Doctoral Degrees Conferred

2002–2003

ALABAMA

Auburn University (7)

DISCRETE AND STATISTICAL SCIENCES

Clark, Sally Ann, Edge-color balance with respect to a partition of the vertices of $K$.

Holliday, Sarah Hale-Heuss, The Ship Captain’s Problem.

Liatti, Mark Lloyd, Partitioning the edges of $K_{c,d}$ into copies of $K_{a,b}$.

MATHEMATICS

Charina, Maria, A MHD free boundary value problem.

Dolberry, Charles, A study of Eaton triples and reduced triples.

Popvassilev, Strashimir, Marczewski measurable sets, base-cover paracompactness and uniform base-cover paracompactness.

Tameru, Ana, A two-point boundary value problem for higher-order functional differential equations.

University of Alabama, Birmingham (1)

BIOSTATISTICS

Zheng, Shimin, Random regression for longitudinal data subject to left censoring the informative drop-outs using generalized multivariate theory.

University of Alabama, Tuscaloosa (7)

INFORMATION SYSTEMS, STATISTICS, AND MANAGEMENT SCIENCE

Carter, Christa, A Bayesian approach to control charting attribute data exhibiting process variability.

Thomas, Joseph, Interpretation of multivariate control chart systems.

Wanorie, Tekle, The effects of importation duty and currency exchange rate fluctuation on inventory control.

MATHEMATICS

Kim, Jaedeok, Rank preserving maps on CSL algebra.

Kim, Youngmi, Subnormal subgroups of finite rank.

Prevo, Raynetta, Entropies of families of fuzzy random variables—an introduction to an in-depth exploration of several classes of important examples.

Ul-Haq, Irfan, Certain covering property and its application on $BMO_\alpha^p$ spaces.

ARIZONA

Arizona State University (7)

MATHEMATICS

Al-rabtah, Adil, Algebraic interpretation and stability of enslaved finite difference schemes.

Bekmetjev, Airat, The threshold phenomenon in random pebbling configurations.

Jo, Tae-Chang, Localized solutions in physical systems.

Miller, Christian, Modeling and analysis of stoichiometric two-patch consumer-resource systems.

Mopecha, Jimmy Penn, A mathematical model for the dynamics of onchocerciasis with cross-protection.

Trahe, Markus, Attractors of 3-D fast rotating Navier-Stokes equations.

University of Arizona (8)

APPLIED MATHEMATICS

Erker, Joseph, Boundary-value problems in electrophoresis with applications to separations science.

Hacker, Wayne, An asymptotic theory for distributed receptivity in the presence of mean flow fields with nonzero pressure gradients.

McMillen, Tyler, Perversions and whips: Static and dynamic problems of elastic filaments.

Pineda-Fortin, Angel, Detection-theoretic evaluation in digital radiography and optical tomography.

Pond, Sergei, Modeling evolution of protein coding DNA sequence.

Schuster, William, Trailing edge noise produced by the scattering of turbulent boundary layer disturbances.

Walton, David Brian, Analysis of kinesin assay data.

University of Arizona, Tuscaloosa (1)

MATHEMATICS

Alshammari, Fahd, Jacobians of plane quintic curves of genus one.

ARKANSAS

University of Arkansas (1)

MATHEMATICAL SCIENCES

McLoud-Mann, Jennifer, On a certain family of determinantal-like ideals.

CALIFORNIA

California Institute of Technology (12)

APPLIED AND COMPUTATIONAL MATHEMATICS

Fetecau, Razvan, Variational methods for nonsmooth mechanics.

Greenberg, Andrei, Chebyshev spectral methods for singular moving boundary problems with application to finance.

Howard, Elizabeth, A front tracking method for modelling thermal growth.

Hyde, E. McKay, Fast high-order methods for scattering by inhomogeneous media.

Kastner, Jason, Modeling a hox gene network: Stochastic simulation with experimental perturbation.

Mauch, Sean, Efficient algorithms for solving static Hamilton-Jacobi equations.
CONTROL AND DYNAMICAL SYSTEMS
Lekien, Francois, Time-dependent dynamical systems and geophysical flows.
Milam, Mark, Real time optimum trajectory generation for constrained dynamical systems.
Vela, Patricio, Averaging and control of nonlinear systems.

MATHEMATICS
Dukes, Peter, Convex cone conditions on the structure of designs.
Mei, Yajun, Asymptotically optimal methods for sequential change-point detection.
Zlatos, Andrej, Sum rules and the Szegő condition for Jacobi matrices.

Claremont Graduate University (5)
MATHEMATICS
Escareno, Claudia Rangel, Modeling biological responses using gene expression profiling and linear dynamical statistical models.
Horick, Christopher, Statistical and structural analysis of the Earthman perimeter measure of tooth and implant damping capacity.
Kairouz, Khalil Antoun, Numerical and experimental investigations of a turbulent junction flow with upstream ribbed surface.
Luong, Barry, Performance and reliability models for the multimedia-broadband gateway.
Nguyen, Dan Manh, A unified automated approach to surface approximation via finite element and nonuniform rational B-spline methods.

Naval Postgraduate School (2)
APPLIED MATHEMATICS
Joolen, Vince van, Application of Higdon nonreflecting boundary conditions to shallow water models.
Wilmer, Archie, Analytic expression of the tripping loads for stiffened plates with bulb or bulb-flat flanges.

University of California, Berkeley (34)
BARNARD, Alexander, The singular theta correspondence, Lorentzian lattices, and Borcherds-Kac-Moody algebras.
BURNS, Michael, Subfactors, planar algebras, and rotations.
Caicedo, Andres, Simply definable well-orderings of the reals.
COATES, Tom, Riemann-Roch theorems in Gromov-Witten theory.
DAVIES, Mark, Split extensions and generalizations of injectivity.
DEVELIN, Mike, Topics in discrete geometry.
DROZD, Elena, Curves on a nonsingular quadric hypersurface in $P^4$: Existence and liaison theory.
EISENTRAEGER, Anne, Hilbert's tenth problem and arithmetic geometry.
ELLiot, Jesse, Witt-Burnside rings.
FRASER, William, Computer assisted topological analysis of go endgames.
GARCIA, Stephan, Conjugation, the backward shift, and Toeplitz kernels.
HARADA, Megumi, The symplectic geometry of the Gel'fand-Cetlin-Molev basis for representations of $Sp(2n, C)$.
HELM, David, Jacobians of Shimura curves and Jacquet-Langlands correspondences.
HIRSCHBERG, Ian, $C^*$-algebras and endomorphisms associated to systems of Hilbert modules.
INGERMAN, Eugene, Modelling the loss of information in optimal prediction.
KETAN, Amit, Formulas for resultants.
LENIVENBURG, Joshua, Accurate adaptive contour finding using C1 data.
LI, Hanfeng, Quantum Gromov-Hausdorff distance and continuity of Connes and Dubois-Violette's $O$-deformations.
MILLER, Andrew, Upsiloids with nonpositive curvature.
NEUMANN, Genevra, Valence of harmonic functions.
ONSHUUS, Alf, Thorn-forking in rosy theories.
SCORPAN, Alexandru, Finite subset spaces of graphs and surfaces.
THOMPSON, Howard, On toric log schemes.
UNVER, Sinan, Ramification on arithmetic surfaces and $P$-adic multi-zeta values.
WHITNEY, Wayne, Functorial Cohen rings.

STATISTICS
BANDYOPADHYAY, Antar, Max-type recursive distributional equations.
BERGER, Noam, Random walk on percolation clusters.
IBER, Feltscher Hank, Legal policy and community level crime prevention: The rise and fall of crime in the United States.
VON BING, Yap, Modeling molecular substitution.
YU, Zhuo, Causal inference in longitudinal studies.

University of California, Davis (7)
MATHEMATICS
ABBOTT, Justin, Low temperature results for the Heisenberg XXZ and XY models.
BARCHECHAT, Alexandre, Minimal triangulations of 3-manifolds.
DUGAW, Christopher, Dynamics of a soil-dwelling parasite and its insect host.
KIM, Dongseok, Graphical calculus on representations of quantum Lie algebras.
WALSH, Genevieve, Great circle links in the three-sphere.

STATISTICS
DURBIN, Blythe, Power transformations of data.
ZHONG, Xiaoyun, The additive genetic gamma frailty models for genetic linkage and association analysis.

University of California, Irvine (3)
MATHEMATICS
ISHIU, Tetsuya, Club guessing sequences and filters.
SIMON, Ezequias, On proper harmonic maps between strictly pseudoconvex domains with Kahler metrics and harmonic functions in metrics of Bergman type in the polydisc.
STRASSER-MCINTOSH, Jennifer, Stability of probabilistic dynamics.

University of California, Los Angeles (13)
MATHEMATICS
BETTER, Joel, Fixed points of equivalent homeomorphisms.
CHOI, Sunhi, The lower density conjecture for harmonic measure.
DONALD, John, A finite difference numerical simulation of the geodynamo.
JUNG, Paul, On invariant measures of the exclusion process and related processes.
NEZZAR, Suzanne, A multiscale image representation using hierarchical $(BV, L^2)$ decompositions.
OLIVER, Michael, An inquiry into the number of isomorphism classes of Boolean algebras and the Borel cardinality of certain Borel relations.
SANDBERG, Berta, Active contour segmentation of multichannel images.
SONG, Bing, Topics in variational PDE image segmentation inpainting and denoising.
WU, Li-Chau, Invariant distributions for critical nearest particle systems.
YANG, Zhiging, Constructing and classifying p-adic group actions.
YI, Peter, An algorithm for computing the Nielsen number of maps on the pants surface.


**University of California, Riverside (3)**

**Mathematics**

Grantcharov, Dimitar
- Weight modules of Lie superalgebras of type I.

Le, Thang
- Representations of infinite dimensional Lie algebras.

**Statistics**

Jampachaisri, Katechan
- An application of singular value decomposition in Bayesian analyses.

**University of California, San Diego (9)**

**Mathematics**

Briggs, Karen Sue
- Q-analogues and P, Q-analogues of rook numbers and hit numbers and their extensions.

