert spaces and applications to shift thoerems for elliptic boundary value problems and finite element methods.

Brown, Philip, Extremum problems relating to Bloch's and Landau's constants.

Moch, Amie, Forcing linearity numbers of certain types of infinitely generated modules over commutative rings.

Ozawa, Narutaka, Local theory and local reflexivity for operator spaces.

Rentzmann, Simon, The Melzak problem for triangulated convex polytopes.

Sucheston, Marcel, Levi foliations and global regularity of the *d*-bar Neuman problem.

Zeigler, David, Dynamic crack propagation in functionally graded bimaterial composites.

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Chu, Karin, Statistical evaluation of furosemide testing.

Gajewski, Byron, Robust multivariate estimation and variable selection in transportation and environmental engineering.

Kiffee, Jaqueline, Variable selection for binary classification of spectral data: the KDR algorithm.

Liang, Hua, Related topics in partially linear models.

Morris, Jeffrey, Statistical methods for colon carcinogenesis.

White, Christopher, Polychotomous regression applied to futility analysis and expected points modeling.

Zhong, Yibing, The spatial modeling of a mixture distribution.

Texas Tech University (2)

MATHEMATICS AND STATISTICS

Barefield, Eric, Rank regression in longitudinal data analysis.

Sugathadasa, Samanmale, An extended Kalman filtering problem in wildlife telemetry.

University of Houston (3)

MATHEMATICS

Berry, Robert, Spatio-temporially dependent models for the spread of infectious disease.

Datta, Sarjay, Some results on the effect of the trapizoidal rule in finite element computations.

Solazzo, James, Interpolation and computability.

University of North Texas (2)

MATHEMATICS

Hanus, Pawel, Example and applications of infinite iterated function systems.

May, Russell, A collapsing result using the axiom of determinacy and Shelah's theory of possible cofinalities.

University of Texas, Arlington (2)

MATHEMATICS

Hua, Ye, Multivariate failure time analysis when only time-to-first failure is observed.

Smith, Sally, Prime and radical submodules of modules over commutative rings.

University of Texas, Austin (15)

MATHEMATICS

Abad, Juan, Renormalization invariant tori, and periodic orbits for Hamiltonian flows.

Buck, Dorothy, The topology and geometry of DNA and DNA-protein interactions.

Kalisch, Henrik, Models for internal waves in two-fluid systems.

Momken, Bahareh, Fluid flow and deformable multi-porus media.

Revesz, Michael, The theory of L^p-random measures.

Richardson, Gregory, Rare events and conditional limit theorems for a class of spectrally positive, heavy-tailed Lévy processes.

Rulla, William, The birational geometry of M_3 and $M_{2,1}$.

TEXAS INSTITUTE OF COMPUTATIONAL & APPLIED

Deb, Manas, Solution of partial differential equations (SPDEs) using Galerkin method: theory and applications.

Gerde, Eric, Fracture and friction.

Hamner, Mark, Bayesian point estimates in finite population sampling.

Jester, William, Interactive numerical simulation of riser interference phenomena in offshore structures.

Kirby, Robert, Local time stepping and a posteriori estimates for flow and transport in porous media.

Rhodes, Phillip, Statistical signal processing algorithms.

Stamey, James, A Bayesian analysis of Poisson data with misclassification.

Walsh, Timothy, hp boundary element modeling of the acoustical transfer properties of the human head/ear.

University of Texas (3)

BIOMETRY

Correa, Arlene, Modeling a health promotion campaign process.

Maddala, Tara, A parametric model for analyzing recurrent nonfatal events in the presence of fatal event.

Song, Xin, Survival analysis of longevity in siblings.

UTAH

Brigham Young University (1)

MATHEMATICS

Andrist, Kathryn, A 3-manifold with non-trivial fundamental group which does not admit non-trivial group actions.

University of Utah (3)

MATHEMATICS

Kong, Jian, Schubert calculus on flag manifolds.

Lim, Chong Keat, Plancherel formula for connected semisimple Lie group with infinite center.

Xie, Xiangdong, Tits boundary and quasi-isometries between CAT(o) z-complexes.

VIRGINIA

University of Virginia (4)

MATHEMATICS

Ahearn, Stephen, Product structures on generalized Eilenberg-Moore spectral sequences.

Hellings, Christian, Two-isometries on Pontryagin spaces.

Kelton, Suzanne, Involutions fixing $\mathbb{R}P^j \cup F^n$.

Williams, Todd, Option pricing and branching processes.

Virginia Commonwealth University (3)

BIOSTATISTICS

Crofts, Theresa, Accounting for treatment by noise factor interactions in sample size determination for the generalized linear mixed model.

Meadows, Stephanie, Optimal experimental designs for detecting departures from additivity in drug/chemical mixtures.

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

Virginia Polytechnic Institute & State University (4)

MATHEMATICS

Beverly, Lesa, The creation of algorithms designed for analyzing periodic surfaces of crystals and mineralogically important sites in molecular models of crystals: understanding the election density function through visual examination of the curvature and shape of the equi-value Laplacian surfaces.

Hoggard, John, Accuracy of computer generated approximation to Julia sets.

Joseph, Daniel, Parameter identification for the Preisach model of hysteresis.

STATISTICS

Noble, Robert, Multivariate applications of Bayesian model averaging.

