

Doctoral Degrees Conferred

2005–2006

ALABAMA

Auburn University (4)

MATHEMATICS AND STATISTICS

Bailey, Bradley, Related covering properties

Sindelrova, Petra, An example on moveable approximations of a minimal set in a continuous flow.

Turner, David, Coefficient space properties and a Schur algebra generalization.

Yan, Wen, Generalization of Ky Fan-Amir-Moez-Horn-Mirsky's result on the eigenvalues and real singular values of a matrix.

University of Alabama, Birmingham (3)

MATHEMATICS

Brouwer, Gaston, Green's functions from a metric point of view.

Lian, Jinguo, Pattern formation for some systems of nonlinear differential equations.

Zhang, Hongkun, Statistical properties of chaotic billiards.

University of Alabama, Huntsville (1)

MATHEMATICS

Wang, Yan, Acquisition numbers and competition-acquisition number.

University of Alabama, Tuscaloosa (11)

INFORMATION SYSTEMS STATISTICS AND MANAGEMENT SCIENCE

Cai, Biao, Evaluation of Gini S mean difference, mean deviation, and quasi-range as estimators of sigma for the performance of Shewhart x-bar control charts.

Haynie, James Brandon, Progressively phased bridge inspection process.

Kim, Young-il, Multivariation SPC for batch processes.

Mysore, Shrikanth, Three essays in scheduling.

Saithanu, Kidakan, Neural networks and multivariate quality control.

Shaltayev, Dmitriy, The value of market information in serial supply chains with Markov-modulated demand.

Watkins, Wade, An efficient search for identifying unobservable factors.

MATHEMATICS

Gong, Minqing G., Waiting time in a combined FCFS and STF queue.

Jun, Younbai, Domain decomposition algorithms for solving parabolic partial differential equations.

Rogers, Frank D., Optimal choices in an LFR system.

Ryang, Dohyoung, Finitely generated groups acting eometrically on generalized hyperbolic spaces.

ARIZONA

Arizona State University (3)

MATHEMATICS AND STATISTICS

Al-Sulami, Hamed Hamdan, C^* -algebras for boundary actions of abelian-by-cyclic groups.

Clark, Phil, The emergence of a classroom community of practice into mathematical structures course.

Lopez-Cruz, Roxana, Structured SIS epidemic models with applications to HIV epidemic.

University of Arizona (11)

MATHEMATICS

Belnap, Jason, Putting TAs into context: Understanding the graduate mathematics teaching assistant.

Leitner, Frederick, Deformation theory of noncommutative formal group in positive characteristics.

Pawloski, Robert, Computing the cohomology ring and Ext-algebra of group algebras.

PROGRAM IN APPLIED MATHEMATICS

Chitnis, Nakul, Using mathematical models in controlling the spread of malaria.

Espinola-Rocha, Jesus Adrian, Short-time asymptotic analysis of the Manakov system.

Forgoston, Eric, Initial-value problem for perturbations in compressible boundary layers.

Kano, Patrick, Development and analysis of high accuracy numerical methods for computational optics.

Linfoot, Andy, A case study of multi-threaded Buchberger normal form algorithm.

Schofield, Samuel, Dynamics of laminar jets in stratified fluids.

Soneson, Joshua, Optical pulse dynamics in nonlinear and resonant non-composite media.

Soterwood, Jeanine, Model and analysis of provider-user games.

CALIFORNIA

California Institute of Technology (9)

APPLIED AND COMPUTATIONAL MATHEMATICS

Demanet, Laurent, Curvetts, wave atoms and wave equations.

Goulet, David, Mathematical models of the developing *C. elegans* hermaphrodite gonad.

Luo, Wuan, Wiener chaos expansions and numerical solutions of stochastic partial differential equations.

Strinopoulos, Theofilos, Upscaling immiscible two-phase flows in an adaptive frame.

CONTROL AND DYNAMICAL SYSTEMS

Shadden, Shawn, A dynamical systems approach to unsteady systems.

The above list contains the names and thesis titles of recipients of doctoral degrees in the mathematical sciences (July 1, 2005, to June 30, 2006) reported in the 2006 Annual Survey of the Mathematical Sciences by 222 departments in 164 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 2007 issue of the *Notices*.

MATHEMATICS

- Gealy, Matthew*, On the Tamagawa number conjecture for motives attached to modular forms.
Liu, Xiaoyu, On divisible codes over finite fields.
Navilarekallu, Tejaswi, On the equivariant Tamagawa number conjecture.
Sorensen, Claus, Level-raising for $GSp(4)$.

Claremont Graduate University (7)

SCHOOL OF MATHEMATICAL SCIENCES

- Bui, Minh*, Linear phase orthogonal filter bank construction with applications to image and geometric approximations.
Cepeda-Rizo, Juan, Solid and fluid mechanics: Case studies in electronic packaging.
De Pass, Monica, Wavelet feature extraction of high-range resolution radar profiles using generalized Gaussian distributions for automated target recognition.
Fedorchuk, Katherine, Condensed history methods for Monte Carlo solutions of photon transport problems.
Longhini, Patrick, Nonlinear dynamics design and operation of advanced magnetic sensors.
Teng, Ying, Modeling and simulation of aeroseroelastic control with multiple control surfaces using μ -method.
Wong, Chao-Jen, The embedding method for simulation for enzyme kinetics and transfer in sessile hydrogel drop.

Stanford University (6)

STATISTICS

- Han, Jiarui*, Dynamic portfolio management.
Li, Jingyang, Contributions to Bayesian survival analysis.
Schwartzman, Armin, Random ellipsoids and false discovery rates: Statistics for diffusion tensor imaging data.
Xing, Haipeng, Change-point stochastic regression models with applications to econometric time series.
Zhang, Nancy, Change-point models and sequence alignments: Statistical problems of genomics.
Zou, Hui, Some perspectives of sparse statistical modeling.

University of California, Berkeley (33)

BIOSTATISTICS

- Birkner, Merrill*, Statistical hypothesis testing and application to biological data.
Machekano, Rhoderick, Statistical complications of infectious disease data: Machine learning, causal inference and multiple testing.

- Sinisi, Sandra*, Data-adaptive prediction with the deletion/substitution/addition algorithm.
Wang, Yan, Statistical methods for evaluating linkage disequilibrium using length of haplotype sharing.

MATHEMATICS

- Borooah, Gautam*, Clean conditions and incidence rings.
Diesl, Alexander, Classes of strongly clean rings.
Dorsey, Thomas, Cleanness and strong cleanness of rings of matrices.
Dugas, Alexander, Stable equivalences of finite dimensional algebras: Relative homology and lifting problems.
Eriksson, Nicholas, Algebraic combinatorics for computational biology.
Farjoun, Yossi, Nucleation, growth, and coarsening: A global view on aggregation kinetics.
Fertig, Ron, Almost rational torsion points on Abelian varieties.
Gracia-Saz, Alfonso C., The symbol of a function of a pseudodifferential operator.
Grigsby, Elisenda, Knot floer homology in cyclic branched covers.
Grossman, Pinhas, Intermediate subfactors with small index.
Hough, J. Ben, Asymptotic results for zeros of diffusing Gaussian analytic functions.
Huggins, Bonnie, Fields of moduli and fields of definition of curves.
Kim, Walter, Ramification points on the eigencurve and the two variable symmetric square p -adic L -function.
Lim, Chu-Wee, Decomposition of spaces of cusp forms over Q and variants of Partial Nim.

- Menta, Rajan*, Supergroupoids, double structures, and equivariant cohomology.
Mesyán, Zachary, On endomorphism rings of infinite direct sums of modules.
Nielsen, Pace, The exchange property for modules and rings.
Okunev, Pavel, Renormalization methods with applications to spin systems and finance.
Palamarchuk, Konstantin, The 6-vertex model in statistical mechanics.
Rinker, Mark, Height functions, maps to the integers, and the Whitehead graph of a finite presentation.
Woo, Alexander, Ideals of the polynomial ring generated by irreducible symmetric group representations and Ellingsrud-Strømme.
Xia, Jianlin, Fast direct solvers for structured linear systems of equations.