Cooper, Joshua N.
- Quasirandom permutations.

Glickenstein, David A.
- Precompactness of the Ricci flow and a maximum principle on combinatorial Yamabe flow.

Loehr, Nicholas A.
- Multivariate analogues of Catalan numbers, parking functions, and their extensions.

Lu, Linyuan Lincoln
- Probabilistic methods in massive graphs and internet computing.

Rowell, Eric C.
- On tensor categories arising from quantum groups and BMW algebras at odd roots of unity.

Scully, Kevin J.
- Finite element approximation over multiple coordinate systems.

Steiner, Jean
- Green’s functions, spectral invariants, and a positive mass on spheres.

Whitley, Aubin Ruth Kathleen
- Skorokhod problems and semimartingale reflecting processes in an orthant.

**University of Southern California (5)**

**Mathematics**

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

Lai, Yingjie
- Branching processes and microsatellite evolution.

Li, Xiaoman
- Some statistical issues in genomics: Shotgun DNA sequence assembly and cDNA expression data.

Shamsa, Kaveh
- Biomechanics of a two dimensional model of human walking: Skeletal dynamics, musculomechanics, stability analysis.

Yaralov, Georgi
- Some problems in statistics of random processes arising in signal and image processing.

**University of Colorado, Boulder (3)**

**Mathematics**

Al-Ghamedi, Ateq
- Robust estimation and testing of location for symmetric stable distributions.

Lin, Jin-Mann
- Small area estimation.

McNally, Richard
- Statistical issues in individual and population bioequivalence.

Wang, Ying
- Modeling time series of count data.

**Applied Mathematics**

Perez, Cristina
- Simulating interaction between intraseasonal and interannual variability in the tropical Pacific with a coupled system of nonlinear ordinary differential equations.

Wright, Eric
- Modeling and analysis of aqueous chemical reactions in a diffusive environment.

Wright, Grady
- Radial basis function interpolation: Numerical and analytical developments.

**University of Colorado, Denver (6)**

**Mathematics**

Oliveira, Saulo
- Discontinuous enrichment methods for computational fluid dynamics.

Popa, Mirela
- Finite element solution of scattering in coupled fluid-solid systems.

Starrett, John
- Geometric control of low-dimensional chaotic systems.

Werner, Mark
- Identification of multivariate outliers in large data sets.

**Preventive Medicine and Biometrics**

Bell, Melanie
- The use of maximum pseudolikelihood in generalized linear models for the analysis of replicated spatial point processes.

Webb, Tim
- Exact test size and power for small samples using an internal pilot study.

**University of Northern Colorado (4)**

**Mathematical Sciences**

Gonske, Theresa
- Relationships among mathematics anxiety, beliefs about the nature of mathematics and learning mathematics, and students’ learning approaches in non-traditional aged students at the community college.

Junius, Pruma
- Cognitive engagement in integrating Euclidean and non-Euclidean geometry.

Mullenberger, Pamela
- The effects of a physics learning community on student attitude and performance.

Tsao, Yea Ling
- The number sense of pre-service elementary school teachers.
CONNECTICUT
University of Connecticut (5)

Mathematics
Lee, Sungwook, Space-like surfaces of constant mean curvature in de Sitter 3-space $S^3$.
Zhou, Peng, Stochastic modeling of post-retirement financial planning.

Statistics
Cicconetti, Gregory, Contributions to sequential analysis.

Wesleyan University (4)

Mathematics
Che, Zhongyuan, Some topics in graph homomorphisms.
Gillespie, James, The flat model structure on chain complexes of modules.
Lopez, Manuel, A classification of Serre classes of Artinian modules over a Noetherian ring.
Patel, Rishiparna, Model-theoretic results on generic and random relational structures.

Yale University (9)

Mathematics
Jackson, Steven Glenn, Standard monomial theory for reductive dual pairs.
Kassabov, Martin D., On the automorphism tower of free nilpotent groups.
Krutelevich, Sergei, Orbits of exceptional groups and Jordan systems.
Ni, Yilong, Sub-Riemannian geometry and analysis on the Heisenberg group.
Savage, Alistair Rowland John, Relations between algebraic and geometric constructions in representation theory.
Yoon, Youngsun, On the polynomial representations of Lie algebras.

Statistics
Gao, Kun, The K-means tree.
Lacey, Michelle, On convergence rates of the neighbor-joining method for phylogeny reconstruction.
Talih, Makram, Markov random fields on time-varying graphs, with an application on portfolio selection.

DISTRICT OF COLUMBIA

American University (5)
Mathematics and Statistics
Al-Shara, Nawar, Multivariate optimizing up-and-down design.
Evans, Brooke, Success in university required mathematics courses: An investigation of students with learning disabilities.
Hijazi, Rafiq, Analysis of compositional data using Dirichlet covariate models.
Kittichopipanit, Nomchit, On the distribution of fixed-response covariates in logistic regression using smoothing splines.
White, Janet, Secondary mathematics teachers' beliefs regarding their preparation to teach upper-level mathematics.

George Washington University (2)
Statistics
Freeman, Jade Lee, An analysis of Box-Cox transformed data.
Yuan, Jinyu, Statistical studies on genetic linkage analysis based on affected sibships.

Howard University (1)
Mathematics
Brooks, Sean, Mathematical modeling of solitons in optical fibers.

FLORIDA

Florida Atlantic University (1)
Mathematical Sciences
Abreu, Marien, Some connectivity conditions and their implications.

Florida Institute of Technology (7)
Mathematical Sciences
Al-Shehri, Radfeda, Readiness based decision making: A reactive decision making model for emergency supply of spare parts in a military scenario.
Alakil, Akil, Objective evaluation of non-profit organization: An analytical hierarchy process approach.
Fauls, Mark, Bayesian sampling schemes for estimating the reliability of a series system.
Nandhakwong, Teeranan, Optimizing web server load distribution with evolutionary computation.
Rosson, Hong-Tham, Stochastic reliability and queueing system with variable resources.

Florida State University (5)
Mathematics
Cruz-White, Irma, Topology of spiral waves in excitable media.
Homescu, Christian, Optimal control of continuous and discontinuous flows.

Statistics
Chen, Feiming, Bayesian modeling of multivariate spatial binary data with applications to the distribution of plant species.
Hall, Sandra, Generalized linear mixed effects models with applications to indoor air quality data.
Zhao, Yichuan, Empirical likelihood methods for comparison of survival functions.

University of Florida (1)
Statistics
Yang, James, A statistical method for identifying informative genes in microarrays.

University of Miami (1)
Mathematics
Beam, John, Expectations for coherent probabilities.

University of South Florida (1)
Mathematics
Appiou Nikiforou, Marina, Extensions of quandles and cocycle knot invariants.

GEORGIA

Emory University (1)
Mathematics and Computer Science
Pfender, Florian, Two problems in extremal graph theory.

Georgia Institute of Technology (7)
Mathematics
Agueh, Martin, Existence of solutions to degenerate parabolic equations via the Monge-Kantorovich theory.
Boczko, Erik, Polygonal approximation for flows.
Kelome, Djivede, Viscosity solutions of second order equations in a separable Hilbert space and applications to optimal control.
Khlabystova, Milena, Dynamical and statistical properties of Lorentz lattice gases.
Maroofi, Hamed, Applications of the Monge-Kantorovich theory.
Wang, Xuelei, Level set model of microstructure evolution in the chemical vapor infiltration process.

S. del Magno, Gianluigi, Dynamics of billiards.

University of Georgia (6)

Mathematics
Arcara, Daniele, Moduli spaces of vector bundles on curves.
Cofer, Tanya, A class of tight contact structures on \(S^2 \times 1\).
Hindman, Blake, Nilpotents of representation rings of finite p-groups.
Park, Heungki, Kinematic formulas of real subspaces in complex space forms of dimensions 2 and 3.
Tarrant, Wayne, The Groebner fan of an ideal with particular attention to the bivariate case.
Wethington, Janice, On computing the Thom-Boardman invariant for polynomial multiplication maps.

University of Illinois (14)

Mathematics
Carvalho, Joao, State estimation and finite element model updating for vibrating systems.
Shahyerdran, Jill, The geometry of weak 2-cocycles.

Northeastern Illinois University (2)

Mathematical Sciences
Carvalho, Joao, State estimation and finite element model updating for vibrating systems.
Shahyerdran, Jill, The geometry of weak 2-cocycles.

Northwestern University (12)

Engineering Sciences and Applied Mathematics
Beck, Jeffrey, Modelling solid flame microstructure.
Bhatt, Sandip, Pulse dynamics driven by four wave mixing in a ring cavity.
Kukuck, Scott, Diffusive-thermal instabilities in nonpremixed combustion.
Storlarska, Magdalena, Modeling crack growth by level sets.
Tongen, Anthony, A continuum model for multigrain thin film deposition.
Topaz, Chad, Pattern formation in two-frequency forced Faraday waves.
Zhang, Jie, The dynamics of a viscous drop with a moving contact line.

Mathematics
Davis, Daniel, The Lubin-Tate spectrum and its homotopy fixed point spectra.
Haesemeyer, Christian, Descent properties for homotopy k-theory.
Li, Tianhong, Euler equations and compensated compactness.
Parwani, Kamlesh, Braids for surface homeomorphisms.
Zhu, Haiyuan, Optimal augmented designs and fractional factorial designs.
de Fernex, Tommaso, Birational transformations of varieties.

