
Doctoral Degrees Conferred

2006–2007

ALABAMA

Auburn University (8)

MATHEMATICS AND STATISTICS

Castellana, Vincent, On the spectrum of minimal covers by triples.

Diawara, Norou, New classes of multivariate gamma survival and reliability models.

Nguyen, Tung, A-stability for two species competition diffusion systems.

Ozkan, Sibel, Hamilton decompositions with primitive leaves.

Pettis, Carl, The triangle intersection problem for hexagon triple systems.

Stone, Jennifer, Non-metric continua that support Whitney maps.

Trimm, Janet, On Frobenius numbers in three variables.

Tuncer, Necibe, A novel finite element discretization of domains with spheroidal geometry.

University of Alabama at Birmingham (2)

MATHEMATICS

Areeg, Abdalla, Monte-Carlo studies with random fuzzy numbers.

Childers, Douglas, Some topological results on the influence of critical points in rational dynamics.

University of Alabama-Tuscaloosa (3)

MATHEMATICS

Bulka, Yuriy, Multiple nonlinear Volterra integral equations.

Kim, Young Hee, A hysteresis model for two-dimensional input signals.

Qui, Lin, Morrey type spaces and Carleson measures.

ARIZONA

Arizona State University (9)

MATHEMATICS AND STATISTICS

Driver, Eric, A targeted Martinet search.

Imran, Mudassar, Mathematical models in biofilm and antibiotic treatment.

Infante, Nicole, Students' understanding of related rates problems in calculus.

Knapp, Jessica, Students' appropriation of proving practices in advanced calculus.

Lu, Yan, Longitudinal estimation in dual frame surveys.

Mason, Clinton, Modeling glucose dynamics leading to a diabetic state with simulations performed from data.

Shim, Eunha, Mathematical models of rotavirus transmission in the presence of maternal antibodies and vaccination.

Tridane, Abdessamad, Mathematical analysis of immunological and epidemiological models of influenza infection.

Wang, Hao, Mathematical analysis of trophic interactions: From bacteria competition of lemming cycles.

University of Arizona (9)

MATHEMATICS

Caine, John, Poisson structures on U/K and applications.

Habermas, Derek, Compact symmetric spaces, triangular factorization and Cayley coordinates.

Konstantinou, Panagiota, Homomorphisms of the fundamental group of a surface into $PSU(1, 1)$ and the action of the mapping class group.

Levitt, Benjamin, Tate-Shafarevich groups of Jacobians of Fermat curves.

Lo, Assane, Witten Laplacian methods of critical phenomena.

Punosevac, Predrag, Regularization of simultaneous binary collisions in some gravitational systems.

Spiegler, Adam, Stability of generic equilibria of the $2n$ -dimensional free rigid body using the energy-Casimir method.

PROGRAM IN APPLIED MATHEMATICS

Garcia-Naranjo, Luis, Almost Poisson brackets for nonholonomic systems on Lie groups.

McNicholas, Erin, Embedded tree structures and eigenvalue statistics of genus zero one-face maps.

ARKANSAS

University of Arkansas at Fayetteville (2)

MATHEMATICS AND SCIENCES

Kali, Zdenka, Two extremal problems in complex function theory.

Lewis, Camille, Homotopy techniques and polynomial roots.

CALIFORNIA

California Institute of Technology (5)

APPLIED AND COMPUTATIONAL MATHEMATICS

Bou-Rabee, Nawaf, Hamiltonian-Pontryagin integrators on Lie groups.

Dondl, Patrick Werner, Structure and evolution of Martensitic phase boundaries.

Latini, Marco, Simulations and analysis of two- and three-dimensional single-mode Richtmyer-Meshkov instability using weighted essentially non-oscillatory and vortex methods.

Zhang, Lei, Metric based upscaling for partial differential equations with a continuum of scales.

MATHEMATICS

Pelayo, Roberto, Diameter bounds on the complex of minimal genus Seifert surfaces for hyperbolic knots.

The above list contains the names and thesis titles of recipients of doctoral degrees in the mathematical sciences (July 1, 2006, to June 30, 2007) reported in the 2007 Annual Survey of the Mathematical Sciences by 197 departments in 143 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 2008 issue of the *Notices*.

Claremont Graduate University (6)

SCHOOL OF MATHEMATICAL SCIENCES

Cadwallader-Olsker, Todd, Proof schemes and proof writing.

Daneshbod, Yousef, Mathematical models in microfluidics: Capillary electrophoresis and sessile drop physics.

Gasner, Scott, Cellular pattern formation and noise in $O(2)$ symmetric systems.

Lewis, Steven, Bayesian parameter and order estimation in profile hidden Markov models.

Schmitz, Adeline, Constructive neural networks for function approximation and their application to CFD shape optimization.

Sunahata, Hiroki, Interaction of the quantum vacuum with an accelerated object and its contribution to inertia reaction force.

University of California, Berkeley (33)

GROUP IN BIOSTATISTICS

Bein, Edward, Topics in causal inference: Analyzing psychotherapy outcome studies, convex-combination estimators, and G -computations model selection.