STATISTICS

- Chen, Chao*, Topics on random forests.
Guha, Apratim, Analysis of dependence structures of hybrid stochastic processing using mutual information.

- Hammond, Alan*, Two models of probability theory: Brownian fluctuations and a kinetic limit.
Krishnapur, Manjunath, Zeros of random analytic functions.
McAuliffe, Jon, Statistical methods for comparing genomes.
Pete, Gábor, Dependent percolation critical exponents, anchored isoperimetry and random walks.
Zhao, Peng, Regularization: Sparsity, structure and computation.

University of California, Davis (9)

MATHEMATICS

- Cheng, Ching-hsiao*, Navier-Stokes equations interacting with a nonlinear elastic shell.
Deka, Lipika, Fermionic formulas for unrestricted Kostka polynomials and superconformal characters.
Johnson, Jesse, Heegaard splittings, the curve complex and the points complex.
Larripa, Kamila, Mathematical models of the cytoskeleton.
McAllister, Tyrrell, Applications of polyhedral geometry to computational representation theory.
Safnuk, Bradley, Intersection theory on the moduli space of curves.
Smith, Noel, Boundary interpolating trigonometric transforms and applications.
Wilson, Robin, Knots with infinitely incompressible Seifert surfaces.
Zhao, Jucheng, Efficient approximations: Overcome boundary effects.

University of California, Los Angeles (34)

BIOSTATISTICS

- Comulada, Warren*, Two-part longitudinal multivariate models for sex, drugs, and teratology.
Gadallah, May Mokhtar Aly, Combing aggregated and individual level data to estimate individual level parameters variance, covariance, and slope coefficient.
Lemus, Hector, Bayesian state space modeling of heterogeneous multivariate longitudinal data.
Li, Ning, Joint analysis of longitudinal measurements and competing risk failure time data.
Siddique, Juned, Multiple imputation using an iterative hot-deck with distance based donor selection.
Wu, Tongtong, A partial linear semi-parametric additive risks model for two-stage design survival studies.
Zhao, Yu, Additive risk regression for survival data from two-stage designs.
Zhou, Kefei, A unified approach to non-parametric comparisons of receiver operating characteristics curves for longitudinal and clustered data.

MATHEMATICS

- Bueti, John*, A bound for the (n, k) maximal function via incidence combinatorics.
- Cai, Shuang*, Algebraic connective K -theory: A simple definition and its consequences.
- Feigon, Brooke*, Periods and relative trace formulas for $GL(2)$ in the local setting.
- Folsom, Amanda*, Modular units.
- Gillette, Alan*, Image inpainting using phase-field method.
- He, Lin*, Applications and generalizations of the iterative refinement method.
- Khamsemanan, Nirattaya*, Estimation of Nielsen numbers.
- Kim, Yon Seo*, Localization method as a universal approach to the Gromov-Witten theory.
- Klein, Silvius*, Spectral theory for discrete, quasi-periodic Schrödinger operators.
- Le, Triet*, A study of image segmentation and decomposition in a variational approach.
- Lee, Catherine*, The effect of smoothness and derivative conditions on the fixed point sets of smooth maps.
- Leung, Shing-Yu*, Applications of the level set method to geometrical optics, transmission tomography, image processing and crystal growth modeling.
- Lieu, Linh*, Contribution to problems in image restoration, decomposition, and segmentation by variational methods and PDEs.
- Ouellette, Keith*, On the Fourier inversion formula for reductive adélic groups.
- Park, Frederick*, Total variation and duality for blind image.
- Peterson, Jesse*, 1-cohomology and rigidity in Π_1 factors.
- Schubert, Claus*, New u -invariants of quadratic forms and function fields of good forms of height two.
- Sze, Nang Keung*, Multilevel optimization for VLSI circuit placement.
- Thiyanarathnam, Pradeep*, Modeling and simulation of electrodisposition in 2 and 3 dimensions.
- Visan, Monica*, The defocusing energy-critical nonlinear Schrödinger equation in dimensions five and higher.
- Xu, Jinjun*, Iterative regularization and nonlinear inverse scale space methods in image restoration—interactive regularization and nonlinear inverse scale space methods in image restoration.

STATISTICS

- He, Yan*, Missing data imputation for tree-based models.
- Huang, Wehua*, Methods to extract rare events.
- Maciuca, Romeo*, MCMC analysis: First hitting times, visiting scheme, and auxiliary variables.
- Veen, Alejandro*, Some methods of assessing and estimating point processes models for earthquake occurrences.

Zheng, Ming, ChIP-chip: Data, model and analysis.

University of California, Riverside (3)

MATHEMATICS

- Bartels, Tobias*, Higher gauge theory, 2-bundles.
- Hernandez, Lisa*, On the girth of a knot.
- Pearse, Erin*, Complex dimensions of self-similar systems.

University of California, San Diego (13)

MATHEMATICS

- Cecil, Mathew S.*, The Taylor map on complex path groups.
- Emmons, Caleb J.*, Higher order integral Stark-type conjectures.
- Fenwick, Jennifer E.*, A survey of meshing algorithms and a multi-purpose mesh generator.
- Fleming, Thomas R.*, Generalized link homotopy invariants.
- Horton, Matthew D.*, Ihara zeta functions of irregular graphs.
- Kang, Weining*, An invariance principle for semimartingale reflecting Brownian motions (SRBMs) in domains with piecewise smooth boundaries.
- Lee, Jason*, Topics in combinatorial game theory: Partizan versions of Nim, the hypercube description and results on computation in the field of numbers.
- Lim, Poon Chuan Adrian*, Path integrals on a compact manifold with non-negative curvature.
- Miceli, Brian*, A rook theory model for product formulas and poly-Stirling numbers.
- Newland, Derek*, Kernels in the Selberg trace formula on \mathbb{T}_k and distributions of the zeroes of the Ihara-zeta function.
- Pendergrass, Cayley*, Just-infinite algebras and an extension of a theorem of Herstein.
- Winkelmann, Beate M.*, Finite dimensional optimization methods and their application to optimal control with PDE constraints.
- Wu, Lei*, Random inscribed polytopes.

University of California, Santa Barbara (13)

MATHEMATICS

- Ham, Ji-Young*, The minimal dilatations of 4 and 5 braids.
- Lichtenstein, Eric*, Divisors for elliptic curves satisfying Zagier's conjecture.
- Pavone, Christopher*, The spectral scale of a self-adjoint operator in a semifinite von Neumann algebra.
- Roybal, Roger*, A reproducing kernel condition for indeterminacy in the multidimensional moment problem.

Sittinger, Brian, Recurrence formulae for the coefficients of modular forms and functions.

Tomova, Madlena, Compressing thin spheres in the complement of a link.

Wylie, William, On the fundamental group of noncompact manifolds with nonnegative Ricci curvature.

STATISTICS AND APPLIED PROBABILITY

- Chernobai, Anna*, Contributions to modeling of operational risk in banks.
- Frame, Samuel*, Some contributions to semi-supervised learning.
- Grebeck, Michael*, Application of stochastic programming and stable distributions to asset liability management.
- Lei, Xiaofang*, Bayes nets: A generalized variable elimination algorithm and applications to classification.
- Tong, Tiejun*, On variances estimation with application to microarray data analysis.
- Yuan, Jiacheng*, Bootstrap resampling in wavelet analysis and statistical methods in ecological research.

University of California, Santa Cruz (5)

MATHEMATICS

- Bonini, Vincent*, Negatively small perturbations of the Laplacian on asymptotically flat manifolds.
- Glesser, Adam*, Refinements of Dade's projective conjecture.
- Jordan, Leif*, Classification of irreducible vi modules for a negative definite rank one even lattice L .
- Niche, Cesar*, On the topological entropy and periodic orbits of optical and magnetic flows.
- Rosen, Oren*, Sturm Liouville extensions: Applications in plate vibration.