University of Illinois, Urbana-Champaign (25)

Mathematics
Adan Bante, Edith, Products of characters and derived length of finite solvable groups.
Anderson, Mark Daniel, Stochastically stable states for perturbed repeated play of coordination games.
Bourd, Alexei, Method of averaging.
Choi, Youn-Sun, Delayed van-der Pol equation.
Davis, Craig, Conformally flat spaces with bounded curvature.
Dunphy, Brian, Uniform families: Parametricity in reflexive graphs.
Gouban, Nadar, Pointwise comparisons between ergodic averages and martingales.
Jung, Nara, Continuity properties and variational problems involving the determinant of the Hessian.
Kim, Dong-Il, Waring’s problem for linear polynomials and Laurent polynomials.
Kuhn, Thomas, Generalizations of the theorem of golod-Shafarevich applications.
Littmann, Friedrich, Entire functions majorants.
Mauer-Oats, Andrew, Goodwillie calculi.
McLaughlin, James, Aspects of continued fractions.
Musat, Magadalena, On the operator space UMD and noncommutative Martingale inequalities.
O’Bryant, Kevin, Sideon sets and Beatty sequences.
O’Bryant, Natella, A problem from Hamiltonian mechanics with time-periodic coefficients, small noise, and degeneracy.
Pelsmajer, Michael, Equitable list coloring, induced linear forests, and routing in rooted graphs.
Song, Minsu, Interface dynamics.
Suh, Jiyeon, A sharp weak type inequality for Martingale transforms and other UMD and noncommutative Martingale sequences.
Tyne, James Michael, Spectral energy methods for strongly and weakly dependent lattice data.

**INDIANA**

**Indiana University, Bloomington (12)**

**MATHEMATICS**

Aljouiee, Abdulla, On weak 2-cocycles and their algebras.
Bloch, Karl, Homology of branched cyclic covers of $S^2$ and $R^2$.
Emmons, Brad, Products of Hecke eigenforms.
Ewald, Brian, Numerical methods for stochastic differential equations in the geosciences.
Huang, Changbing, Control and analysis for PDEs in fluid mechanics and geoscience.
Humpherys, Jeffrey, Spectral energy methods and the stability of shock waves.
Hwang, Eunju, Nonparametric estimation for nonlinear autoregressive processes.
Lyng, Gregory, One dimensional stability of detonation waves.
Montero Zavara, Jose Alberto, Stable vortex solutions to the Ginszburg Landau energy.
Scherrer, Chad, Multivariate circular symmetry models.
Toth, Daniell, A random field driven model of term structure.

**STATISTICS**

Kim, Mi-Ok, Quantile regression in a varying coefficient model.
Kocherginsky, Maria, Extensions of Markov chain marginal bootstrap.

**Vukadinovic, Jesenko**, On the backwards behavior of the solutions of the 2D periodic Kelvin filtered Navier-Stokes equations.

**Indiana University-Purdue University (2)**

**MATHEMATICAL SCIENCES**

Melton, Raymond, Positive operators in the functional calculus.
Sirotnik, Gleb, Compact-friendly operators.

**Purdue University (18)**

**MATHEMATICS**

Chen, Jiun-Ming, Algebraic aspects of multivariate cryptosystems based on tame transformations.
Chiang-Hsieh, Hung-Jen, A numerical criterion for simultaneous normalization.
Dhillon, Ajneet, Hodge theory for algebraic stacks and the cohomology of the moduli space of stable bundles.
Krishnamurthy, Muthukrishnan, Weak Asai lift to $GL(4)$.
Li, Cheng-Che, Mathematical modeling of schistosomiasis.
Lomont, Chris, Error correcting codes on algebraic surfaces.
Park, Moongyu, Development and analysis of higher order finite volume methods for elliptic equations.
Pathenpurakal, Tony, Hilbert functions of Cohen-Macaulay modules.
Sega, Liana, Cohomology of finite modules over local rings.
Sezer, Mustafa, Effective generation of rings of invariants of finite groups.
Zell, Thierry, Quantitative study of semi-Pfaffian sets.
Zhao, Chaogui, An extension of the Dickman function.

**STATISTICS**

Chen, Peiqi, Generalized linear intent variable modeling analysis for multi-group studies.
Dietz, Zachariah E., Large deviations of a class of non-homogeneous Markov chains.
Eckhoff, Jens C., Generalized linear intent variable modeling analysis for multi-group studies.
Nordman, Daniel John, On nonparametric methods for strongly and weakly dependent lattice data.
Park, Minque, Regression estimation of the mean in survey sampling.
Qu, Yongming, Estimation for the nonlinear errors-in-variables model.
Wright, James H., An investigation of sampling excluding adjacent units.
Zhao, Yan, Bayesian design for life testing and accelerated life testing.

**University of Iowa (18)**

**APPLIED MATHEMATICAL AND COMPUTATIONAL SCIENCES**

Bennellou, Imad, A dynamic programming model integrating the analytical hierarchy process and treating the transition probabilities as estimates.
Cartwright, Christopher, A parallel algorithm for matrix assembly in meshfree methods.
Seol, Jae-Hoon, Analysis of the radiosity equation using the collocation method.
Zhang, Qinghong, The interior point method for variational inequalities and perfect duality for semidefinite programming.

**BIOSTATISTICS**

Allen, Jeff M., Frequentist performance of Bayesian models for bivariate longitudinal data with two informative drop-out times.
Doctoral Degrees Conferred

MATHEMATICS

Benjelloun, Imad, A dynamic programming model integrating the analytic hierarchy process and treating the transition probabilities as estimates.

Byun, Sun-Sig, Optimal w₁, p regularity theory of elliptic and parabolic equations.

Cartwright, Christopher, A parallel algorithm for matrix assembly in meshfree methods.

Johnson, Paul, Contributions to the hidden subgroup problem.

McLendon, Michael, The Hochschild homology of skew algebras.

Morales, Leonardo, Generators for repeated-root cyclic codes.

Seol, Jae-Hoon, Analysis of the radiosity equation using the collocation method.

Svidersky, Oleg, Spectra of Dirac and Rarita-Schwinger operators on the compactified Minkowski space.

Zhang, Qinghong, The interior point method for variational inequalities and perfect duality for semidefinite program.

STATISTICS AND ACTUARIAL SCIENCE

Aspelund, Thor, Nonlinear association-marginal models for multivariate categorial data with application to ordinal receiver operating characteristics analysis.

Larson, Michelle, Two-shaped likelihood ratio tests of dispersion between probability vectors using order-restricted techniques.

Lu, Nelson, Tests on multiplicative covariance structures.

Meyers, Troy, Frequentist properties of Bayesian credible intervals for functions of two parameters.

KANSAS

Kansas State University (4)

MATHEMATICS

Shahin, Sami, A non-linear elliptic system with degenerate diffusions.

STATISTICS

Al-Haj Ebrahem, Mohammed, Nonparametric accelerated degradation models in life-testing.

Malone, Christopher, The analysis of location and dispersion effects in replicated 2^k factorial experiments.

McGaughey, Karen, Variance testing with data depth.

University of Kansas (4)

MATHEMATICS

Braman, Karen, Toward a recursive QR algorithm.

Hukle, Marian, Real and topological stable rank.

Theodorescu, Emanoil, Derived functors and Hilbert polynomials.

Yao, Yongwei, Finite F-representation type and primary decomposition.

WICHITA STATE UNIVERSITY (1)

MATHEMATICS AND STATISTICS


KENTUCKY

University of Kentucky (6)

MATHEMATICS

Bullock, Christopher, Chain numbers of modules.

Hu, Mojia, A statistical continuum theory on constitutive relations of elastic polycrystals.

Motley, Mark, Isomorphism classes of elliptic and hyperelliptic function fields.

Robbins, Jakayla, On orientations of the free spikes.

Schmidt, Laura, On f-vectors of regular triangulations.

Walters, Karen, Variable order cascadic multigrid.

LOUISIANA

Louisiana State University, Baton Rouge (5)

MATHEMATICS

Cardetti, Fabiana, Properties of linear control system on Lie groups.

Kang, Changheon, Exotic integral Witt equivalence of algebraic number fields.

Murray, Brian, Explicit multiplicative relations between Gauss sums.

Nelson, Victor Samuel, Racks, quandles and virtual knots.

Slay, David, Group automorphisms and the decomposition of Plancherel measures.

Tulane University (1)

BIOSTATISTICS


University of Louisiana at Lafayette (3)

MATHEMATICS

Christou, Marios, Fourier-Galerkin spectral method for localized solutions of nonlinear equations.

Dyakewich, Nadejda, Complete blow-up of solutions for degenerate semilinear parabolic problems.

Papanicolaou, Nectarios, A Galerkin spectral method for fourth order boundary value problems.

MARYLAND

Johns Hopkins University (8)

BIOSTATISTICS

Blades, Natalie, Statistical methods for serial analysis of gene expression.

Boyd, Felicity, Methods of learning in statistical education: Design and analysis of a randomized trial.

Mathematical Sciences

DeVinney, Jason, The class cover problem and its applications in pattern recognition.

Kapur, Nevin, Additive functionals on random search trees.

Lin, Anhua, Projection algorithms in nonlinear programming.

MATHEMATICS

Cha, Byungchul, Vanishing of some cohomology groups and bounds for the order of Shafarevich-Tate groups of elliptic curves.

Gajcakovi, Nicholas, Cohomology and quadratic forms.

Metcalfe, Jason, Global strichartz estimates for solutions of the wave equation exterior to a convex obstacle.

University of Maryland, Baltimore (4)

MATHEMATICS AND STATISTICS


Guidi, Rafaela M., Continuum random-cluster processes simulation without critical slowing down using auxiliary variables algorithms.

Osmou Khina, Anna, Nonparametric measures of dependence for biometric data studies.

Zhou, Yan, Baseline adjustment by inducing a partial ordering when measurements are ordered categories.

University of Maryland, College Park (13)

MATHEMATICS

Auerbach, Ruth, The Gröbner fan and Gröbner walk for submodules.

Jackson, Monica, Spatial data analysis for discrete data on a lattice.

Khoshinaqht, Bita, Prediction of protein folding using residue fragment graphs.

Lakiss, Omar, Error control for the mean curvature flow.

Laprise, Scott, Stochastic dynamic programming: Monte Carlo simulation and applications to finance.

Powell, Alexander, The uncertainty principle in harmonic analysis and Bourgain’s theorem.

Saleh, Anwar, A finite dimensional model for the inverse frame operator.
### Harvard University (32)

#### Biostatistics

**Brown, Elizabeth**, Bayesian methods for joint modeling longitudinal and survival data.

**Goldwater, Meredith**, Semi-parametric methods for heteroscedastic quantile regression with application to neurotoxicity.