Petersen, Maya, Applications of causal inference methods to improve the treatment of antiretroviral-resistant HIV infection.

MATHEMATICS

Alappattu, Jomy, An analysis of randomized algorithms on trees.

Anderson, Bernard, Relative properties of reals.

Assaf, Sami, Dual equivalence graphs, ribbon tableaux and MacDonalD polynomials.

Berbec, Ioan, Group schemes over Artinian rings and applications.

Cameron, Maria, Seismic velocity estimation from time migration.

Carnahan, Scott, Monstrous Lie algebras and generalized moonshine.

Chen, Yanfeng, Categorification of representations of quantum groups and invariants of tangle cobordisms.

Chester, Elizabeth, Fast methods for computing all-to-all geodesic paths for the eikonal equation.

Christianson, Hans, Quantum monodromy and non-concentration near a closed semi-hyperbolic orbit.

Franklin, Johanna, Aspects of Schnorr randomness.

Goodrick, John, When are elementarily bi-embeddable models isomorphic?

Greicius, Aaron, Elliptic curves with surjective global Galois representation.

Hoyt, Crystal, Kac-Moody superalgebras of finite growth.

Huh, Jae-Seok, Implicit interface finite element method for elliptic interface problems.

Inoue, Taiyo, Organizing volumes of right-angled hyperbolic polyhedra.

Kelley, James, Homotopical syzygies in K -theory.

Kirkpatrick, Kay, Rigorous derivation of the Landau equation in the weak coupling limit.

Lyo, Grace, Semilinear actions of Galois groups and the algebraic K -theory of fields.

Marzuola, Jeremy, A stable class of perturbations for minimal mass solitons of saturated NLSE in 3d.

Medvedev, Alice, Group-like minimal sets in ACFA.

Miller, Carl, Cohomology of p -torsion sheaves on characteristic- p curves.

Morrison, Scott, A diagrammatic category for the representation theory of $U_q(\mathfrak{sl}_n)$.

Nieh, Ari, Decategorification of local $\mathfrak{sl}(2)$ and $\mathfrak{sl}(3)$ Khovanov homology.

Shan, Ying, Solving partial differential equations on irregular domains with moving interfaces, with applications to superconformal electrodeposition in semiconductor manufacturing.

Spivak, David, Quasi-smooth derived manifolds.

Wang, Jiajun, Cosmetic surgeries, nice Heegaard diagrams and Floer homology.

Weare, Jonathan, Smoothing and filtering of stochastic ordinary and partial differential equations by efficient path sampling.

Webster, Ben, Poisson algebraic geometry in representation theory and combinatorics.

Weinstein, Jared, Automorphic representations with local constraints.

Yazdani, Soroosh, Modular forms with odd congruence numbers.

Yu, Josephine, Combinatorial aspects of tropical geometry.

University of California, Davis (14)

MATHEMATICS

Choup, Leonard, Edgeworth expansion of the eigenvalue distribution function of GUE and LUE.

Kuang, Jessica, Models of seed predation and coexistence of desert annual plant species.

Lankham, Isaiah, Patience sorting and its generalizations.

Liao, Ben-Shan, Subspace projection methods for model order reduction and nonlinear eigenvalue problem.

Pitman, Damien, Clustering in random fitness landscapes: Conformity and incompatibility.

Sternberg, Philip, Applications of crystal bases to current problems in representation theory.

Wissman, Brian, Global solutions to the ultra-relativistic Euler equations.

STATISTICS

Ding, Jimin, Joint modelling of survival and longitudinal data.

Liao, Shanmei, Application of bootstrap confidence region for multivariate analysis.

Metoyer, Candace, Estimation methods for linear, nonlinear and multidimensional time series: Applications of state-space modeling.

Wang, Lu, Penalization and rank reduction.

Ye, Jingjing, Preprocessing and biomarker detection analysis for biological mass spectrometry data.

Zhang, Nan, Functional data analysis for non-Gaussian longitudinal data.

Zhu, Shuying, Bootstrap methods with applications in multivariate analysis.

University of California, Irvine (11)

MATHEMATICS

Bai, Li, Time reversal through rough surface.

Bargagliotti, Anna, An exploration of the effects of data based on ranks.

De Santiago, Rafael, Interest rate derivatives and value-at-risk with multiscale stochastic volatility.

Equalada, Tristan, Small-time asymptotics for multi-asset options.

Kang, Yang, The Liouville equation for general ergodic magnetic Schrödinger operations.

Kronewetter, Jason, Advances in topological social choice.

Lam, Kwan Hang, Weighted Poincaré inequality and manifolds with Spin(9) holonomy.

Lin, Christopher, Curvature-induced quantization in tubular neighborhoods about complete Riemannian manifolds.

Lunasin, Evelyn, Analytical and computational study of certain sub-grid scale L -models of turbulence.

Macklin, Paul, Toward computational oncology: Nonlinear simulation of centimeter-scale tumor growth in complex, heterogeneous tissue.

Natsukawa, Eisuke, On the Weil-Petersson geometry of the moduli space of Calabi-Yau manifolds.