University of Southern California (7)

MATHEMATICS

- Cetin, Coskun*, Backward stochastic differential equations with quadratic growth and their applications.
- Dong, Huamei*, Critical region for droplet formation/dissolution.
- Li, Ming*, Statistical models of sequencing error and algorithms of polymorphism detection.
- Liu, Xiaobo*, The quantum Teichmüller space as a noncommutative algebraic object.
- Shamam, Asher*, Modeling and deconvolution of alcohol transport through human skin employing a new fully-discrete parameters estimation framework for parabolic and hyperbolic distributed parameter systems.
- Torres, Juan*, Space-time decay of solutions of the Navier-Stokes equations.
- Yang, Yi*, Computational genome analysis by alignment.

COLORADO

Colorado School of Mines (3)

MATHEMATICS AND COMPUTER SCIENCE

Al-Ramouni, Suad, Efficient algorithms for association rules from transactional databases.

Gao, Kun, Attribute based modeling: An interpolation approach to design.

Idwan, Sahar, Algorithms for discrete geometric and graph theoretic pursuit problems.

Colorado State University (6)

MATHEMATICS

Eastman, Sean, Analysis and application of the nonlinear power method.

Hacioglu, Ilhan, The integral structure of Hecke algebras for finite generalized polygons.

Neckels, David, Variational methods for uncertainty quantification.

STATISTICS

Abd El-Fattah, Ehab, Saddlepoint approximations for linear rank models.

Abdel Karim, Amany, Applications of generalized inference.

Storlie, Curtis, Tracking of multiple merging and splitting targets with application to convective systems.

University of Colorado at Boulder (9)

APPLIED MATHEMATICS

Brannick, James, Adaptive algebraic multi grid coarsening strategies.

Cooley, Daniel, Statistical analysis of extremes motivated by weather and climate studies: Applied and theoretical advances.

Hoefler, Mark, Dispersive shock waves in Bose-Einstein condensates and nonlinear nano-oscillators in ferromagnetic thin films.

Lee, Eunjung, FOSLL* for eddy current problems with three-dimensional edge singularities.

Suwannajan, Pakinee, Evaluating the performance of latent semantic indexing.

Wysham, Derin, Reducibility, manifolds, and bifurcations of invariant tori in dynamical systems.

MATHEMATICS

Chambers, Amy, Certain subalgebras of the tensor product of graph algebras.

Massman, John, Applications of algebraic geometry to error-correcting codes.

Smith, Becker Sidney, The Hilbert e-operator and its significance for metamathematics.

University of Colorado at Denver (3)

MATHEMATICS

JuJunanashvili, Abram, Angles between infinite-dimensional subspaces.

Rostermundt, Robert, A description of all elation groups of the Hermitian surface in 3-dimensional projective space over a finite field of characteristic 2.

Weinstein, Tessa, Three-phase hybrid mixture theory for swelling drug delivery systems.

University of Colorado at Denver and Health Sciences Center (1)

PREVENTIVE MEDICINE AND BIOMETRICS

Bjork, Kathe, Robust identification of differential gene expression and discrimination.

University of Northern Colorado (3)

SCHOOL OF MATHEMATICAL SCIENCES

Banks, Clare, Preservice teachers' personal epistemological beliefs in relation to their beliefs in the National Council of Teachers of Mathematics' principles and standards for school mathematics.

Duvall, Sally, Students' concept images of parameters in a multi-representational differential equation course.

Tsay, David, Pedagogical content knowledge in prospective elementary teachers: The schema of multiplication.

CONNECTICUT

University of Connecticut, Storrs (5)

MATHEMATICS

Catral, Minerva, Group inverses and mean first passage matrices in finite ergodic Markov chains.

O'Neill, Krista, High frequency response to low frequency forcing in a non-linear mechanical model.

Speicher, Regina, Numerical solutions to an Allen-Chan type equation.

STATISTICS

Song, Seongho, Hierarchical Bayesian analysis of genetic diversity in geographically structured populations.

Zhang, Zhenkui, Variable window scan statistics.

Wesleyan University (1)

MATHEMATICS AND COMPUTER SCIENCE

Cane, Ilirjan, Shellability properties on planar graded posets and higher order complexes.

Yale University (7)

MATHEMATICS

Armstrong, John, Extensions of classical knot invariants to categories of tangles.

Duncan, John F., Vertex operators, and three sporadic groups.

Lim, Seonhee, Enumeration of lattices and entropy rigidity of group actions on trees and buildings.

Mallahi-Karai, Keivan, Relative growth and Kazhdan property for arithmetic groups.

Poznansky, Tal, Existence of simultaneous Ping-Pong partners in linear groups.

Salehi-Golsefidy, Alireza, Lattices of minimum covolume in Chevalley groups over positive characteristic local fields.

Szlam, Arthur D., Non-stationary analysis on data sets and applications.

DELAWARE

University of Delaware (2)

MATHEMATICAL SCIENCE

Platte, Radrigo, Accuracy and stability of global radial basis function methods for the numerical solution of partial differential equations.

Sun, Jiguang, Numerical analysis of nonlinear ferromagnetic materials.

DISTRICT OF COLUMBIA

American University (3)

MATHEMATICS AND STATISTICS

Bejleri, Valbona, Prediction intervals for the Poisson model with applications to Atlantic storms data.

Gochenaur, Deborah, African Americans and STEM: An examination of one intervention program.

Pascal, Matthew, No Child Left Behind in the mathematics classroom: A regional assessment of the impacts that the No Child Left Behind Act of 2001 has had on the mathematics classroom learning environment.

George Washington University (3)

MATHEMATICS

Helme-Guizon, Laure, A categorification for the chromatic polynomial.

STATISTICS

Gartvig, Konstantin, Asset pricing under parameter uncertainty.

Hui, Terrence, Bootstrap and likelihood based inference for ranked set samples.

Howard University (3)

MATHEMATICS

Mohlala, Molobe, Enriched quantum Yang-Baxter geometry, quantum geometry.

Moshesh, Irene, Image partition regularity of affine transformations.

Rahman, Abdul, On the construction and cohomology of a self-dual perverse sheaf on simple stratified spaces motivated by string theory.

FLORIDA

Florida Atlantic University (2)

MATHEMATICAL SCIENCES

Humphreys, Katherine, Enumeration of lattice paths using finite operator calculus.

Mahalanobis, Ayan, Diffie-Hellman key exchange protocol, its generalization and nilpotent groups.

Florida Institute of Technology (5)

MATHEMATICAL SCIENCES

Liew, Agatha, Stochastic analysis of a multivariable random walk with applications to finance.

Lindsay, Rita, An analysis of the effects of a computer enhanced curriculum and learning style on student achievement in college algebra at a Florida community college.

Samanta, Tathagata, Comparing pseudo- and quasi-random number generators in multivariable integration and traveling salesman problem.

Shaikh, Shoaib, Design optimization using statistical techniques.

Smith, Timothy, On periodic solutions of nonlinear hyperbolic equations of the fourth order.

Florida State University (11)

MATHEMATICS

Akella, Santha, Deterministic and stochastic aspects of data assimilation.

Croicu, Ana-Maria, Single and multiple-objective stochastic programming with applications to aerodynamics.

Cui, Zhenlu, Rheology and mesoscale morphology of flows of cholesteric and nematic liquid crystal polymers.

Ganesan, Anand, Two part thesis: 1. A modified $k-\epsilon$ turbulence model of high speed jets at elevated temperatures. 2. Modeling and a computational study of spliced acoustic liners.

Goforth, Jacqueline, A description and analysis of a two variable version of the NTRU crypto system.

Hu, Wenbo, Calibration of generalized hyperbolic distributions using the EM algorithm, with applications in risk management, portfolio optimization, and portfolio credit risk.