**Han, Karen**, Exact analysis of multiple binary outcomes with application to neurotoxicity.

**Houseman, Eugene Andres (Andy)**, Distribution diagnostics for time series and clustered outcomes with applications to environmental data.

**Huang, Jie**, Regression with high dimensional covariates on censored data analysis.

**Kang, Minhee**, Discrete-state, continuous-time stochastic processes with applications to HPV.

**Stubbendick, Amy**, Regression with high dimensional covariates on censored data analysis.

**Teodorescu-Frumosu, Alexandra**, Parametrization of surfaces and affine structures of rank 1 in 3-manifolds.

**Tadesse, Mahlet**, Bayesian models for gene expression analysis.

**Tseng, Chien-Cheng**, Low-level analysis, supervised and unsupervised machine learning, and related issues in microarray analysis.

**Vandekerckhove, Bart**, Longitudinal analysis and temporal reasoning.

**Rahnama, Saeid**, Group decision making and temporal reasoning.


**Schröder, Christian**, Applications of graphical models to computer vision.

**Jackson, Stephen**, Applications of graphical models to computer vision.

**Stinchcomb, Julie**, Bayesian methods for gene expression analysis.

**Wang, Jing**, Stochastic processes in machine learning and related fields.

**Zhang, Junni**, Causal inference with principal stratification: Some theory and applications.

### Massachusetts Institute of Technology (20)

#### Mathematics

**Alekhnovitch, Mikhail**, Propositional proof systems: Efficiency and automatizability.

**Altschul, Brett**, Aspects of quantum field theory in 1+1 and slightly more dimensions.

**Ardila, Federico**, Enumerative and algebraic aspects of matroids and hyperplane arrangements.

**Beheshti, Roya**, Lines on Fano hypersurfaces.

**Bushueva, Natasha**, Finance without price dynamics.

**Coventry, Alek**, Detection of non-coding RNA with comparative genomics and the sequential closure of smooth graphs in cartesian currents.

**De Piro, Trisram**, Zariski structures and simple theories.

**De Sole, Alberto**, Vertex algebras generated by primary fields of low conformal weight.


**Ghitza, Alexandru**, Siegel modular forms (mod p) and algebraic modular forms.

**Grinfeld, Pavel**, Boundary perturbation of Laplace eigenvalues and applications to electron bubbles and polygons.

**Klionsky, Caroline**, Combinatorial properties of shifted complexes.

**Lakatos, Gyula**, Smooth K-theory and locally convex algebras.

**Lee, Eun Soo**, A new structure on Khovanov’s homology.

**McNamara, Peter**, Edge labellings of partially ordered sets.
Michigan State University (13)

Mathematics

Dragicevic, Oliver, Riesz transforms and the Bellman function technique.
Hoensch, Ulrich, Horseshoe-type diffeomorphisms with a homoclinic tangency at the boundary of hyperbolicity.
Huang, Kai, Optimal design of diffractive optics.
Irma, Elmas, Superinjective simplicial maps of complexes of curves and injective homomorphisms of subgroups of mapping class groups.
Lim, Chia, Graded local cohomology and its associated primes.
Roudenko, Svetlana, The theory of function spaces with matrix weights.
Vaatavu, William, Abelian subgroups and automorphisms of the Torelli group.

Statistics and Probability

Cheng, Fuxia, Error density and distribution function in nonparametric regression models.
Kong, Fan, Bayesian modeling on inhomogeneous point patterns via independent increment random measures.
Li, Linfa, Nonlinear wavelet based curve estimation under random censorship and inference on long memory processes.
Makhnin, Oleg, Filtering for some stochastic processes with discrete observation.
Ni, Pingping, Minimum distance regression and autoregressive model fitting.
Xia, Yichuan, Internal estimation for the difference of two binomial proportions.

Michigan Technological University (2)

Mathematical Sciences

Kanaana, Izabela, Tight incomplete block designs.
Paez Osuma, Octavio, An algebraic function field approach to the Stohr-Voloch bound and its applications.

Oakland University (1)

Mathematics and Statistics

Roy, Anuradha, Some contributions to discrimination and classification with repeated measures data with special emphasis on biomedical applications.

University of Michigan, Ann Arbor (34)

Biostatistics

Carlson, Nichole, A pulsatile association model of two hormones using a Bayesian approach.
Epstein, Michael, Statistical methods in gene mapping of familial traits.

Li, Chun, Association methods for mapping genes for complex diseases.
Pan, Wenqin, Transition measurement error models for longitudinal data.
Wang, Yue, Statistical methods utilizing biomarkers.
Yu, Jian, Prosper function analysis for organ allocation, a counting process and Martingale approach.
Zheng, Hui, Penalized spline nonparametric regression methods for survey samples with potentially unequal probabilities of inclusion.

Mathematics

Bills, Morgin, On homomorphisms of Brauer algebra modules in the non-semisimple case.
Chan, Tszho, Pair correlation and distribution of prime numbers.
Choi, Seung-Il, Degenerate principal series for exceptional $p$-adic groups.
Chung, Dean, Computation of cache misses in matrix multiplication.
Gordon, Julia, Some applications of motivic integration to the representation theory of $p$-adic groups.
Haas, Daniel, A geometric study of the toric varieties determined by the root system An, Bn, and Cn.
Ibragimov, Zair, The Apollonian metric sets of constant width and mobius modulus of ring domains.
Iriens, Marius, Properties of square integrable holomorphic functions.
Kirr, Eduard, Resonances in Hamiltonian partial differential equations.
Korman, Jonathan, A character formula for compact elements using the building.
Lafont, Jean-Francois, Rigidity results for singular metric spaces.
Liang, Jianfeng, Nonlinear hyperbolic smoothing at a focal point.
Otero, Jesse, Bounds for the heat transport in turbulent convection.
Pitkin, Joel Hyuck-Choon, A twisted Kazhdan density theorem: An application of the stabilized twisted trace formula.
Rogalski, Daniel, Examples of generic noncommutative surfaces.
Rogovin, Kevin, Local compactness and closedness of families of $A$-harmonic functions.
Sidman, Jessica, On the Castelnuovo-Mumford regularity of subspace arrangements.
Stephen, Tamon, The distribution of values in combinatorial optimization problems.

Statistics

Hung, Ying-Chao, Modeling and analysis of stochastic networks with shared resources.
Mentz, Graciela, Longitudinal data analysis using growth curve models.
Qu, Xianggai, Some problems in the theory and construction of factorial designs.
Sousa, Bruno, A contribution to the estimation of the tail index of heavy-tailed distributions.
Stuff, Mark, Derivation and estimation of Euclidean invariants of far field range data.
Vengazhiyil, Roshan, Modeling and optimization for robust parameter design.
Zhang, Tonglin, Report on problems in restricted parameter spaces.

Western Michigan University (6)

STATISTICS

Abebe, Asheber, Nonlinear regression based on ranks.
Abousias, Abou El-Makarim Abd El-Alim, New statistical methods of the mean and standard deviation from normally distributed censored samples.
Anderson, Kirk, Robust residuals and diagnostics in autoregressive time series.
Crimin, Kimberly, Visualization methods: A comparative study of new traditional, and robust procedures.
Cucos, Diana, On rank-based considerations for generalized linear models and generalized estimating equation models.
Shomrane, Ali, A comparison of different schemes for selecting and estimating score function based on residuals.

MISSISSIPPI

Mississippi State University (3)

MATHEMATICS AND STATISTICS

Caldwell, Patrick, Positive solutions for classes of nonlinear reaction diffusion equations.
Oruganti, Shobha, Positive solutions for classes of nonlinear elliptic boundary value problems.
Yang, Bo, Boundary value problems for ordinary differential equations.

University of Mississippi (2)

MATHEMATICS

Mcmurray, Nolan, On largest circuits and cocircuits in matroids.
Olivier, Jake, Home range techniques utilizing spatial correlation.

MISSOURI

St. Louis University (2)

MATHEMATICS AND COMPUTER SCIENCE

Ashford, Katrina, A Plancherel formula for homogeneous spaces.
Redden, Joanne, The nonabelian tensor square of the free 2-Engel group of rank n.

University of Missouri, Columbia (3)

MATHEMATICS

Budden, Mark, On the local coefficients of principal series representations of metaplectic groups.
Hoffmann, Mark, Topics in complex analysis and function spaces.
Kashcheyeva, Olga, Monomialization of strongly prepared morphisms.

University of Missouri, Kansas City (2)

MATHEMATICS AND STATISTICS

Caughron, Allietta, Some dimension results for graphs of continuous functions.
Smith, Charles, Variation on a theme by Herstein.

University of Missouri, Rolla (2)

MATHEMATICS AND STATISTICS

Dik, Filiz, Tauberian theorems for convergence and subsequential convergence of sequences with controlled oscillatory behavior.
Dik, Mehmet, Tauberian theorems for sequences with moderately oscillatory control moduli.

Washington University (1)

MATHEMATICS

Jury, Michael, Matrix products and interpolation problems in Hilbert function spaces.

MONTANA

Montana State University (6)

MATHEMATICAL SCIENCES

Chomtee, Boonorm, Comparison of design optimality criteria of reduced models for response surface designs in a spherical design region.
Koonprasert, Sanoe, The sinc-Galerkin method for problems in oceanography.
Parker III, Albert, Symmetry breaking bifurcation of the information distortion.
Riley, Kathy, An investigation of prospective secondary mathematics teacher’s conceptions of proof and refutation.
Shvetsov, Yuri, Rotation of flows on generalized solenoids.
Turk, Philip, A surface response approach to assessing the relative efficiency of adaptive cluster sampling.