University of California, Los Angeles (25)

MATHEMATICS

Boisvert, Alex, A new definition of the Steenrod operations in algebraic geometry.

Chan, Stephen, Colinking properties of Euclidean neighborhood retracts in merger manifolds.

Chung, Jason, Variational image segmentation and restoration using multilayer implicit curve evolution approach.

Crawford, Nick, Mean field theories and models of statistical physics.

Dokos, Pericles, On the combinatorial and spectral properties of finite quotients of the Bruhat-Tits building of the type C2 by discrete subgroups of PGSP4 and the arithmetic of quaternionic hermitian forms.

Draganova, Anna, Asymptotic existence of decompositions of edge-colored graphs and hypergraphs.

Fernandez, Rahul, Airy functions associated to compact Lie groups and their analytic properties.

Gillette, Alan, Image inpainting using a modified Cahn-Hilliard equation.

Handy, Jon, Bounded analytic functions on the complements of square Cantor sets: The corona problem and related problems.

Ioanna, Adrian, Rigidity results in the orbit equivalence theory of non-amenable groups.

Jetter, Madeleine, Steiner equivalence of convex bodies: Analytic and algebraic perspectives.

Kittrel, John, Full groups and hyperfiniteness.

O'Dell, Steve, Inverse scattering for Schrödinger type operators in exterior domains containing surfaces with interfaces.

Ryckman, Eric, Spectral equivalences for Jacobi matrices.

Skeith, William, Homomorphic encryption and non-interactive secure computation.

Sun, Hae-Sang, Non-vanishing mod p of special L -values.

Tanushev, Nick, Gaussian beams: Theory and applications.

Upton, Margaret, Galois representations attached to Picard curves and equidistribution of traces of Hecke operators for GL_2 .

STATISTICS

Baek, Jong-Ho, Statistical methods for a sensor rich building.

Erickson, Stephen, Hierarchical empirical Bayes analysis of genomic microarrays.

Kriegler, Brian, Cost-sensitive stochastic gradient boosting within a quantitative regression framework.

Li, Jinhui, Analysis of longitudinal data with missing values.

Presson, Angela, Statistical methods for complex disease analysis.

Sun, Wei, Statistical strategies in eQTL studies.

Wang, Hui, Extended homozygosity in high density genotyping.

University of California, Riverside (7)

MATHEMATICS

Crockett, Catherine, On the topology, combinatorics and geometry of circle and spherical orders.

Daudert, Britta, Epidemic modeling on complex networks, localization on snowflake domains.

Lu, Hung, p -adic fractal strings and their complex dimensions.

Morton, Jeffrey, Extended TQFT's and quantum gravity.

Rock, John, Zeta functions, complex dimensions of fractal strings and multifractal analysis of mass distributions.

Senesi, Jagannatha Prasad, Finite dimensional representation of the twisted loop algebras.

Wise, Derek, Topological gauge theory, Cartan geometry and gravity.

University of California, San Diego (14)

MATHEMATICS

Anderson, Reid, Local algorithms for graph partitioning and finding dense subgraphs.

Bandlow, Jason, Combinatorics of Macdonald polynomials and extensions.

Berg, Arthur, Nonparametric function estimation with infinite-order kernels and applications.

Colarusso, Mark, The Gelfand-Zeitlin algebra and polarizations of regular adjoint orbits for classical groups.

Erway, Jennifer, Iterative methods for large-scale unconstrained optimization.

Farina, John, Stability properties in ring theory.

Kotschwar, Brett, Some results on the qualitative behavior of solutions to the Ricci flow and other geometric evolution equations.

Lebl, Jiri, Singularities and complexity in CR geometry.

Musiker, Gregg, A combinatorial comparison of elliptic curves and critical groups of graphs.

Smith, Barry, On the values of equivariant and Artin L -functions of cyclic extensions of number fields.

Voden, Thomas, Subalgebras of Golod-Shafarevich algebras.

Wildstrom, David, Dynamic resource location on generalized distance metrics.

Wong, Aaron, The Brauer-Siegel theorem for fields of bounded relative degree.

Wroblewski, David, Non-smooth Brownian martingales and stochastic integral representations.

University of California, Santa Barbara (5)

MATHEMATICS

Dawson, Liana, Unique continuation for higher order dispersive equations.

Gunnarsson, Gunnar, Stochastic partial differential equation models for highway traffic.

STATISTICS AND APPLIED PROBABILITY

Paradkar, Deepali, Some contributions to inferential tests in mixture models and model-based clustering.

Siddiqi, Muhammad Aleemuddin, Statistical image and functional data analysis.

Villacorta, Alexander, Information diffusion in multimedia environments.

University of California, Santa Cruz (4)

MATHEMATICS

Agapito, Ruben, Study of energy decay of magnetohydrodynamics equations.

Berman, Abraham, On centers of blocks of finite groups.

McCain, William, Properties of the linearized Kepler operator.

Niche, Cesar, On the topological entropy and periodic orbits of optical and magnetic flows.

COLORADO

Colorado School of Mines (5)

MATHEMATICS AND COMPUTER SCIENCE

Crabtree, John, Design and implementation of computational automation tools for the evaluation of detailed chemical kinetic mechanisms.