Kadioglu, Samet, All speed multi-phase flow solvers.

Srinivasan, Parthasarathy, Applications of representation theory and higher-order perturbation theory in NMR.

STATISTICS

Franks, Billy, Investigating the categories for blood pressure for risk assessment of death due to coronary heart disease.

Kaziska, David, Statistics models on human shapes with applications to Bayesian image segmentation and gait recognition.

Munshi, Mahtab, Impact of missing data on building prognostic models across studies.

University of Central Florida (4)

MATHEMATICS

Bradshaw, David, Classification of high-dimensional vectors based on matrix-variate distributions.

Heard, Astrid, Applications of statistical methods for risk and reliability.

Qi, Limin, Phase synchronization in three-dimensional lattices and globally coupled populations of nonidentical Rossler oscillators.

Singh, Neeta, Epidemiological models for mutating pathogen with temporary immunity.

University of Florida (15)

MATHEMATICS

An, Jung-ha, Various methods in shape analysis and image segmentation and registration.

Bhat, Yermal Sujeet, A multiscale analysis of PDE modeling voltage potential.

Jakimovik, Slagjana, On the classification of inverse limit spaces of tent maps.

Kozinski, Jason, Abstract bilinear integration and applications.

Melikhov, Sergey, Geometry of link invariants.

Rojas-Rebolledo, Diego, Approximations to the strength of OD^A -determinacy and applying determinacy to porosity.

Sadykov, Rustam, Singularities of smooth maps.

Thiruvenkadam, Sheshadri, Partial differential equations (PDE) and variational methods applied to medical image analysis.

Tweddle, J. Christopher, Minimization of linear growth functionals of measure.

STATISTICS

Capanu, Marinela, Tests of misspecification for parametric models.

Chakraborty, Sounak, Bayesian machine learning.

Cui, Yuehua, Statistical functional mapping for genetic control of programmed cell death.

Min, Lin, Mathematical and statistical methods for identifying DNA sequence variants that encode drug response.

Rumcheva, Pavlina, Projected multivariate linear models for directional data.

Zhao, Wei, Statistical modeling for functional mapping of longitudinal and multiple longitudinal traits: Structured ante-dependance model and wavelet dimensionality reduction.

University of Miami (2)

MATHEMATICS

Anthappan, Paul, On trigonometric interpolation.

Solis, Didier, Global properties of asymptotically de Sitter and anti de Sitter spacetimes.

University of South Florida (4)

MATHEMATICS

Fall, Djiby, Longtime dynamics of hyperbolic evolutionary equations in unbounded domains and lattice systems.

Kephart, David, Topology, morphism, and randomness on the space of formal languages.

Rajaram, Lakshminarayan, Statistical models for environmental and life sciences.

Youmbi, Norbert, Contributions to harmonic analysis and probability theory on semihypergroups.

GEORGIA

Clark Atlanta University (1)

MATHEMATICS

Torain, David S., II, An analytical approach to the bio-economic dynamics of a fishery which includes simultaneous harvesting of other species.

Emory University (7)

BIostatISTICS

Hickson, DeMarc, Multilevel (hierarchical) analysis of the human immunodeficiency virus and high risk sexual behavior: Assessing model fit with the DIC generalized coefficient of determination.

Leong, Traci, First- and second-order properties of spatial point processes in biostatistics.

Lin, Carol, Evaluating and optimizing performance of diagnostic systems with multiple tests.

Patel, Rajan, Determining connectivity of the human brain with functional neuroimaging data.

Tassone, Eric, Small area estimation of health disparity via Bayesian hierarchical models.

MATHEMATICS AND COMPUTER SCIENCE

Crane, Brian, Forbidden subgraphs and (k, m) -pancyclic graphs.

Ferrara, Michael, The degree stripping method for potentially H -graphic sequences.

Georgia Institute of Technology (7)

SCHOOL OF MATHEMATICS

Chen, Jian, Bifurcations normal forms and their applications.

Gameiro, Marcio, Topological analysis of patterns.

Hegde, Rajneesh, New tools and results in graph structure theory.

Hohenegger, Christel, Small scale stochastic dynamics for particle image velocimetry applications.

Moeller, Todd K., Conley-Morse chain maps.

Norine, Serguei, Matching structure and Pfaffian orientations of graphs.

Wollen, Paul, Extremal functions for graph linkages and rooted minors.

University of Georgia (10)

MATHEMATICS

Baramidze, Victoria, Spherical splines for scattered data fitting.

Chang, Sungkon, On the arithmetic of twists of super elliptic curves.

Nam, Kyunglim, Tight wavelet frame construction and its application for image processing.

Pemy, Moustapha, Regime switching market models and applications.

STATISTICS

Bandyopadhyay, Dipankar, Novel non-parametric methods for event time data.

Habtzghi, Desale, Maximum likelihood based estimation of hazard function under shape restrictions and related statistical inference.

Shen, Jing, Robust estimation and inference in finite mixtures of generalized linear models.

Woo, Mi-Ja, Robust estimation in mixture models and small area estimation using cross-sectional time series models.

Zhao, Ying, Some stochastic shapes applications in time series and Markov chains.

Zheng, Haitao, Inference for time series models for count data.

HAWAII

University of Hawaii (1)

MATHEMATICS

Kalk, Jonathan, Sparse ordinary graphs.

IDAHO

Idaho State University (2)

MATHEMATICS

Earl, Katheryne, Remediation in American colleges: Its history and future.

Velásquez, Maria Elena, Wavelets: Theory and applications.

University of Idaho (3)

MATHEMATICS

Guan, Yongtao, Algorithms and Monte Carlo methods in computational biology.

Ponciano Castellanos, José Miguel, On the use of stochastic population models in microbial ecology.

Sprano, Timothy, Prime ideals of the infinite product ring of p -adic integers.

ILLINOIS

Illinois Institute of Technology (1)

APPLIED MATHEMATICS

Bongolan-Walsh, Vena Pearl, Nonautonomous and stochastic dynamics of oceanic gravity currents.

Illinois State University (2)

MATHEMATICS

Brown, Susan, The trigonometric connection: Students' understanding of sine and cosine.

Nenduradu, Rajeev, Characterizing pre-service teachers' use of representations in solving algebraic problems involving exponential relationships.

Northern Illinois University (3)

MATHEMATICAL SCIENCES

Apel, Geoffrey, Quintuple product identities.

Kong, Ling Ju, Non-linear boundary problems of ordinary differential equations.

Peng, Wujian, On the Krylov subspace solutions of matrix equations in control theory.

Northwestern University (11)

ENGINEERING SCIENCE AND APPLIED MATHEMATICS

Catlla, Anne, Pattern formation in impulsively forced Faraday waves.

Singh, Gogi, Mathematical modeling of self-organized nano-scale porous structures in anodic aluminum oxide.

Spiller, Elaine, Computational studies of rate events in optical transmission systems.

MATHEMATICS

Carter, Andrea, The Brauer group of Del Pezzo surfaces.

Heller, Jeremiah, Semi-topological cobordism for complex varieties.

Joukhovitski, Valentina, Topological modular forms and p^n -level structures at the prime p .

McCarthy, Anne, Rigidity of solvable group actions.

Pearson, Paul, The $mod 2$ homology of the connective spectrum of topological modular forms.

Salomone, Matthew, Quasi-periodic continuation along a continuous symmetry.

Youngren, Drew, Microlocal analysis of the anharmonic oscillator with large potential.

Zhang, Hua, Symplectic partially hyperbolic diffeomorphisms.

Southern Illinois University, Carbondale (1)

MATHEMATICS

Huang, Zhongming, Multinomial change point problems.

University of Chicago (24)

MATHEMATICS

Athreya, Jayadev, Quantitative recurrence of Teichmüller geodesic flow.

Copeland, David, A definition of the global Weyl group and a simple example.

D'Costa, Sameer, Trace of Frobenius for an ordinary elliptic wave.