NEBRASKA

University of Nebraska, Lincoln (4)

MATHEMATICS AND STATISTICS

Arnavut, Meral, The projective line over the integers and decompositions of modules over one-dimensional rings.
Crittenden, Paul, Electromagnetic sensing of chiral materials.
Messer, Kirsten, Dynamic equations on time scales.
Walesensky, William, Mathematical models of digestion modulation in grasshoppers.
NEW HAMPSHIRE
Dartmouth College (3)

MATHEMATICS
Balof, Barry, Free triangle orders: Characterizations and generalizations.
D’Agostino, Susan, Classifying additive codes.
Proctor, Emily, Isospectral metrics on classical compact simple Lie groups.

University of New Hampshire (1)

MATHEMATICS AND STATISTICS

NEW JERSEY
New Jersey Institute of Technology (3)

MATHEMATICAL SCIENCES
Barannyk, Lyudmyla, Fully nonlinear interfacial waves in a bounded two-fluid system.
Ghosh-Dastidar, Urmi, Optimization for source localization and geoaoustic inversion in underwater acoustics.
Sun, Xiaoyun, Closed-loop control of vortex shedding by means of Lorentz force.

Princeton University (6)

APPLIED AND COMPUTATIONAL MATHEMATICS

Cisternas, Jaime, Modeling and bifurcation analysis of mechano-chemical oscillations.
Drakakis, Konstantinos, A detailed mathematical study of several aspects of the internet.
Ma, Junling, Evolutionary branching and its application to resource adaptation.
Malvadkar, Urmila, Variation in Diel vertical migration of zooplankton: Causes and consequences.
Plotkin, Joshua, Aggregation in ecology and evolutionary biology.

Rutgers University, New Brunswick (8)

MATHEMATICS
Chavez, Madalena, Observer design for a class of nonlinear systems, with applications to chemical and biological networks.

New Mexico State University (1)

MATHEMATICAL SCIENCES
Bataineh, Khaled, Finite-type invariants for knots in the solid torus.

University of New Mexico (6)

MATHEMATICS AND STATISTICS
Braz e Silva, Pablo, Stability of plane coquette flow: The resolvent method.
Burroughs, Elizabeth, Convection in a thermosyphon: Bifurcation and stability analysis.
Crandall, Winston, Selection criteria for log-linear and location models.
Kapitula, Laura, Diagnostics for two-stage regression models and growth charts.

NEW YORK
City University of New York, Graduate Center (6)

MATHEMATICS
Feder, Elie, Algorithmic problems in the braid group.
Goldstein, Avraham, The homology and the cohomology theories of the connected algebras.
Halpert, Ariel, Thresholds in random graphs.
Tradler, Thomas, Two BV-structures identified: The Hochschild cohomology and the homology of the free loop space.
Wang, Xinnao, Inversion of displacement operators and structured matrices.

Zhang, Gaofei, Topological model of simple Siegel disk type.

Columbia University (13)

MATHEMATICS
Akhmetshin, Alexei, Integrable systems of particles on algebraic curves and their field analogs.
Broaddus, Nathan, Noncyclic covers of knot complements.
Champakarerkar, Abhijit, A-polynomial and Bloch invariants of hyperbolic 3-manifolds.
Lee, Hanjin, The analytic singularities of the Bergman kernels on strongly pseudoconvex domain.
Nairn, Kristen, Graver complexity of monomial curves in F3.
Nedav, Eugene, Symplectic capacities and periodic solutions in Hamiltonian dynamics.

Nguyen Thanh, Phi Long, On iterates of radon transform along curves with torsion and fractional integral operator.

Tian, Ye, Euler systems of CM points on Shimura curves.

Volkovskii, Iouri, Algebro-geometric methods in the theory of integrable systems.

Zhang, Qiao, Integral mean values of L-functions.

NEW MEXICO

Statistics
Lu, Wenbin, Semi-parametric cure models and related topics.
Zamfirescu, Ingrid-Mona, Optimal stopping under model uncertainty.

Zitkovic, Gordon, Optimization problems from investment and random endowment in incomplete semimartingale markets.

Cornell University (15)

APPLIED MATHEMATICS
Camacho, Erika, Mathematical models of retinal dynamics.
Carver, Sean, Control of a spring-mass hopper.
Hueffmeier, Ewald, Turbo codes and channel information in wireless networks.
Phipps, Eric, Taylor series integration of differential algebraic equations: Automatic differentiation as a tool for simulating rigid body mechanical systems.
Rowell, Jonathan, Diffusive food webs and signaling dynamics of populations.
Sundell, Nancy, Two mathematical problems from genetics and ecology.

Mathematics
Budney, Ryan, Representations of mapping class groups via topological constructions.
Demlow, Alan, Estimates for and properties of mixed finite element methods for elliptic problems.
Gerlits, Ferenc, Some computations in graph homology.
Hruska, Christopher, Nonpositively curved spaces with isolated flats.
Leah, Gold, Homological results in commutative algebra.
Lynch-Hruska, Suzanne, Hyperbolicity in the complex Henon family.
Mahajan, Swapneel, Shuffle graphs, shellings, and projections.
Miller, Joseph, Pi-0-1 classes in computable analysis and topology.
Revelle, David, Random walks on solvable groups.

New York University, Courant Institute (12)
Mathematics
Borisuk, Alla, Mathematical modeling of neural responses in the inferior colliculus to dynamic stimuli.
Capistran, Marcos, On the numerical solution of the inverse obstacle scattering problem.
Ding, Pisheng, Topological obstructions to certain group actions on manifolds.
Dragnev, Dragomir, Fredholm theory and transversality for noncompact pseudo-holomorphic maps.
Fisher, Michael, Contributions to the method of entropy calibration in financial modeling.
Jacobson, Tivon, Mixing and shocks in geophysical shallow water models.
Li, Jing, Dual-primal FETI methods for stationary Stokes and Navier-Stokes equations.
Lim, Sook Kyung, Simulation of the sharp transition to overwhirling of a rotating elastic filament in a viscous fluid by the immersed boundary method.
Mora-Donato, Eduardo, Pseudoholomorphic cylinders in symplectisations.
Pravia, Josi, Numerical methods for viscoelastic flows.
Ren, Weijing, Numerical methods for the study of energy landscapes and rare events.

New York University (2)

Statistics
Heddy, Merrill, Optimal portfolio policy in a bond market.
Nguyen, Lan Ma, Hedging using Malliavin calculus.

Polytechnic University (1)
Mathematics
Pranayamantana, Poramate, Elliptic BRunn-Minkowski theory.

Rensselaer Polytechnic Institute (4)
Mathematics
Clark, Antwan, Barotropic instability in shallow-water.
Dietz, Donna, Convex cubic spirals.
Nebus, Joseph, Monte Carlo simulations, statistical mechanics, and ground states of the logarithmic potential.
Rinaldi, Billie, A cellular automaton inverse problem.

State University of New York, Albany (1)
Mathematics and Statistics
Yang, Weishen, The reproducing kernel of an invariant subspace of the Bergman space.

State University of New York, Binghamton (4)
Mathematics
Clouse, Daniel, A dual representation of Boolean semirings in a category of structured topological spaces.
Greenfield, Gary Allan, Variance estimation after using the Chow-Robbins stopping rule to determine a fixed width confidence interval for the mean of a normal distribution fall.
Ortiz, Ivonne, The lower algebraic K-theory of F2.
Pettrillo, Joseph, The cover-avoidance property in finite groups.

State University of New York, Buffalo (1)
Mathematics
Jolta, Daniela, Numerical and asymptotic analysis of the meniscus shape at a sharp corner.

State University of New York, Stony Brook (19)
Applied Mathematics and Statistics
Chiang, Jung-Tsung, Multiple outlier detection in linear models through data-splitting.
Cho, Seung Yeon, Predictability of stochastic reservoir and scale-up.
Garber, William, Parallel computation of radiative heat transfer in an axisymmetric closed chamber: An application to crystal growth.
Jovanovic, Nenad, On robots swarm dispersion, task scheduling in distributed systems, and web-based short period style analysis.
Ju, Charles, Magnetically driven Rayleigh-Taylor instability.
Kang, Yunghee, Estimation of computational simulation errors in gas dynamics.
Kim, Inbunn, The fluid flow through a rock fracture using finite difference lattice Boltzmann method.
Korobka, Alexandre, Protein-DNA binding simulation on parallel computers.
Shin, Hyun Kyung, Developing a throat construction algorithm for medical axis analysis of 3-D images of vesiculated basaltic rocks.
Shon, Dewon, A statistical genetic model for a bivariate mixed phenotype.
Simms, Brett, Wave propagation in myocardial tissue.
Xu, Zhiliang, A conservative front tracking method with applications.

Mathematics
Barsamian, Mark, Normal subgroups of the symplectomorphism group.
Buse, Olga, Relative parametric Gromov-Witten invariants and symplectomorphisms.
Coffey, Joseph, A symplectic Alexander trick and spaces of symplectic sections.
Dearricott, Owen, Canonical variation and positive sectional curvature.
McIntyre, Andrew, Analytic torsion and Faddeev-Popov ghosts.
Perez, Rodrigo, Dynamics of quadratic polynomials: Geometry and combinatorics of the principal nest.

Syracuse University (4)
Mathematics
Carlson, Lynn, Secondary teacher understanding of probability and sampling in context.
Hallagan, Joan, Teachers’ models of student responses to middle school algebraic tasks.
Rollin, Linda, Selection and testing designs for selecting one among K normal populations, provided it is better than a standard.
Doctoral Degrees Conferred

Tyler, Helene, (+)-Admissible sequences and the preprojective component.

University of Rochester (6)
Biostatistics and Computational Biology
Eappen, Sara, Some issues in the analysis of cross-over trials: Order-restricted inference and survival methods.
Feng, Changyong, Combining stratified and unstratified log-rank tests for correlated survival data.
Wang, Antai, Parameter estimation in bivariate copula models.
Wilding, Gregory, A study of two consistent tests of bivariate independence and some applications.

Mathematics
Mustafaev, Zakhrab, Some geometric inequalities in Minkowski spaces.
Voloshina, Maria Sergeevna, On the holomorph of a discrete group.