Hyatt, John, Domain decomposition orthogonal spline collocation with non-matching grids.

Kurkowski, Stuart, Credible mobile ad hoc network simulation-based studies.

McMullin, Dale, A graphical data structure for complicated vector field properties and behavior.

Wang, Zhongben, Modified nodal cubic spline collocation methods for elliptic and parabolic problems.

Colorado State University (8)

MATHEMATICS

Cruceanu, Stefan, Numerical solutions of nonlinear systems derived from semilinear elliptical equations.

Devanath, Sripriya, Modular decomposition of K -hypergraphs.

Kull, Trent, Coefficient recovery in parabolic initial boundary value problems.

Sandelin, Jeff, Global estimate and control of model, numerical, and parameter error.

STATISTICS

Coar, William, State-space models for stream networks.

Merton, Andrew, Geostatistical models: Model selection and parameter estimation under infill and expanding domain asymptotics.

Ozaksoy, Isin, Modeling genetic correlation in microsatellite frequencies associated with covariates and population substructure.

Patterson, Paul, Generalized inference for mixed linear models problems.

University of Colorado, Boulder (9)

APPLIED MATHEMATICS

Ahrens, Cory, The asymptotic analysis of communications and wave collapse problems in nonlinear optics.

Jin, Chao, Parallel domain decomposition methods for stochastic partial differential equations and analysis of nonlinear integral equations.

Liu, Hong, Rare events, heavy tails, and simulation.

Sheehan, Brendan, Multigrid methods for isotropic neutron transport.

MATHEMATICS

Catone, Christopher, Projective equivalence of Finsler and Riemannian surfaces.

Deajim, Abdul, On non-associative division algebras arising from elliptic curves.

Furst, Veronika, A characterization of semiorthogonal Parseval wavelets in abstract Hilbert spaces.

Miller, Sheila, Free left-distributive algebras.

Sagullo, Noel, A Drinfeld analogue of the Brownawell-Waldschmidt theorem.

University of Northern Colorado (3)

SCHOOL OF MATHEMATICAL SCIENCES

Cribari, RaKissa, Socio-cultural factors and seventh grade students' attitudes and beliefs about mathematics.

Dollard, Clark, Preservice elementary teachers' thinking about situations involving probability.

Huang, Chein Chung, The understanding of multiplication of preservice elementary school teachers in Taiwan.

CONNECTICUT

University of Connecticut, Storrs (14)

MATHEMATICS

Foondun, Mohammad, Harnack inequalities for integro-differential operators.

Mullen, Ryan, Examples of Banach spaces that are not branch algebras.

Rogalski, Alexander, Reverse mathematics on lattice ordered groups.

Schwell, Rachel, Operads, polytopes and the A_∞ -Deligne conjecture.

Shlapaik, Yuriy, Numerical methods for finding certain solutions to Gross-Pitaevskii type equations with general potentials.

Tang, Huili, Uniqueness for the Martingale associated with pure jump processes.

STATISTICS

Das, Sonali, A new development of Bayesian structural equations model with application to the VHA survey data.

Diva, Ulysses, Novel approaches in modeling spatially correlated multivariate data.

Ghosh, Samiran, Clustering classification and function for high dimensional data arising from bioinformatics and related domains.

Liu, Zhaohui, Bayesian inference for non-homogeneous Poisson process models for software reliability.

Oemcke, Zoe, The estimation and forecasting of volatility: The use of stock, option and high-frequency data to assist in the valuation of options.

Pepe, William, On some bounded risk sequential procedures for exponential mean and normal density estimation.

Song, Changhong, Analyzing longitudinal data using random effects models.

Xu, Hai, Statistical inference and computing for diffusion models in finance.

Yale University (6)

MATHEMATICS

Bremer, James C., Adaptive multiscale analysis of graphs and manifolds.

Kim, Sang-hyun, Hyperbolic surfaces subgroups of right-angled Artin graph products of groups.

Licata, Anthony Michael, Moduli spaces of sheaves on surfaces in geometric representation theory.

Licata, Joan, Heegaard Floer link homology, the Thurston norm, and minimal-complexity surfaces.

Sussan, Joshua, Category 0 and $sl(k)$ link invariants.

Wong, Helen, $SO(3)$ quantum invariants: Density and applications.

DELAWARE

University of Delaware (2)

MATHEMATICAL SCIENCE

Capursi, Maria, On some projective planes of order 16 arising by Bose-Barlotti derivation.

Zhou, Junjie, Option pricing under the generalized tempered stable process.

DISTRICT OF COLUMBIA

George Washington University (4)

MATHEMATICS

Dabkowska, Malgorzata, Turing degree spectra of groups and their spaces of orders.

Ufferman, Eric, Structures and partial computable automorphisms.

Veve, Michael, Skein modules, orderable magmas, and billiards.

STATISTICS

Chen, Xiao Wu, Inference of haplotype effects in case-control studies using unphased genotype and environment data.

FLORIDA

Florida Institute of Technology (1)

MATHEMATICAL SCIENCES

Allen, Josef, Multiplicative noise ratio and speckle reduction for synthetic aperture radar imagery via nonlinear partial differential equation methods.