Gurshi, Michael, An algebraic theory of tricategories.

Haynes, Richard, Results concerning the G -signature.

Iyer, Gautam, A stochastic Lagrangian formulation of the incompressible Navier-Stokes and related transport equations.

Johns, Joseph, Complexification of Morse functions and the directed Fukaya category.

Khare, Apoorva, Category G over the symplectic oscillator algebra.

Melnick, Karin, Compact Lorentz manifolds with local symmetry.

Mulnix, James, L^p estimates for parabolic oblique derivative problems.

Park, Jinhyun, Infinitesimal and cyclic aspects of motives.

Pettet, Alexandra, Cohomology of some subgroups of the automorphism group of the free group.

Ramadoss, Ajay, On the nonexistence of certain morphisms from Grassmannian to Grassmannian in characteristic O .

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MISSOURI

University of Missouri-Columbia (13)

MATHEMATICS

- Arutyunyan, Georgiy*, Combinatorial methods in harmonic analysis.
- Brown, James (Ryan)*, Complex and almost-complex structures on six dimensional manifolds.
- Diestel, Geoffrey*, Bilinear Littlewood-Paley theory and square function estimates.
- Jakab, Tunde*, Parabolic layer potentials and initial boundary value problems in Lipschitz cylinders with data in Besov spaces.
- Kucherenko, Tamara*, The absolute functional calculus for sectorial operators.
- Nguyen, Phuc*, Potential theory and harmonic analysis methods for quasilinear and Hessian equations.
- Sansing, Christopher*, Directional time-frequency analysis with applications.
- Yaskin, Vladyslav*, Applications of the Fourier transform to convex geometry.
- Yaskina, Maryna*, Topics in functional analysis and convex geometry.

STATISTICS

- Duty, Paul*, Improving the delta method for nonlinear functions.
- Park, Do Hwan*, Semiparametric and nonparametric methods for the analysis of longitudinal data.
- Sheng, Junfeng*, Diagnosis, selection, and multiple comparisons in the mixed modeling framework.
- Zhang, Song*, Bayesian hierarchical models and applications in cancer analysis.

University of Missouri-Rolla (2)

MATHEMATICS AND STATISTICS

- Rueck, Florian*, Bootstrap prediction intervals for multivariate time series.
- Ye, Yi (Derek)*, Statistical methods for the analysis of aerosol concentration data.

University of Missouri-St. Louis (2)

MATHEMATICS AND COMPUTER SCIENCE

- Ndao, Rokhaya*, Subdivision schemes for the design and rendering of 3D surfaces.
- Wurdack, Karen*, Hierarchical Kalman filtering.

Washington University (9)

ELECTRICAL AND SYSTEMS ENGINEERING

- Day, Theodore*, Applications of operations research to medical informatics and systems.
- Du, Xiuxia*, Detection of visual input and control mechanism in the visual cortex of turtles.
- Fischer, Brian*, A model of the computations leading to a representation of auditory space in the midbrain of the barn owl.
- Huang, Yong*, A decomposition and selection method for solving VRPSTW and DEA applications.
- Joseph, Jenner*, Bio-inspired encoding of images with spatiotemporal cortical activity waves and information recovery via dynamical modeling.

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- Lim, Wang Q.*, Wavelets with composite dilation and their applications.
- Opela, David*, Extensions and dilations of N -tuples of Hilbert space operators.
- Traub, Cynthia*, Topological effects related to minimum weight Steiner triangulations.
- Zeng, Zemin*, Set theoretic complete intersections and torsion cycles.

MONTANA

Montana State University-Bozeman (1)

MATHEMATICAL SCIENCES

- Hasenbank, Jon*, The effects of a framework for procedural understanding on college algebra students' procedural skill and understanding.

University of Montana - Missoula (2)

MATHEMATICAL SCIENCES

- Luttman, Aaron*, A three-dimensional variational approach to video segmentation.
- Whitmire, Jane*, The use of computer manipulatives in building integrated concrete understandings in secondary mathematics education.

NEBRASKA

University of Nebraska-Lincoln (4)

MATHEMATICS

Bartley, Katherine, Decoding algorithms for algebraic geometric codes over rings.

James, Justin, Some decision problems in group theory.

Langdon, Jennifer, Asymptotic behavior of linear dynamic equations on a time scale.

STATISTICS

Hooks, Tisha, Design and analysis of experiments in the presence of spatial correlation.

NEW HAMPSHIRE

Dartmouth College (1)

MATHEMATICS

Stemkoski, Lee, The Selberg trace formula for cocompact arithmetic groups in $SL(3, R)$.

University of New Hampshire (1)

MATHEMATICS AND STATISTICS

Montiel, Mariana, The process of integration and the concept of integral: How does success with applications and comprehension of underlying notions such as accumulation relate to students' mathematical ability.

NEW JERSEY

New Jersey Institute of Technology (3)

MATHEMATICAL SCIENCES

Lahiri, Soumi, Linear and log-linear models based on generalized inverse sampling scheme.

Tseluiko, Dimitri, Mathematical problems arising in interfacial electrohydrodynamics.

Zorych, Ivan, A Bayesian approach to wireless location problems.

Princeton University (5)

MATHEMATICS

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Ciperiani, Mirela, Solvable points on genus one curves.

Jorati, Hadi, Singular kernels adapted to curved flags.

Silberman, Lior, Arithmetic quantum chaos on locally symmetric spaces.

Wu, Ming-Yih, Stochastic Boussinesq equations and the infinite dimensional Malliavin calculus.

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Enciso, Germán, Monotone input/output systems and biological applications.

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Holowinsky, Roman, Shifted convolution sums and quantum unique ergodicity.

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Mikula, Richard, The Weingarten curvature problem: Prescribing Gauss-Kronecker curvature on group invariant convex hypersurfaces.

Nacin, David, Structural properties of algebras arising from pseudoroots.

Radomirovic, Sasa, Cusp forms over function fields and modular symbols.

Vatter, Vincent, The enumeration and structure of permutation classes.

Weininger, Nicholas, Correlation properties of discrete probability models.

Stevens Institute of Technology (3)

MATHEMATICAL SCIENCES

Cho, Hong-Ray, An introduction to counter groups.

Rekeda, Ludmyla, Statistical tests for stochastic dominance.

Von Dohlen, Paul, Novel approaches to particle-tracking simulations for time dependent velocity fields.

NEW MEXICO

New Mexico State University, Las Cruces (5)

MATHEMATICAL SCIENCES

Li, Baokun, Estimation on random set data and skew normal distribution.

Moyo, Lloyd, Codomains for the Cauchy-Riemann operator, Laplace operator and the product Laplace operator in the context of the S -convolution.

Obiedat, Hamed, Topological characterizations of the Schwartz space and the Beurling-Bjorck space.

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University of New Mexico (3)

MATHEMATICS AND STATISTICS

Marquez-Lago, Tatiana, Numerical estimation of progesterone transcription in the EGFR pathway.

Vlaicu, Irina, Weak turbulence theory for coasting beams with Schottky noise.

Xu, Ling, Bayesian methods for computing populations with multimodal distributions.

NEW YORK

City University of New York, Graduate Center (8)

MATHEMATICS

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Bocchi, Timothy, Prescribed mean curvature graphs in hyperbolic space.

Gouraije, Rony, Z -classes in central simple algebras.

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Clarkson University (1)

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Vasileva, Irina, Force inversion in floating plate dynamics.

Columbia University (21)

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Chen, Mei-Yin, Two stage stepwise procedures for dose finding in clinical trials with a biological endpoint.

Tian, Hong, Variance estimation of the cross validation estimator of the generalization error.

Yang, Yuqing, Some statistical methods for diagnostic accuracy with correlated data.

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Freiermuth, Hans Georg, On partial compactifications of the space of framed vector bundles on the projective plane.

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Lamberson, Peter John, Splice type singularities and iterated branched cyclic covers.