NORTH CAROLINA

Duke University (12)
Mathematics
Mitchell, Colleen, Mathematical properties of time windowing in neural systems.
Oldson, Darren, Flow perturbations in a mathematical model of the tubuloglomerular feedback system.
Welsh, Edward, Mathematical modeling of landscape erosion: Convergence, singularities, and shocks in a continuous, transport-limited model.

Statistics and Decision Sciences
Calder, Catherine, Exploring latent structure in spatial temporal processes using process convolutions.
Chen, Sining, A deformation model for images.
Ferreira, Mario, Bayesian multi-scale modelling.
Holloman, Christopher, Parameter estimation algorithms for computationally intensive spatial problems.
Liechty, Merrill, Covariance matrices and skewness: Modeling and applications in finance.
Paulo, Rui Miguel, Problems on the Bayesian/frequentist component.
Ponisciak, Stephen, Bayesian analysis of teacher effectiveness.
Zhou, Xi, Classification of missense mutations of disease genes.

Biostatistics and Epidemiology
Horst, Enrique, A Lévy generalization of compound Poisson processes in finance: Theory and applications.

North Carolina State University, Raleigh (29)
Mathematics
Coffey, Todd, Temporal and pseudotemporal numerical integration methods.
Fowler, Jennifer, Algorithms for computations in local symmetric spaces.
Gaspari, Daniel, Relations between characters of Lie algebras and symmetric spaces.
Mawhinney, Katherine, Characteristics of complexity within the lattice of compactifications.
Person, Axelle, Solving fourth order linear differential equations in terms of equations of lower order.
Raye, Julie, An electromagnetic interrogation technique utilizing pressure-dependent polarization.
Tullie, Tracey, Variance reduction for Monte Carlo simulation when pricing European, American or barrier options.
Turner, William, Black box linear algebra with the LinBox library.
Williams, Scott, The Lageos satellite: A comprehensive spin model and analysis.
Wu, Ling, The classification of involutions in $SL(n, k)$ and $SO(2n + 1, k)$.

Statistics
Agarwal, Prasheen, Bootstrapping of spatially correlated data.
Anstrom, Kevin, Utilizing propensity scores to estimate average causal treatment effects from observational studies with right-censored data.
Bodiya, Chris, Numerical differentiation using statistical design.
Czika, Wendy, Accounting for within- and between-locus dependencies in marker association tests.
Dougherty, Daniel, Deterministic and semi-mechanistic approaches in predictive fermentation microbiology.
Gotwald, Christopher, Model-robust interval estimation.
Johnson, Brent, The analysis of censored covariates in observational studies.
Lu, Jun, Analysis on microarray data and DNA regulatory elements prediction.
Luo, Xiaohui, Tuning variable selection procedures and score tests for dose effect in the presence of nonresponders.
Mitchell, Matthew, Testing separability of covariances for space-time processes.
Ravindran, Palanikumar, Bayesian analysis of circular data using wrapped distributions.
Sen, Kapildeb, Unit root test in time series and stochastic volatility models.
Song, Xiao, Semiparametric approaches in joint models for longitudinal and time-to-event data.
Tao, Wendi, Testing patterns of nucleotide substitution rates at multiple genes.
Umbach, Amy, Bayesian imputation methods to measure quality of life.
Wang, Ziju, Tree-structured classification for multivariate binary responses.

Wilson, David, Signed scale measures: An introduction and application.
Yi, Bingming, Nonparametric, parametric and semiparametric models for screening and decoding pools of chemical compounds.

University of North Carolina, Chapel Hill (6)
Mathematics
Mela, Xavier, Dynamical properties of the Pascal adic and related systems.

Statistics
Caragea, Petruta, Approximate likelihoods for spatial processes.
Ge, Xin, Bayesian calibration of stochastic volatility models.
Owzar, Kourosh, Association in bivariate survival and Roc models correlated biomarkers.
Spitzner, Dan, Regression analysis, inferential alignment, and the frequentist-Bayesian interface.
Zhang, Zhengyu, Multivariate extremes, max-stable process estimation and dynamic financial modeling.

University of North Carolina, Charlotte (1)
Mathematics
Behboudi, Rasoul, Existence and regularity of generalized solutions of degenerate parabolic problems via finite difference numerical schemes.

NORTH DAKOTA

North Dakota State University (1)
Statistics
Cheng, Fu-Chih, Classification of closed contours.

OHIO

Bowling Green State University (2)
Mathematics and Statistics
Elec, Bernardo, Locking-free dual mixed finite elements for thin shells.
Lafluen-Rodriguez, Ramiro, Groups of $o$-automorphisms of $o$-groups of finite Archimedean rank.

Case Western Reserve University (16)
Epidemiology and Biostatistics
Barzilai, David, Geographic and patient variation among Medicare beneficiaries in the use of follow-up testing and skin examinations after local expression of cutaneous melanoma.
Colabianchi, Natalie, Contextual influences on adolescent sexual behavior.

Conti, David, Hierarchical modeling in genetic association studies.

Daley, Denise, Identification susceptibility for cancer in a whole genome scan utilizing novel phenotypes with the assumption of heterogeneity.

Diaz-Insua, Mireya, Mammographic computer-aided detection using bootstrap aggregation.

Goodwin, Meredith, Using direct observation in primary care research—the Hawthorne effect: Defining the nature and impact of the presence of research observers on patients and physicians in the community.


Kaabi, Belhassen, Fuzzy clustering in linkage analysis of complex diseases.

Karaft, Matthew, Discriminating between measures of discrimination: A comparison of ROC area to alternatives.

Litaker, David, Regional variation in health system resources and access to health care in Ohio.

Milidonis, Mary, Expectation measurement for persons with hip replacement and the association of expectations with outcomes.

Miller, Lesley-Ann, The interrelationship of sociodemographics, quality of life and preference-based measures.

Serwer, Joshua, Understanding the role of patient race in physician decision to prescribe opioid analgesic.

Song, Kijong, Locating disease genes using measures of disequilibrium.

Strak, Cynthia, Factors predicting outcome and resource use of home health patients.

Mathematics

Meckes, Mark, Random phenomena in finite-dimensional normed spaces.

Kent State University (1)

Mathematical Sciences

Bu, Qingying, Banach-valued sequence spaces and tensor products.

Ohio State University (16)

Mathematics

Bell, Robert, Three-dimensional FC Artin groups are CAT(0).

Conrad, Eric, Some continued fraction expansions of Laplace transforms of elliptic functions.

Craciun, Gheorghe, Systems of nonlinear equations deriving from complex chemical reaction networks.

Golubeva, Natalia, Singularities in the spatial complex plane for vortex sheets and thin vortex layers.

Gorodnik, Alexander, Density and equidistribution of integer points.

Hu, Xiaodong, Transversally elliptic operators/mathematics.

McCoy, Ted, Upper and lower densities of Cantor sets using blanketed Hausdorff functions.

Sacharlie, Vlad, Improvements on the equity indexed annuity market.

Yablonsky, Eugene, Characterization of operators in nongaussian infinite dimensional analysis.

Statistics

Choudhary, Pankaj, Assessment of agreement and selection of the best instrument in method comparison studies.

Johannesson, Gardar, Multi-resolution statistical modelling in spaces and time with application to remote sensing of the environment.

Lehman, Jeffrey, Sequential design of computer experiments for robust parameter design.

Luo, Yuqun, Incorporation of genetic marker information in estimating model parameters for complex traits with data from large complex pedigrees.

Mandrekar, Sumithra, Modeling of heart period data and a study of the associated spectral measures.

Skrivaneck, Zachary, Sequential imputation and linkage analysis.

Zhao, Yonggang, For general linear model for censored data.

Ohio University (2)

Mathematics


Tynan, John, Decompositions of certain classes of nonnegative matrices.

University of Cincinnati (2)

Mathematical Sciences

Endelman, Robin, Degenerations of elliptic solutions to the quantum Yang-Baxter equation.

Yi, Zuoibiao, Indentification of general source terms in parabolic equations.

University of Toledo (1)

Mathematics

Mahler, Andreia, Bianchi-Baeklund transformations for constant mean curvature surfaces with umbilic: Theory and applications.

University of Oklahoma, Health Science Center (2)

Biostatistics and Epidemiology

Bursac, Zoran, Comparison of two SAS procedures for longitudinal data with evaluation of SAS experimental procedure MI (Multiple Imputation).

Skaggs, Valerie, Examination of the correlation structures within generalized estimating equations for small samples.

University of Oklahoma (2)

Mathematics

Gomartell, Mamuka, On the normal accessibility property of actions and pseudo semi-groups of local diffeomorphisms.

Munteanu, Marius, Metric flows on the Heisenberg group.

OREGON

Oregon State University (2)

Mathematics

Kang, Dong-Seung, Trace forms and self-dual normal bases in Galois field extensions.

Kim, Seong Kun, Asphericity of length 6 equations over torsion free groups.

University of Oregon (6)

Mathematics

Elke, Kimberly, The Dieudonné ring for ordinary homology.

Itza-Ortiz, Benjamin, The $C^*$ algebras associated with irrational time homeomorphisms of suspensions.

Jensen, Jacqueline, Finding $\pi_2$-generators for exotic homotopy types of two-complexes.

Phillips, Aaron, Restricting modular spin representations of symmetric and alternating groups.

Raney, Michael, Abstract backward shifts of finite multiplicity.

Stavrow, Iva, The spectral geometry of Riemann curvature tensor.

PENNSYLVANIA

Carnegie Mellon University (9)

Mathematical Sciences

Atkinson, Geoffrey, $b$-independent sets in random graphs.

Krueger, John, Saturated ideals.

Liu, Jianping, Molecular models for fluid mixtures and their large scale dynamics.

Parekh, Ojas, Polyhedral techniques for covering in graphs.

Pav, Steven, Delaunay refinement algorithms.
Santos, Pedro, On some constrained variational problems. 
Yu, Peng, Bridging scales in fluids and materials science.

**STATISTICS**
Algranati, David, Exploring racial and geographical effects in the decision to seek the federal death penalty, 1995–2000.
Paciorek, Christopher, Nonstationary Gaussian processes for regression and spatial modelling.