Florida State University (16)

MATHEMATICS

Achuthan, Srisairam, Analysis of orientational restraints in solid-state nuclear magnetic resonance with applications to protein structure determination.

Asbury, Thomas, From data to structure: Using orientational information with PISEMA spectra to build atomic models.

Galloway, Mack, Option pricing with selfsimilar, additive processes.

Laing, Christian, Biomedical applications of shape descriptors.

Mann, Jennifer, DNA knotting: Occurrences, consequences, and resolution.

Toporikova, Natalia, Regulation of rhythmic prolactin secretion: Combined mathematical and experimental study.

Tzigantchev, Dimitre, Predegree polynomials of plane configurations in projective space.

Webster, Clayton, Reduction techniques for the numerical solution to stochastic partial differential equations.

Wood, William, Combinatorial type problems for triangulation graphs.

Zhang, Jianke, Numerical methods for portfolio risk estimation.

STATISTICS

Auguste, Anna, Estimation from data representing a sample of curves.

Delpish, Ayesha, Comparison of estimators in hierarchical linear modeling.

Herbei, Radu, Quasi-3D statistical inversion of oceanographic tracer data.

Rubinshtein, Eugenia, Optimal linear representations of images under diverse criteria.

Sharma, Dinesh, Logistic regression, measures of explained variation, and the base rate problem.

Yu, Han, Nonparametric minimax testing on high frequency data.

University of Central Florida (4)

MATHEMATICS

Cowan, Doris C., Effects of atmospheric turbulence on the propagation of flattened Gaussian optical beams.

Jing, Wu, Frames in Hilbert C -modules.

Mancas, Stefan C., Dissipative solitons in the cubic-quintic complex Ginzburg-Landau equation: Bifurcations and spatiotemporal structure.

Vetelino, Frida, Fade statistics for a lasercom system and the joint PDF of a gamma-gamma distributed irradiance and its time derivative.

University of Miami (2)

MATHEMATICS

Clarke, Patrick, Duality for formal toric Landau-Ginzburg models.

Dominguez, Alvio, Non-existence of product-form solutions for some closed discrete-time queueing networks.

University of South Florida (10)

MATHEMATICS

Ameur, Kheira, Polynomial quandle cocycles, their knot invariants and applications.

Aryal, Gokarna R., Study of Laplace and related probability distributions and their applications.

Camara, Louis R., Statistical modeling and assessment of software reliability.

Cureg, Edgardo S., Some problems in products of random matrices.

Gishe, Jemal E., Finite family of orthogonal polynomials and resultants of Chebyshev polynomials.

Mostafa, Abdelelah M., Regression approach to software reliability models.

Pirnot, Joni B., Recognizable languages defined by two-dimensional shift spaces.

Quarcoo, Joseph O., Contributions to the degree theory for perturbations of maximal monotone operators.

Shibata, Michiru, Pricing models and analysis of corporate coupon-bonds and credit default swaptions.

Wooten, Rebecca Dyanne, Statistical environmental models: Hurricane, lightning, rainfall, flooding, red tide and volcanoes.

GEORGIA

Emory University (9)

BIostatistics

Moore, Renee, Prediction of random effects when data are subject to a detection limit.

Wu, Haiyan, Hierarchical analysis of microarray experiments with applications to the study of CD8 T cell immune responses.

MATHEMATICS AND COMPUTER SCIENCE

Berger, André, Faster minimum weight subgraph algorithms.

Kurzyniec, Dawid, Towards lightweight and reconfigurable resources sharing frameworks.

Liu, Jia, Pre-conditioned Kyrlov subspace methods for incompressible flow problems.

Powell, Jeffrey, Two questions about connectivity in graphs.

Tengan, Eduardo, Graphs and surfaces.

Wagner, Brian, Subgraph sequences in graphs and diagraphs.

Zich, Jan, The Hajós conjecture and triangulations.

Georgia Institute of Technology (2)

SCHOOL OF MATHEMATICS

Jiang, Wen, Maximum codes with the identifiable parent property.

Komendarczyk, Rafal, Nodal sets and contact structures.

University of Georgia (9)

MATHEMATICS

Ashton, Edward, Exploring continuous tensegrities.

Cho, Okkyung, Construction of compactly supported multiwavelets.

Guy, Michael, Moduli of weighted stable maps and their gravitational descendants.

Hower, Valerie, Hodge spaces of real toric varieties.

Mullikin, Chad, On length minimizing curves with distortion thickness bounded below and distortion bounded above.

Park, Daeshik, The Fekete-Szegő theorem with splitting conditions on the projective line of positive characteristics.

Zhou, Jie, Construction of orthonormal wavelets of dilation factor 3 with application in image compression and a new construction of multivariate compactly supported tight frame.

STATISTICS

Bhattacharya, Archan, Inference for controlled branching processes, Bayesian inference for zero-inflated count data, and Bayesian techniques for hairline fracture detection and reconstruction.

Han, LingLing, Models with subject by treatment and subject by carryover interactions and use of baseline measurements in crossover trials.