WASHINGTON

University of Washington (31)

APPLIED MATHEMATICS

Knaub, Karl R., On the asymptotic behavior of internal layer solutions of advection-diffusion-reaction equations.

Luke, David Russell, Analysis of optical wavefront reconstruction and deconvolution in adaptive optics.

Moskowitz, Benjamin Michael, An analysis of frictional feedback in the Madden-Julian oscillation.

Obrist, Dominik, On the stability of the swept leading-edge boundary layer.

BIOSTATISTICS

Arbogast, Patrick, Statistical methods for case-control studies.

Chapman, Nicola, Genome descent in isolated populations.

Dasgupta, Abhijit, Parametric identifiability and related problems.

Desai, Manisha, Mixture models for genetic changes in cancer cells.

Dunning, Andrew, Aspects of matching and power in group randomized trials.

Ghosh, Debashis, Nonparametric and semi-parametric analysis of recurrent events in the presence of terminal events and dependent censoring.

Guthrie, Katherine, A hierarchical aggregate data model with allowance for spatially correlated disease rates.

Lystig, Theodore, Evaluation of hidden Markov models.

Snow, Gregory, Understanding and extending the Li-Duan theorem.

Stoner, Julie, Analysis of clustered data: a combined estimating equations approach.

Thach, Chau, Self-designing optimal group sequential clinical trials.

Warnes, Gregory, The normal kernel coupler: an adaptive Markov chain Monte Carlo method for efficiently sampling from multi-modal distributions.

MATHEMATICS

Arden, Gregory, Approximation properties of subdivision surfaces.

Goebel, Rafal, Convexity, convergence and feedback in optimal control.

Nandy, Rajesh, Estimation of spectral gap using coupling techniques.

Nyman, Adam, The geometry of points on quantum projectivizations.

Ratzkin, Jesse, The end-to-end gluing construction for surfaces of constant mean curvature.

Schneider, David, Nonholonomic Euler-Poincare equations and stability in Chaplygn's sphere.

STATISTICS

Banerjee, Moulinath, Likelihood ratio inference in regular and non-regular problems.

Bunea, Florentina, A model selection approach to partially linear regression.

Craigmile, Peter F., Wavelet-based estimation for trend contaminated long memory processes.

Das, Barnali, Global covariance modeling: a deformation approach to anisotropy.

Golinelli, Daniela, Bayesian inference in hidden stochastic population processes.

Jones, Beatrix, Likelihood inference for parametric models of dispersal.

Ruczinski, Ingo, Logic regression and statistical issues related to the protein folding problem.

Walsh, Daniel Charles Islip, Detecting and extracting complex patterns from images and realizations of spatial point processes.

Wegelin, Jacob A., Latent models for cross-covariance.

Washington State University (2)

PURE & APPLIED MATHEMATICS

Felt, Andrew, A computational evaluation of interior point cutting plane algorithms for the stochastic programs.

Pierce, Donna, Planar functions.

WISCONSIN

Marquette University (2)

MATHEMATICS, STATISTICS & COMPUTER SCIENCE

Manuel, Albert, Mathematical model for evaluation of velocity profile effects on cross-sectional concentration with application to x-ray imaging.

Murphy, Brian, Modeling the time to engrafement of white blood cells and platelets following autologous peripheral blood stem cell tran.

Medical College of Wisconsin (1)

BIOSTATISTICS

Wu, Jingtao, Statistical methods for discretizing a continuous covariate in a censored data regression problem.

University of Wisconsin, Madison (24)

MATHEMATICS

Berger, Kurt, Asymptotic and numerical analysis of free surface flows: lump solitons and wave turbulence.

Borges, Maria, Homoclinic and heteroclinic solutions for a Hamiltonian system in the plane.

Chen, Bohui, A smooth compactification of moduli of instanton and its application.

Choi, Jongho, Long nonlinear water waves over a periodic bottom topography.

Eghbalnia, Hamid, A complex-valued overcomplete representation of information for visual search: a learning theoretic approach based on multiscale symmetry.

Felcyn, Pawel, Classifying spaces of moduli spaces of Morse shale flows.

Hildebrand, Jeffrey, Some results on down-up algebras over fields of prime characteristic.

Holtz, Olga, Theorems and counterexamples on structured matrices.

Kung, David Tsung-Shiao, Local smoothing phenomena for operators failing the cinematic curvature condition.

Lang, Michael, Some results on bipartite distance-regular graphs.

MacLean, Mark, Bipartite distance-regular graphs and their primitive idempotents.

MacNair, Simon, Valuation problems in incomplete markets.

Zhang, Wanchuan, A vanishing theorem in local mirror symmetry.

STATISTICS

Chan, Kin-Yee, Logistic regression trees.

Chen, Yonghua, Flexible group sequential designs for clinical trials.

Chen, Yun-Fei, Efficient clustering algorithms via multivariate techniques and mixture models.

Cheung, Ken, Dose escalation strategies for phase 1 clinical trials with late-onset toxicity.

Fan, Xiaoyin, Conditional estimation methods for the analysis of group sequential studies.

Gaffney, Patrick, An efficient reversible jump Monte Carlo approach to detect multiple loci and their effects in inbred crosses.

Gai, Chunyang, Pruning methods for classification trees.

Hoff, Peter, Constrained nonparametric estimation via mixtures.