**Lehigh University** (4)

**MATHEMATICS**
Batakoi, Leyla, Cohomology of the Steenrod algebra mod nilpotents.
Bowers, Tracy, Characterization of minimal submanifolds by total Gauss curvature.
Frommeyer, John, Arithmetic on free Abelian groups.
Teboh-Ewungkem, Miranda, Mathematical analysis of oxygen and substrate transport within a multicapillary system in skeletal muscle.

**Pennsylvania State University** (14)

**MATHEMATICS**
Dans, Michael, On a variance arising in the Gauss circle problem.
Dryakhlov, Alexander, On Hausdorff dimension of random fractals.
Gunesch, Roland, Precise asymptotics for periodic orbits of the geodesic flow in nonpositive curvature.
Hawkins, Eli, Quantization of multiply connected manifolds.
Long, Ling, Modularity of elliptic surfaces.
Roth, Kimberly, Geometry of the Julia set for some maps with invariant circles.
Windsor, Alistair, Liouville phenomena in smooth ergodic theory.

**STATISTICS**
Boomer, Karen, Parameterization and estimation of the multivariate normal model in the presence of incomplete and censored data for the methacholine challenge.
Chen, Shu-Chuan, Clustering binary sequences using mixture trees.
Chung, Hwan, Latent-class modeling with covariates.
Maples, Jerry, A semiparametric mixed effects model with marginal means structure.
Shaffer, Michele, Supplementing the intent-to-treat analysis for treatment failures in clinical trials.
Simon, Laura, Paired two-by-two crossover models for complete, missing-at-random, and nonignorable-missing data.

**Temple University** (8)

**MATHEMATICS**
Birmajer, Daniel, Polynomial detection of matrix subalgebras.
Gurita, Cristian, On some degenerate boundary value problems.
Renaud, Marc, Computing generators for rings of multiplicatively invariant polynomials.
Russo, Daniel, Hecke-Weil correspondence on conjugate groups.
Tournier, Federico, \(W^{2,p}\) estimates for linearized Monge-Ampère equations.

**STATISTICS**
Chervoneva, Inna, Semiparametric two-stage models for multi-level clustered non-Gaussian data.
Jiang, Qi, Sample size determination in survival studies with informative censoring.

**University of Pennsylvania** (5)

**MATHEMATICS**
Beh, Jeffrey, Strong asymptotics of ultraspherical polynomials with varying weights using Riemann-Hilbert techniques.
Jaggard, Aaron, Involution of the symmetric group: Containment properties and parallels to general permutations.
Kang, Hyun Suk, Polynomial hulls and relative indices in dimension one.
Khuri, Marcus, The local isometric embedding in \(\mathbb{R}^3\) of two-dimensional Riemannian manifolds with Gaussian curvature changing sign to finite order on a curve.
Yin, Cui, The mapping class group and special loci in moduli of curves.

**University of Pittsburgh** (17)

**BIOSTATISTICS**
Berhane, Zekarias, Flexible models for recurrent time to event data.
Ezzeddine, Rana, A comparison of test statistics for proportionality of hazards in the Cox model.
Richards, Thomas J., Weakest link models for binary response and survival data.
Wei, Hsiao-Lan, A generalized imputation method based on propensity score.

**MATHEMATICS**
Al-Attas, Husain, Enhancing reliability of porous media flow through sensitivity computation.
Altundas, Yusuf, Phase field computations and comparison with experiments.
Begovic-Muratovic, Amelia, Polynomials that commute with a given polynomial over finite fields.
Caglar, Atila, Reliable finite element simulation of boundary driver turbulence.
Curtu, Rodica, Waves and oscillations in model neuronal networks.
Guantance, Jocelyn, Proper \(m \times n\) arrays: Geometric and algebraic methods of classification.
Han, Ge, American options on several assets.
Saltz, Mary, Degree theory for compact perturbations of Fredholm maps of index zero.
Sasmor, Joshua, Fatou, Julia and Mandelbrot sets for functions with noninteger exponent.
Tawfik, Hatim, Numerical modeling of reactive infiltration instabilities.
Zhang, Fu, Two shooting problems in ordinary differential equations.

**STATISTICS**
Huang, Hsiiao-Yun, Discrimination of nonstationary time series using the SLEX model.
Wondmagegnehu, Estetu, Mixture distribution of increasing failure rates.

**RHODE ISLAND**

**Brown University** (15)

**APPLIED MATHEMATICS**
Cao, Yan, Axial representations of 3D shapes.
Jackson, Russell, Multiple pulses in nonlinear optical systems.
Kirby, Robert, Toward dynamic spectral/hp refinement: Algorithms and applications to fluid-structure interaction.
Lu, Jinbo, Generalized harmonic maps.
Michel Jean, Jean-Michelet, Silnikov homoclinic orbits in the equations for a semiconductor laser subject to optical injection and detuning.
Min, Mi-Sun, Spectral method for discontinuous problems: Applications in electromagntic problems and image reconstruction.
Ryan, Jennifer, Extension of a lost-processing technique for the discontinuous Galerkin finite element methods for hyperbolic equations.
Sebastian, Kurt, Multidomain weighted essentially nonoscillatory (WENO) methods with interpolation of subdomain interfaces.
Zhang, Yong-Tao, Topics in structured and unstructured weighted ENO schemes.

**MATHEMATICS**
Brubaker, Benjamin, Analytic continuation for cubic multiple Dirichlet series.
Jafari, Amir, Framed mixed Hodge structures associated to iterated integrals and strong Suslin reciprocity law on curves.
Lin, Zhifu, Stability and instability of equilibria in collisionless plasma and ideal plane flows.
Munson, Brian, Embeddings in the 3/4 range.
Pacelli, Allison, The structure of the class group in global function fields.
Volic, Ismar, Finite type knot invariants and calculus of functors.

**University of Rhode Island (4)**

**Mathematics**

Costa, Stephanie, Specializations of whist tournament designs.
Gibbons, Carol, Periodicity, convergence, and boundedness of some difference equations.
Overdeep, Carol, Global behavior of some nonlinear difference equations.
Predescu, Mihaela, Global behavior of some nonlinear difference equations.

**SOUTH CAROLINA**

Clemson University (5)

**Mathematical Sciences**

Forrester, Richard, Addressing formulation size, strength, and mathematical structure in modeling discrete decision problems.
Hutson, Kevin, Stochastic minimum spanning trees.
Mcnells, Erin, Using a circadian rhythms model to identify optimal shift work schedules.
Miles, William, Modeling time-dependent, multicomponent, viscoelastic fluid flow.
Villalpando, John, Graph parameters: Channel assignment as related to L[2, 1)-coloring and domination parameters.

Medical University of South Carolina, Columbia (1)

**Mathematics**

Coco, Michael, Structures in Banach spaces: Biorthogonal systems and forms.

Medical University of South Carolina (1)

**Biometry and Epidemiology**

Mueller, Martina, Predicting extubation success from mechanical ventilation in premature infants using a computational model.

University of South Carolina, Columbia (2)

**Statistics**

Miller, Carl, Varying coefficient models for periodic water quality data.
Simmons, Susan, Data mining for mutagenic potency estimation in hierarchical linear models.

**TENNESSEE**

University of Memphis (4)

**Mathematical Sciences**

Anwar, Ashraf, Sparse distributed memory for conscious software agents.
González, Fabio, A study of artificial immune systems applied to anomaly detection.
Kelemen, Arpad, Constraint satisfaction as a support for decision making in software agents.
Zhu, Junhong, Estimation of parameters for cell population.

University of Tennessee (2)

**Mathematics**

Hetzel, Andrew, On properties related to going-up for commutative rings.
Siopsis, Maria, An individual based model of the toxic algae species pseudonitzschia multiseries.

**Vanderbilt University (5)**

**Mathematics**

Cole, James, Residuated lattice orders on cancellation monoids.
Galatos, Nikolaos, Varieties of residuated lattices.
King, Erika, Characterizing and comparing some subclasses of well-covered graphs.
Markovic, Petar, Strongly nilpotent finite algebras.
O’Hara, Karen, A model of HIV-1 disease progression and treatment: The subclass of latently infected CD4 + T cells becomes undetectable when both IL-2 and Haart are used.

**Texas A&M University (11)**

**Mathematics**

Fang, Xiang, Some invariants of a tuple of commuting operators.
Flanagan, Michael, Optimal shape design of a layered periodic structure.
Huang, Tingwen, Chaotic vibration of the wave equation studied through the unbounded growth of the total variation.
Nam, Haewon, Ultrasound-modulated optical tomography.
Zhao, Jun, Analysis of finite element approximation and iterative methods for time-dependent Maxwell problems.

**Statistics**

Gaile, Daniel Patrick, Development of statistical tools with applications in radiation hybrid and linkage mapping.
Jo, Chan-Hee, Topics in Bayesian modeling and its applications.
Kim, Inyoung, Statistical methods for matched case-control studies and cDNA microarray.
Pounds, Stanley, Cluster analysis of AFLP data.
Rose, Nicholas, Locally adaptive modeling using stochastic complexity.

**Statistics**

Reynolds, Daniel, A nonlinear thermodynamic model for phase transitions in shape memory alloys.

**Mathematics**

Earles, Christopher, Partial umbilics of hypersurfaces and repeated eigenvalue currents.
Huff, Robert, Flat structures, soap films, and capillary surfaces.
Marinenko, Tatiana, High distance pit- tings of 3-manifolds.

**Statistics**

Miller, John, Venture capital, entrepreneurship, and long run performance prediction: An application of data mining.
Spratt, Heidi, A comparison of three methods used to determine functionally important protein residues.
Swartz, Richard, Applications of Bayesian sequential decision theory to medical decision making.

**Southern Methodist University (2)**

**Mathematics**

Garrett, Bentley, Wavelets and boundary value problems.