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Martens, Johan, Instanton counting through non-Abelian localization.
Ording, Philip, On knot Floer homology of satellite $(1, 1)$ knots.
Phan, Jeffrey, Order properties of monomial ideals and their free resolutions.
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Kardaras, Konstantinos, The numeraire portfolio and arbitrage in semimartingale models of financial markets.
Kerman, Jouni, An integrated framework for Bayesian graphical modeling, inference, and prediction.
Liang, Yu, Joint modeling and analysis of longitudinal observations and observation times.
Pal, Soumik, On capital requirements and optimal strategies to achieve acceptability.
Shnaidman, Michael, New approaches to modelling and analyzing recurrent event time data.
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Cornell University (25)

CENTER FOR APPLIED MATHEMATICS

Blais, Marcel, Liquidity and modelling the stochastic supply curve for a stock price.
Boyle, Katharyn, Risk minimization hedging methods using options.
Carey, Varis, A posteriori error estimation for the finite element method via local averaging.
Franco, Maria Mercedes, Existence and regularity of minimizers for a one-dimensional elasticity problem without convexity.
Goel, Sharad, Estimating mixing times: Techniques and applications.
Martin, Carla, Higher-order Kronecker properties and tensor decompositions.
Rodriguez, Jesus, Forward models and options in electricity markets.
Small, Tara, Modeling tradeoffs in intermittent connectivity networks.

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Belk, Maria, Applications of stress theory: Realizing graphs and Kneser-Poulsen.

Berestycki, Nathanaël, Phase transitions for the distance of random walks and applications to genome rearrangement.
Gibson, Lee, The number of sites visited by a random walk on an infinite graph.
Haiduc, Radu, Horseshoes in the forced van der Pol equation.
Hamblen, Spencer, Lifting n -dimensional Galois representations.
Hardin, Christopher, The Horn theory of relational Kleene algebra.
Kemp, Todd, Hypercontractivity in non-commutative holomorphic spaces.
Mermin, Jeffrey, Lexicographic ideals.
Montalban, Antonio, Beyond the arithmetic.
Morris, Steve, Four- and six-dimensional nilmanifolds and symplectic forms.
Roeder, Roland, Topology for the basins of attraction of Newton's method in two complex variables.
Sayit, Hasanjan, Realistic no arbitrage conditions.
Slavnov, Serguei, Semantic investigations of linear logic.
Thacker, John, Property of Brownian and random walk loop soups.
Trujillo Ferreras, José Antonio, The random walk loop soup and the expected area of the Brownian loop in the plane.
Woodroffe, Russ, Shelling the coset poset.
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Courant Institute, New York University (11)

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Azer, Karim, A one-dimensional model of blood flow in arteries with friction, convection and unsteady Taylor diffusion based on the Womersley velocity principle.
Griffith, Boyce, Simulating the blood-muscle-valve mechanics of the heart by an adaptive and parallel version of the immersed boundary method.
Isaacson, Samuel, Stochastic reaction-diffusion methods for modeling gene expression and spatially distributed chemical kinetics.
Lisi, Samuel, Applications of symplectic geometry to Hamiltonian systems.
Liu, Kai Ju, A trainable graph combination scheme for belief propagation.
Neylon, Tyler, Sparse solutions for linear prediction problems.
Raj, Arjun, Stochastic processes in cell biology.
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Vladimirski, Boris, Modeling and analysis of spontaneous electrical episodic activity in the developing nervous system by means of a heterogeneous excitatory network of spiking neurons with slow synaptic depression and reduced mean-field models.
Walker, Ryan, A two-dimensional coupled model for ice shelf-ocean interaction.

Rensselaer Polytechnic Institute (1)

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Banks, Jeffrey, A high resolution Godunov method for high-speed multi-material flows.
Castronovo, Emilio, A comparative study of Lagrangian stochastic models for oceanic transport.
Dediu, Sava, Recovering inhomogeneities in a waveguide using eigensystem decomposition.
Farwell, Kristin, Gomory cutting planes using exact arithmetic.
Glackin, James, Solving bi-level linear programs using multiple objective linear programming.
Koch, Gretchen, Simulating the min system in *Escherichia coli*: Two models of oscillating polymer chains.
Maserumule, Rebecca, On the linear stability analysis of the wetting front in the Vandose zone.
Pokorni, Boris, On the dynamics and intermittency in the numerical model of gravity surface water waves.
Roe-Dale, Rachel, Quantitative models in cancer chemotherapy.
Xiang, Zhi, Multiple-response latent analysis (MLA).
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State University of New York, Albany (1)

MATHEMATICS AND STATISTICS

McCollum, Joseph, Random walks on the dihedral group and abelian groups.

State University of New York, Binghamton (4)

MATHEMATICS AND SCIENCE

Florez, Rigoberto, Four studies in the geometry of biased graphs.
Kong, Fanhui, Asymptotic properties of Buckley-James estimator.
Salazar-Diaz, Olga, Thompson's group V from a dynamical viewpoint.
Wang, Yishi, Some new tests for normality.

State University of New York, Buffalo (2)

MATHEMATICS

Cheon, Younghan, Some enumeration problems for cryptographic Boolean functions.

Mohammed-Awel, Jemal Said, Deterministic and stochastic models of development of resistance to genetically modified pesticidal crops.

State University of New York, Stony Brook (32)

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Ahn, Kwangmi, Quantifying the percent increase in minimum sample size of linear trend tests resulting from SNP genotyping errors in genetic association studies.

Baek, Inyoung, Optimal designs for potential missing trials in multiple-objective dose response studies.

Chung, Sohae, Bone image analysis: Quantifying topological change in bone under uniform erosion.

Duan, Tao, A power study of a two sample likelihood ratio test in the presence of mixtures.

Dutta, Srabasti, Supernovae and hydrodynamic instabilities.

Fan-Orzechowski, Xiaofei, Applications of Lovász's theta and Lagrangian functions to certain deterministic and stochastic optimization problems.

Genethliou, Dora, Statistical approaches to electric load forecasting.

Han, Guowen, Analysis of multiscale molecular dynamics algorithms for simulating biomolecules.

Heller, Jason, Automatic recognition of harmonic bird sounds.

John, Elizabeth, An implementation of warm-start strategies in interior-point methods for linear programming.

Lee, Yoonha, Stochastic error analysis of multiscale flow simulations: Two-phase oil reservoir problem.

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Lu, Tianshi, Direct numerical simulation of bubbly flow and interfacial dynamics of phase transition.

Prodanovic, Masa, Fluid displacement in rock cores: A study based on three-dimensional X-ray microtomography images.

Sung, Heejong, Power calculation for linkage analysis of a disease related trait.

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Ye, Qing, Survival analysis estimation and testing assuming a two component exponential mixture.

Yoon, Choongseok, Representation of generally-mixed multivariate aerosol by the quadrature method of moments.

Yoon, Seungtae, Bayesian factor screening.

Zhao, Ming, Error analysis in numerical solutions of various shock physics problems.

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Cabrera Ocanas, Carlos, Towards classification of laminations associated to quadratic polynomials.

Core Bianchi, Susana, Analogues of the usual pseudodifferential calculus on the Heisenberg group.

Hooper, W. Patrick, On the stability of periodic billiard paths in triangles.

Hu, Wenchuan, Algebraic cycles and Lawson homology.

Lynberg, Karyn, A theorem on the boundary behavior of a uniformly convergent of conformal maps of the unit disk.

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Rasdeaconu, Rares, On the topology and differential geometry of Kaehler threefolds.

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Teh, Jyh-Haur, A homology and cohomology theory for real projective varieties.

Van Coevering, Craig, Toric surfaces and Sasakian-Einstein 5-manifolds.

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Syracuse University (2)

MATHEMATICS

Gao, Yunchuan, Multi-category support vector machines.

Gogus, Nihat, Continuity of plurisubharmonic and Perron-Bremermann envelopes.