HAWAII

University of Hawaii at Manoa (3)

MATHEMATICS

Chrisman, Micah, The number theory of finite cyclic actions on surfaces.

Kaneshige, Bryon, On semifree symplectic circle actions.

Piotrowski, Andrzej, Linear operators and the distribution of zeros of entire functions.

ILLINOIS

Illinois Institute of Technology (1)

APPLIED MATHEMATICS

Zhang, Guo Quan, Iterated approximate moving least-squares: Theory and applications.

Northern Illinois University (4)

MATHEMATICAL SCIENCES

Brahma, Sanjoy, Robust and minimum norm partial quadratic eigenvalue assignment problems: Theory and computations.

Frobish, Daniel, Estimation of change points in recurrent events models.

Hein, Robert, P -polynomial table algebras and distance regular graphs.

Kallenbach, Jeffrey, Spectral concentration in the Sturm-Liouville differential equation.

Northwestern University (10)

ENGINEERING SCIENCE AND APPLIED MATHEMATICS

Clay, Matthew, Motion of thin droplets due to surfactants and gravity.

Fisher, Lael, Mathematical modeling of interfacial hydrodynamic phenomena in some liquid-fluid systems.

Norris, Scott, Evolving faceted surfaces: From continuum modeling, to geometric simulation, to mean-field theory.

Park, Jang, Numerical studies of integral equation and rod models of solid fuel combustion.

Rempe, Michael, Efficient computational strategies for simulating neural activity on branched structures.

Retford, Christopher, Multi-scale modeling of surfaces and edges of nanoscale materials.

MATHEMATICS

- Aldi, Marco*, A-branes and mirror symmetry.
- Borisov, Dennis*, Homotopy Gerstenhaber structure on deformation complex of a morphism.
- Johnson, Michael*, Results on polynomial ergodic averages.
- Voineagu, Mircea*, Semi-topological K -theory of certain projective varieties.

Southern Illinois University, Carbondale (3)

MATHEMATICS

- Chang, Jing*, Resistant dimension reduction.
- Kazi, Haseeb*, Inequalities and bounds for elliptic integrals.
- Marr, Alison*, Labelings of directed graphs.

University of Chicago (22)

MATHEMATICS

- Abouzaid, Mohammed*, On homological mirror symmetry for toric varieties.
- Balduzzi, David*, Hamiltonian geometry of moduli space of bundles on curves.
- Boyarchenko, Dmitriy*, Characters of unipotent groups over finite fields.
- Dymarz, Tullia*, Large scale geometry of certain solvable groups.
- Jackson, Craig*, Nilpotent slices and Hilbert schemes.
- Kerr, Gabriel*, Weighted blow-ups and mirror symmetry for toric surfaces.
- McCathern, Sharon*, A replacement theorem for modules with a unipotent automorphism.
- Morris, Courtney*, On free $\mathbb{Z}/p\mathbb{Z}$ actions on products of spheres.
- Ponto, Kathleen*, Fixed point theory and trace for bicategories.
- Putman, Thomas*, An infinite presentation of the Torelli group.
- Rule, David*, The regularity and Neumann problem for non-symmetric elliptic operators.
- Scheels, Ann*, The fortification illusion of migraine.
- Smithling, Brian D.*, On the moduli stack of commutative, 1-parameter formal Lie groups.
- Thomas, Anne*, Lattices in automorphism groups of polyhedral complexes.
- Walker, Katharine*, Fundamental groups of moduli spaces of quadratic differentials.
- Yanagisawa, Masuo*, Floer homology for elliptic $K3$ surface.
- Young, Robert*, Filling inequalities and the geometry of nilpotent groups.
- Zarnescu, Arghir*, Analytic study of models of complex non-Newtonian fluids.

STATISTICS

- Jager, Abigail*, Likelihood methods for potential outcomes.
- Ostrovnaya, Irina*, Estimating error rates for independent and dependent test statistics.
- Shao, Xiaofeng*, Statistical evaluation of multiresolution model output and spectral analysis for nonlinear time series.
- Yang, Jie*, Infinite exchangeability and partitions and permanent process and classification model.

University of Illinois at Chicago (21)

MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

- Akbas, Erol*, A presentation for the automorphisms of the 3-sphere that preserve a genus two Heegaard splitting.
- Andikfar, Hossein*, Decomposition numbers and Cartan invariants of finite groups of Lie type in the defining characteristic.
- Beyarslan, Ozlem*, Random structures over pseudofinite fields.
- Brugueras, Jaime*, On payoff allocations for assignment games and on algorithms for stochastic games.
- Cai, Dongmin*, Information-based projection method for categorical clustering and outlier detection.
- Chakrabarty, Siddhartha*, Optimal control of drug delivery to brain tumors using a distributed parameters deterministic model.
- Coppola, Andrew*, The theory of Q -abstract elementary classes.
- Dong, Yuping*, Surveillance studies on change point in incidence rate.
- Fernos, Talia*, Relative property (T), linear groups, and applications.
- Grizzard, Phil*, On Lefschetz characters of 2-local geometries for some sporadic groups.
- Gupta, Chetan*, Algorithms to identify clusters and outliers based on dyadic decomposition with applications to streams.
- Lenzhen, Anna*, Teichmuller geodesics that do not have a limit in PMF.
- Lou, Congrong*, Assessment of agreement.
- Olson, Jeffrey*, Finiteness conditions on varieties of residuated structures.
- Savic, Predrag*, Counting closed orbits in rectangles with slits.
- Taber, Mark*, Analyticity of the Dirichlet-Neumann operator and its application to detecting ocean bathymetry.
- Tancredi, Daniel*, Design insights for epidemiological studies of prevalent and incident dementia.
- Wei, Li*, Stochastic curtailment method under linear models.
- Yan, Guoqing*, Option pricing for a stochastic-volatility jump-diffusion model.