**Statistical Science**

Vijverberg, Chu-Ping, Discrete multiplicative stationary processes.
Doctoral Degrees Conferred

Texas Tech University (5)
MATHEMATICS AND STATISTICS
Arciniega, Armando, Extrapolation of difference methods in option valuation, rounding error in numerical solution of stochastic equations, and shooting methods for stochastic boundary problems.
Drews, Kimberly, Nonparametric analysis of treatment effects with missing observations.
Kirupaharan, Nadarajah, Deterministic and stochastic epidemic models with multiple pathogens.
Martin, Cynthia, Asymptotic, spectral, and numerical analysis of aircraft wing model in subsonic flow.
Ornas, Gerard, Maximum distortion results for hyperbolically convex functions.

University of Houston (3)
MATHEMATICS
Alford, John, Computation of bifurcating rotating waves for the Fitz-Hugh Nagumo equations on circular domains of one and two dimensions.
Bokil, Vrushali, Computational methods for wave propagation problems on unbounded domains.
Dyadechko, Vadim, Geometrically adapted meshes and iterative solvers for elliptic problems.

University of North Texas (2)
MATHEMATICS
Hog, Enamul, Quantization of spin direction of solitary waves in a uniform magnetic field.
Valdez, Leroy, Analysis of sequential barycenter array random probability measures via finite construction.

University of Texas at Dallas (1)
MATHEMATICAL SCIENCES
Flores, Kathryn, Classical and quantum controls from decompositions of unitary matrices.

University of Texas, Austin (11)
MATHEMATICS
Gonzalez, Alexander, An application of the continuity method for an equation on line bundles.
Kim, In-Won, Uniqueness and existence results on viscosity solutions of some free boundary problems.
Neira, Ana, Power series in roots of unity.
Oehrtman, Michael, Collapsing dimensions, physical limitations, and other student metaphors for limited concepts.
Pal, Mihaiela, Theory of principal component filter banks with applications to multicomponent imagery.
Savin, Ovidiu, Phase transitions: Regularity of flat level sets.
Slepcev, Dejan, On level set methods to motion of manifolds of arbitrary codimension.
Terhune, David, Evaluations of multiple L-values and double zeta values of quadratic fields.
Vano, John, A Nash-Moser implicit function with Whitney regularity and applications.

UTAH
Brigham Young University (1)
MATHEMATICS
Noble, Nephi, The expansion of graphs along integer eigenvalues.

University of Utah (6)
MATHEMATICS
Alibegovic’, Emina, Makamín-Razborov diagrams for limit groups.
Coogan, Nick, A model of biofilm growth and structural development.
Mustata, Anca-Magdalena, Degree I curves on the d work pencil and on the mirror family.
Rudd, Matthew, Nonlinear constrained evolution in Banach spaces.
Thornton, Blake, Asymptotic curves of symmetric spaces.

VIRGINIA
Old Dominion University (2)
MATHEMATICS AND STATISTICS
Islaș, Alvaro, Multisymplectic integrators for nonlinear wave equations.
Reck, Brian, Nearly balanced and resolvable block designs.

University of Virginia (10)
MATHEMATICS
Bowling, James, The ring of fractions of a quadratic Jordan algebra.
Despeaux, Sloan, The development of a publication community: 19th century mathematics in British scientific journals.
Erovenko, Igor, Bounded generation of S-arithmetic orthogonal groups.
Hammond, Christopher, On the norm of a composition operator.
Hatfield, Leslie, Words of small weight in the dual codes of projective planes of orders 9 and 25.
Klintworth, Karen, Affine remoteness planes.
Moorhouse, Jennifer, C*-algebraic relations and component structure of composition operators.
Stanish, Karen, A radical structure for some rings with partial identities.
Toews, Carl, Topological structures on sets of composition operators.

STATISTICS
Kayis, Alye Atay, Non-decomposable graphical models.

Virginia Commonwealth University (2)
BIOSTATISTICS
Casey, Michelle, Statistical methodology for exploiting the use of Ray designs in studies of polychemical mixtures.
Ingrissia, Lily, Mixed effects regression model for estimating the effects of combination drug treatment on the severity of HIV infection in person in Virginia.

Virginia Polytechnic Institute and State University (5)
MATHEMATICS
Siehler, Jacob, Near group categories.

STATISTICS
Bowling, James, The ring of fractions of a quadratic Jordan algebra.
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Kayis, Alye Atay, Non-decomposable graphical models.

Virginia Polytechnic Institute and State University (5)
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STATISTICS
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Moorhouse, Jennifer, C*-algebraic relations and component structure of composition operators.
Stanish, Karen, A radical structure for some rings with partial identities.
Toews, Carl, Topological structures on sets of composition operators.

STATISTICS
Kayis, Alye Atay, Non-decomposable graphical models.

Washington University (17)
APPLIED MATHEMATICS
Coughlin, Kathleen, Stratospheric and tropospheric signals extracted using the empirical mode decomposition method.
Hammond, Rebecca, A dynamic game for managing a conservative pollutant in an estuary.
Kusiak, Steven, The scattering support and the inverse scattering problem at fixed frequency.
BIOSTATISTICS

Chen, Jinbo, Semiparametric efficient and inefficient estimation for the auxiliary outcome problem with the conditional mean model.

Damian, Doris, Bayesian approach to estimating heterogeneous spatial covariances.

Johnson, Laura Lee, Incorporating death into the statistical analysis of categorical longitudinal health.

Kurland, Brenda, Analysis of binary longitudinal data with dropout and death.

Zheng, Yingye, Semiparametric methods for longitudinal diagnostic accuracy.

MATHMATICS

Chappa, Eduardo, The X-ray transform of tensor fields.

Fox, Daniel Jeremy Forrest, Contact projective structures and contact path geometries.

Mouat, Robert, Finitary isomorphisms with finite expected coding times of Markov chains.

STATISTICS

Ali, Rebecca Ayesha, Applying graphical models to partially observed data-generating processes.


Steele, Russell J., Practical importance sampling methods for finite mixture models and multiple imputation.

Tantrum, Jeremy M., Model based and hybrid clustering of large data sets.

WISCONSIN

Medical College of Wisconsin (1)

BIOSTATISTICS

Hayat, Matthew, Bayesian methods for longitudinal data.

University of Wisconsin, Madison (18)

MATHMATICS

Alkan, Emre, Multiplicative number theory with applications to modular forms and enumeration of groups.

Bharali, Gautam, On smooth peak-interpolation sets for weakly pseudodconvex domains.

Boylan, Matthew, Congruences for the Fourier coefficients of modular forms with applications.

Cookson, Timothy, Independence from cardinal arithmetic and random \( \times \) random forcing.

Garcia, Jorge, A large deviation principle for stochastic integrals.

Gerber, Kenneth, On the chromatic sum, strength, and weakenss of graphs.

Givens, Berit, Hypergraphs and chromatic numbers, with applications to the Bohr topology.

Hu, Shengda, Semi-stable degeneration of Toric varieties and their hypersurfaces.

Hwang, Seok, Kinetic decomposition of approximate solutions to conservation laws.

Miller, Daniel, A preparation theorem for Weierstrass systems.

Mortenson, Eric, The modularity of a certain Calabi-Yau threefold and supercongruences for truncated hypergeometric functions.

Voelker, Meta, Optimization of slice models.

Yang, Chan Woo, \( L^p \) estimates for some classes of Radon transforms and oscillatory integral operators.

STATISTICS

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


Lee, Yonghee, Confidence intervals and tests on a linear combination of variance components when estimators are dependent.

Lee, Yoonkyung, Multicategory support vector machines, theory and application to the classification of microarray data and satellite radiance data.

Zhang, Hao, Nonparametric variable selection and model building via likelihood basis pursuit.

University of Wisconsin, Milwaukee (3)

MATHEMATICAL SCIENCES

Rueda, Sonia, Differential operators on invariant rings of tori and related topics.

Vachadze, George, Finite mixture models and their applications in finance.

Yordanov, Boris, Critical exponents for nonlinear wave equations with damping.

WYOMING

University of Wyoming (3)

MATHEMATICS

Isaia, Vincent, Intermediate asymptotics of nonlinear degenerate parabolics PDEs via a renormalization group approach: A numerical study.

Kurita, Satoko, Stochastic models in flow through porous media: An application to bioremediation.

Telyakovskiy, Alex, Approximate solutions to the Boussinesq equation.
Doctoral Degrees
Conferred 2002–2003

Supplementary List

The following list supplements the list of thesis titles published in the February 2004 Notices pages 246–263.

CALIFORNIA

University of California, Davis (1)

MATHEMATICS

Scott, Michael, General relativistic shock-waves propagating at the speed of light.

NEW JERSEY

Princeton University (16)

MATHEMATICS

Askshay, Venkatesh, Limiting forms of the trace formula.
Banner, Adrian, Restriction of the Fourier transforms to quadratic submanifolds.
Booker, Andrew, Numerical tests of modularity.
Chudnovsky, Maria, Berge trigraphs and their applications.
Doran, Brent, Intersection homology hypergeometric functions, and moduli spaces as ball quotients.
Hall, Christopher, L-functions of twisted legendre curves.
Harcos, Gergely, New bounds for automorphic L-functions.
Heiligott, Harald, Root numbers and the parity problem.
Kerr, Matthew, Geometric construction of regular currents with applications to algebraic cycles.
Krieger, Joachim, Global regularity of wave maps in 2 and 3 spatial dimensions.
Mckee, Mark, On the finite order of Whittaker functions, Eisenstein series, and automorphic L-functions.
Milley, Peter, Tube volumes and small hyperbolic 3-manifolds.
Parson, James, Level-raising congruences in the representation theory of reductive groups over large fields.
Sepanski, Peter, A Seiberg-Witten product formula for certain circle-bundles over surfaces.
Tymoczko, Julianna, Decomposing Hessenberg varieties over classical groups.

OHIO

Case Western Reserve University (2)

STATISTICS

Subramanian, Neepa, Monte Carlo methods for large queuing networks.
Yan, Guofen, Evaluation of Bayesian diagnostic methods for hierarchical data.

OREGON

Portland State University (1)

MATHEMATICS

Rosson, John, Multiplicative invariants of special 2-complexes.