University of Rochester (2)

MATHEMATICS

Chen, Rui, Heat equation with white or fractional noise potentials.

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NORTH CAROLINA

Duke University (10)

INSTITUTE OF STATISTICS AND DECISION SCIENCE

Carvalho, Carlos, Structure and sparsity in high-dimensional multivariate analysis.

Duan, Jun (Jason), Spatio-temporal modeling using nonparametric and stochastic differential equation approaches.

Hans, Christopher, Regression model search and uncertainty with many variables.

Kohnen, Christine, Using multiply imputed, synthetic data to facilitate data sharing.

Liao, Ming, Bayesian models and machine learning with gene expression and analysis applications.

Tu, Chong, Bayesian nonparametric modeling using Levy process priors with applications for function estimation, time series modeling and spatio-temporal modeling.

Xia, Gangqiang, Large sample size issues in spatial statistics.

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Anderson, David, Stochastic perturbations of biochemical reaction systems.

Deering, Ryan, Fine scale analysis of speech using empirical mode decomposition: Insight and applications.

Laurent, Thomas, New phenomena in non-local partial differential equations.

North Carolina State University (29)

MATHEMATICS

Adams, Brian, Non-parametric parameter estimation and clinical data fitting with a model of HIV infection.

Cabbage, Brian, The Stone-Čech compactification of the plane.

Cicco, Tracey, Algorithms for computing restricted root systems and Weyl groups.

Gao, Jining, The algebraic structure of BRST operators and their applications.

Glotov, Petr, Time reversal of electromagnetic waves in randomly layered media.

Hood, Jeffrey, Molecular-based models for viscoelasticity of polymers.

Ingram, Frank, III, On the wreath product of Schur functions.

Lasater, Matthew, Numerical methods for the Wigner-Poisson equations.

May, John, Approximate factorization of polynomials in many variables and other problems in approximate algebra via singular value decomposition methods.

Ray, Robert, Quantum symmetric spaces and quantum symplectic invariants.

Schugart, Richard, Mathematical models and numerical methods for analysis of mechanical and chemical loading in articular cartilage.

Taylor, Padraic, On the solvability of nonlinear discrete multipoint boundary value problems.

Yokley, Karen, Physiologically based model development and parameter estimation: Benzene dosimetry in humans and respiratory irritation response in rodents.

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Gao, Guozhi, Semiparametric estimators for the regression coefficients in the linear transformation competing risks models with missing cause of failure.

- Goyal, Lovely*, Statistical inference for non-linear mixed effects models involving ordinary differential equations.
- Guo, Xiang*, Statistical analysis in two stage randomization designs in clinical trials.
- Han, Sanggohn*, Inference regarding multiple structural changes in linear models estimated via two stage least squares.
- Heo, Tae-Young*, Spatial modeling for capturing the effects of point sources.
- Hepler, Amanda*, Improving forensic identification using Bayesian networks and relatedness estimation: Allowing for population substructure.
- Jiang, Honghua*, Age-dependent tag return models for estimating fishing mortality, natural mortality and selectivity.
- Kang, Changku*, Regression via clustering using Dirichlet mixtures.
- Lee, Hyeyoung*, Reparametrized dynamic space-time models and spatial model selection.
- Liu, Feng*, Elliptical copulate with dynamic conditional correlation.
- Park, Jungwook*, Statistical inference for correlated data based on censored observations.
- Park, Mansik*, Symmetry and separability in spatial-temporal processes.
- Song, Hae-Ryoung*, Associations between Gaussian Markov random fields and Gaussian geostatistical models with an application to model the impact of air pollution on human health.
- Wang, Qiong*, Robust estimation via measurement error modeling.
- Webster, Raymond*, Spatial modeling of detection and abundance from count surveys of animal populations.

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BIOSTATISTICS

- Bigelow, Jamie*, Semiparametric Bayesian methods for hierarchical functional data.
- Chen, Qingxia*, Theory and inference for parametric and semiparametric methods in missing data problems.
- Chi, Yueh Yun*, Bayesian methods for longitudinal and survival data with application to clinical trials and genomics.
- Diao, Guoqing*, Semiparametric models for mapping quantitative trait loci in experimental design and human pedigrees.
- Kistner, Emily*, A method for using nuclear families to test linkage and association, maternal effects, and parent-of-origin effects between marker and quantitative trait.
- Pennell, Michael*, Bayesian semiparametric methods for longitudinal, multivariate and survival data.
- Sterrett, Andrew*, Hidden Markov models and sequential imputation to infer the location of tumor loci.

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- Bailey, Sarah E.*, Dynamical properties of some non-stationary non-simple Bratteli-Vershik systems.
- Boysal, Arzu*, Picard group of moduli spaces of semistable principal G -bundles over algebraic curves.
- Gamber, Emily Brown*, A topological classification of D -dimensional cellular automata.
- Zheng, Xiaoyu*, The effective properties of nematic polymer nano-composites.

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- Chamú Morales, Francisco*, Estimation of max-stable processes using Monte Carlo methods with applications to financial risk assessment.
- Chen, Feng*, Admission control and routing in multi-priority systems.
- Ghosh, Arka*, Controlled stochastic networks in heavy traffic.
- Huang, Tao*, Dynamic revenue management of flexible capacity.
- Huang, Wei*, Managing warranty services pricing inventory and outsourcing.
- Kolenikov, Stanislav*, A modification of the EM algorithm with applications to spatio-temporal modeling.
- Pacheco-Soto, Ivan*, Cyclical time series with squeezed time.
- Ross, Kevin*, Convergent numerical schemes for stochastic singular control problems with state constraints.
- Wu, Yichao*, Probability approximation with application in computational finance and computational biology.

University of North Carolina at Charlotte (2)

MATHEMATICS AND STATISTICS

- Taylor, John*, Arithmetic properties of pullback domains.
- Techanie, Geta*, Images of two to one continuous maps.

OHIO

Air Force Institute of Technology (2)

MATHEMATICS AND STATISTICS

- Schubert, Christine*, Quantifying correlation and its effects on system performance in classifier fusion.
- Thorsen, Steven*, The application of category theory and analysis of receiver operating characteristics to information fusion.

Bowling Green State University (6)

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- Dunlap, Jonathan*, Uniqueness of Curtis-Phan-Tits amalgams.

- Jagannathan, Keshav*, Statistical inference and goodness-of-fit tests for skewed double exponential models.
- Knox, Michelle*, Algebraic and lattice theoretic properties of density continuous functions.
- Marin, Juan*, Dense sets of common cyclic vectors for Jordan operators.
- Melnykov, Igor*, Simultaneous inference in the analysis of gene expression data.
- Roberts, Adam*, A Phan-type theorem for orthogonal groups.

Case Western Reserve University (1)

MATHEMATICS

- Feng, Qingfu*, On pre-image topological pressures.

Ohio State University, Columbus (27)

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- Chan, Ping-Shun*, Invariant representations of $GSp(2)$.
- Fu, Yun*, Linear stability of an interface between two incompressible fluids.
- Guler, Dincer*, Chern forms of positive vector bundles.
- Kane, Abdoul*, Activity propagation in two-dimensional neuroray networks.
- Kennell, Lauren*, Boundary behavior of the Bergman kernel on locally strongly pseudoconvex domains with respect to weighted Lebesgue measure.
- Lee, Seung Youn*, Reflected Rouse model.
- McKinley, Scott*, An existence result from the theory of the fluctuating hydrodynamics of polymers in dilute solution.
- Micu, Eliade*, Graph minors and Hadwiger's conjecture.
- Pitale, Ameya*, Liftings from \widetilde{SL}_2 to $GSpin(1,4)$.
- Salminen, Adam*, On the sources of simple modules in nilpotent blocks.
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- Wolfe, Adam*, S -sparse Steiner triple systems.
- Xia, Honggang*, On zeros of cubic L -functions.