- Yan, Zhiwu*, Crossover designs for a self and simple mixed carryover effects model with correlated errors.
- Ye, Jinchun*, Optimal life insurance purchase, consumption and portfolio under an uncertain life.

University of Illinois, Urbana-Champaign (23)

MATHEMATICS

- Anguelova, Jana*, Quantum vertex algebras and symmetric polynomials.
- Cao, Weiting*, Some problems in structural graph theory.
- Cho, Jae-Seong*, An algebraic generalization of subelliptic multipliers.
- Gambill, Thomas*, L^2 bounds of the attractor for the KS equation.
- Gibson, Donald*, Covering systems.
- Jossey, John*, Galois 2-groups unramified outside 2.
- Kaul, Hemanshu*, Topics in stochastic combinatorial optimization and extremal graph theory.
- Ledoan, Andrew*, Distribution of Farey series and free path lengths for a certain billiard in the unit square.
- Lee, Jae-ug*, Particles' spreading in a simple Majda model and eigenvalue estimation through Cayley transform.
- Markin, Nadya*, Realization of Galois groups with restricted ramification.
- Paulhus, Jennifer*, Elliptic factors in the Jacobians of low genus curves.
- Poitevin, Luis*, Model theory of Nakano spaces.
- Snapp, Bart*, Generalized local cohomology and the canonical element conjecture.
- Tao, Hua*, Potential theory for subordinate Brownian motion by tempered stable subordinators.
- Treeneer, Stephanie*, Congruences for the coefficients of weakly holomorphic modular forms.
- Wong, Jeremy*, Collapsing manifolds with boundary.
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Sun, Yijun, Global attractivity of higher order nonlinear difference equations.

Wu, Xiaojin, Temperature effects in semiconductor equations.

MISSOURI

St. Louis University (1)

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Granda, Larry, Dehn surgery on singular knots.

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Latulippe, Christine, Environments that encourage mathematics graduate teaching assistants: The effects of institution type and availability of training.

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Welder, Rachael, Preservice elementary teachers' mathematical content knowledge of prerequisite algebra concepts.

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Gray, Katharine, Comparison of trend detection methods.

NEBRASKA

University of Nebraska-Lincoln (6)

MATHEMATICS

Brown Kramer, Joshua, Two problems in extremal set theory.

Buchholz, Bobbi, Self-adjoint matrix equations on time scales.

Cokeley, Paul, Boundary and localized null controllability and corresponding blow up rates of thermoelastic and structurally damped systems.

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NEW HAMPSHIRE

University of New Hampshire (6)

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- Leman, Scotland*, On evolutionary theory, inference, and simulation: A geneological perspective.
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North Dakota State University, Fargo (2)

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Bowling Green State University (10)

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OKLAHOMA

Oklahoma State University, Stillwater (3)

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PENNSYLVANIA

Carnegie Mellon University (2)

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Ziegler, Melissa, Variable selection when confronted with missing data.

RHODE ISLAND

Brown University (11)

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SOUTH CAROLINA

Medical University of South Carolina (4)

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Abell, Jill, Racial disparities in cardiovascular mortality risk associated with body mass index in men and women: A subject level meta analysis.

Adelman, Aaron S., Population mixing and risk of childhood acute lymphoblastic leukemia.

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McNeil, Rebecca, Development and application of the multivariate Mantel-Haenszel mean scores test.

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TENNESSEE

University of Memphis (3)

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TEXAS

Baylor University (6)

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Flagg, Mary, The role of the Jacobson radical of the endomorphism ring in the Baer-Kaplansky theorem.

Foss, Fred, On the numerical exact pointwise interior controllability of the scalar wave equation and solution of nonlinear elliptic eigenproblems.

Gvozdev, Vladimir, Discretizations of the diffusion and Maxwell equations in polyhedral meshes.

Kalva, Deepti, Equiangular cyclic frames.

Liu, Yuncheng, Defect relations on parabolic manifolds and degeneracy of holomorphic curves.

Wang, Yunjiao, Patterns of synchrony in lattice dynamical systems.

Xu, Dekang, Proper holomorphic mappings between balls.

University of North Texas (2)

MATHEMATICS

Edson, Marcia, Around the Fibonacci numeration system.

Yingst, Andrew, A characterization of homeomorphic Bernoulli trial measures.

University of Texas at Arlington (1)

MATHEMATICS

Cai, Jiangang, LES for wingtip vortex around an airfoil.