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- Alexandridis, Roxana*, Minimum disparity inference for discrete ranked set sampling data.
- Dingus, Cheryl*, Designs and methods for the identification of active location and dispersion effects.
- Du, Juan*, Judgment post-stratification for designed experiments.
- Frey, Jesse*, Inference procedures based on order statistics.
- Huang, Yifan*, Partition testing and maintenance gene solution.

Kosler, Joseph, Multiple comparison using multiply-imputed data under a two-way mixed effect repeat measure interaction model.

Li, Qianqiu, Bayesian inference on hepatotoxicity.

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Ling, Xiang, Adaptive design in dose-response studies.

Liu, Sijin, Computational developments of ψ -learning.

Marin, Ofelia, Designing computer experiments to estimate integrated response functions.

Papachristou, Charalampos, Constructing confidence regions for the locations of putative trait loci using data from affected sib-pair designs.

Park, Changyi, Generalized error rates for margin-based classifiers.

Xu, Haiyan, Using the partitioning principle to control generalized familywise error rate.

Ohio University, Athens (1)

MATHEMATICS

Lee, Haewon, Nonlinear evolution equations and optimization problems in Banach spaces.

University of Cincinnati (1)

MATHEMATICAL SCIENCES

Diene, Adama, Structure of permutation polynomials.

University of Toledo (4)

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Hettiarachchi, Chamath, Representations for six dimensional Lie algebras with a codimension one nilradical.

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Wang, Shuwen, Statistical inferences for ROC curves under density ratio models.

Zhang, Shiju, Statistical inferences under a semiparametric finite mixture model.

OKLAHOMA

Oklahoma State University, Stillwater (1)

MATHEMATICS

Zhu, Xinyun, Finite representations of a quiver arising from string theory.

University of Oklahoma (2)

MATHEMATICS

Stone, Andrea, A psychometric analysis of the statistics concept inventory.

Sulman, Robert, Affine group actions on Euclidean space.

OREGON

Oregon State University (3)

STATISTICS

Cooper, Cynthia, Developing a basis for characterizing precision of estimates produced from non-probability samples on continuous domains.

Monleon, Vicente, Regression calibration and maximum likelihood inference for measurement error.

Tsai, Guei-Feng, Semiparametric and mixed models for longitudinal data.

University of Oregon (5)

MATHEMATICS

Amende, Bonnie, G -irreducible subgroups of type A .

Dunn, Corey, Curvature homogeneous pseudo-Riemannian manifolds.

Montgomery, Martin, Global dimension of certain binomial rings.

Ruff, Oliver, Completely splittable representations of symmetric groups and affine Hecke algebras.

Wakefield, Max, On the derivation module and apolar algebra of a hyperplane arrangement.

PENNSYLVANIA

Bryn Mawr College (2)

MATHEMATICS

Campbell Hetrick, Beth, Continuous dependence results for inhomogeneous ill-posed problems.

Jordan, Jill, Generating family invariants for Legendrian links of unknots.

Carnegie Mellon University (16)

MATHEMATICAL SCIENCE

Andreev, Konstantin, Approximation algorithms for network design and graph partitioning problems.

Burgin, Kelley, Hamiltonian cycles in random graphs.

D'Silva, Stephen, Time consistent and currency invariant risk adjusted valuation.

Flaxman, Abraham, Average-case analysis for combinatorial problems.

Hilden, Sean, Allocation of risk capital via intra-firm trading.

Karolik, Anatoli, Modeling correlated credit rating migrations.

Kazanci, Caner, Statistical analysis and reverse engineering of large biochemical networks.

Kravitz, David, Satisfiability and the giant component in online variants of the classical random models.

Speight, Adam, Multigrid methods for calibrating financial models.

Vera, Juan, Variations on the preferential attachment graph.

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Buzoianu, Manuela, Bayesian decision making with application to a clinical trial.

Mitra, Sinjini, Efficient biometric authentication based on statistical models.

Myers, Kary, Developing models to reveal brain activation in massive neuroimaging datasets.

Rambharat, Bhojnarine, Valuation methods for American derivatives in a stochastic volatility framework.

Serban, Nicoleta, Analysis of multiple peaks and multiple curves with application to molecular biology.

Wang, Liuxia, Model based variable clustering with application to neurophysiology.

Lehigh University (4)

MATHEMATICS

Heinold, Brian, Sum list coloring and choosability.

Muraleetharan, Murugiah, Evolution of curves by curvature flow.

Ojeda Echevarria, Francisco Miguel, Orthonormal expansions for Gaussian processes.

Shank, Nathan, Limit theorems for random Euclidean graphs.

Pennsylvania State University, University Park (16)

MATHEMATICS

Chen, Long, Robust and accurate algorithms for solving anisotropic singularities.

Elkin, Arsen, Hyperelliptic Jacobians with real multiplication.

Emelianenko, Maria, Multilevel and adaptive methods for some non-linear optimization problems.

Fisher, Travis, Some results in hyperbolic dynamics.

Genin, Daniel, Regular and chaotic dynamics of outer billiards.

Kim, Hyun Jeong, Coarse geometry of warped cones.

Lloyd, Kimberly, Two approaches to measures for algebraic independence.

Luu, Viet-Trung, A large-scale approach to K -homology.

Matsnev, Dmitry, The Baum-Connes conjecture and group actions on affine buildings.

Mieczkowski, David, The cohomological equation and representation theory.

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Novichkov, Gleb, Lie algebroids and BV-algebras.

Shantanu, Dave, Equivariant non-commutative residue and an equivariant Weyl's theorem.

Tyurina, Yulia, Skew embeddings and immersions of manifolds into Euclidean spaces in codimension two.

Van Erp, Johannes H. A. M., The Atiyah-Singer index formula for subelliptic operators on contact manifolds.

Wang, Xiaoqiang, Phase field models and simulations of vesicle bio-membranes.

Temple University (7)

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Brown University (20)

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University of Rhode Island (1)

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SOUTH CAROLINA

Clemson University (5)

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Medical University of South Carolina (3)

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University of South Carolina (4)

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TENNESSEE

University of Memphis (5)

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University of Tennessee, Knoxville (4)

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University of Houston (7)

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University of North Texas (4)

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UTAH

Brigham Young University (1)

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University of Utah (4)

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VIRGINIA

Old Dominion University (2)

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University of Virginia (5)

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Conrad, Emery, Bifurcation analysis and qualitative optimization of models of biochemical regulatory networks with applications to circadian rhythms.

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University of Washington (21)

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Washington State University (4)

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Loveless, Andrew, Extensions in the theory of Lucas and Lehmer pseudoprimes.

Zhou, HuaJun, Multivariate compound point processes with drifts.

WEST VIRGINIA

West Virginia University (5)

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Ou, Yongbin, Maximum size t-cross-intersecting families with degree conditions.

Shao, Yehong, Claw-free graphs and line graphs.

Simon Romero, Likin, Hyperspace graph of connected subgraphs.

Xue, Fei, Asymptotic solutions of almost diagonal differential and difference equations.

WISCONSIN

Marquette University (1)

MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

Kirova Jordanova, Roumyana, Markov chain decomposition and characterization of hypertensive blood pressure with application to linkage analysis.

Medical College of Wisconsin (2)

BIostatISTICS

Lu, Leiyan, Explained variation in survival analysis and hypothesis testing for current leukemia-free survival.

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Carracino, Christine, Estimates for the Szego kernel on a non-pseudoconvex domain.

Charalambides, Marios, Stable spectral methods with no spurious eigenvalues.

Davis, Joshua, Degenerate relative Gromov-Witten invariants and symplectic sums.

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Jenkins, Michael, Equivalences of holomorphic mappings in one and several complex variables.

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Swisher, Holly, Asymptotics and congruence properties for Stanley's partition function, and a note on a theorem of Koike.

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Wiesner, Emilie, Translation functors and the Shapovalov determinant.

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WYOMING

University of Wyoming (2)

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