University of Texas at Austin (17)

INSTITUTE FOR COMPUTER ENGINEERING AND SCIENCE

Baird, John, Numerical analysis of the representer method applied to reservoir modeling.

Bazilevs, Juris, Isogeometric analysis of turbulence and fluid-structure interaction.

Heath, Ross, Numerical analysis of the discontinuous Galerkin method applied to plasma physics.

Kurtz, Jason, Fully automatic *hp*-adaptivity for acoustic and electromagnetic scattering in three dimensions.

Rath, James, Multiscale basis optimization for Darcy flow.

MATHEMATICS

DeBlois, Jason, Totally geodesic surfaces in hyperbolic 3-manifolds.

Díaz Espinosa, Oliver R., Renormalization and central limit theorem for critical dynamical systems with external weak random noise.

Fokam, Jean Marcel, Forced vibrations via Nash-Moser iterations.

Gagliardo, Michael, The higher flows of harmonic maps.

Haynes, Alan, Tools and techniques in Diophantine approximation.

Kent, Richard Peabody, IV, Geometry and algebra of hyperbolic 3-manifolds.

Kwon, Young-Sam, Strong trace for degenerate parabolic-hyperbolic equations and applications.

Pekker, Alexander, Diophantine approximation in projective space and the absolute Siegel's lemma.

Rand, Betseygail, Pattern-equivariant cohomology of tiling spaces with rotations.

San Martin Gomez, Mario, A three dimensional finite element method and multigrid solver for a Darcy-Stokes system and applications to vuggy porous media.

Scholl, Matthew, Local elliptic boundary value problems for the Dirac operator.

Zarzar, Marcos, Error-correcting codes on low Néron-Severi rank surfaces.

University of Texas at Dallas (6)

MATHEMATICAL SCIENCES

El-Sissi, Nermine, Positive definite kernels and lattice paths.

Kshattray, Indra B., Modeling arsenic in the wells of Nepal.

Suzuki, Sumihiro, Constructive methodologies of optimal sequential plans.

Xia, Jingsi, Optimal sequentially planned change-point detection procedures.

Xiao, Peng, Contributions to multivariate *L*-moments: *L*-comoment matrices.

Zhou, Hong, Parametrizations of unitary and positive matrices in quantum information and control.

UTAH

Brigham Young University (1)

MATHEMATICS

Xie, Zhifu, The *N*-body problem.

University of Utah (6)

MATHEMATICS

Despotovic, Zrinka, Action dimension of mapping class groups.

Kovacevic, Domagoj, Exceptional dual pair correspondences.

Louder, Larsen, Krull dimension for limit groups.

Newren, Elijah, Enhancing the immersed boundary method: Stability, volume conservation, and implicit solvers.

Oster, Andrew, Mathematical models of cortical development.

Zobitz, John, Mathematical approaches to partition net ecosystem exchange of CO_2 in a high elevation subalpine forest.

VIRGINIA

Old Dominion University (4)

MATHEMATICS AND STATISTICS

Deng, Yihao, Efficient unbiased estimating equations for analyzing structured correlation matrices.

Jones, Andrea, The computation of exact Green's functions in acoustic analogy by a spectral collocation boundary element method.

Slaba, Tony, Three methods for solving the low energy neutron transport equation.

Srivastava, Jayesh, Canonical correlation analysis and correspondence analysis of longitudinal data.

University of Virginia (5)

MATHEMATICS

Hafizoglu, Cavit, Linear quadratic regulatory boundary/point control of stochastic PDE systems with unbounded coefficients.

Smith, Michael, Derivations of 8 simple Jordan superalgebras.

Taylor, David, The Bloch-Okounkov function and dimension formulas for modules of infinite-dimensional Lie algebras.

Toundykov, Daniel, Long-term dynamics of a semilinear wave equation with localized nonlinear dissipation, critical source term, and mixed boundary conditions.

Tuffaha, Amjad, Well-posedness, solvability, and optimal control of coupled PDEs with an interface.

Virginia Polytechnic Institute and State University (15)

MATHEMATICS

Chalmeta, Alberto, On the units and structure of the 3-Sylow subgroups of the ideal class groups of pure bicubic fields and their normal closures.

Dimitrova, Elena, Polynomial models for systems biology: Data discretization and term order effect of dynamics.

Fulton, Brian, Analysis and approximation of viscoelastic and thermoelastic joint-beam systems.

Fulton, Melanie, The quantum automorphism group and undirected trees.

Grinshpon, Mark, Universal localization and group cohomology.

Kachroo, Pushkin, Control of hyperbolic partial differential equations: Application to traffic.

Rivera-Marrero, Olgamary, The place of discrete mathematics in the school curriculum: An analysis of preservice teachers' perceptions of the integration of discrete mathematics into secondary level courses.

Vance, James, Permanent coexistence for omnivory models.

STATISTICS

Farrar, David, Some model based and nonparametric clustering methods for characterization of regional ecological stressor response patterns and regional environmental quality trends.

Joner, Michael, Univariate and multivariate surveillance methods for detecting increases in incidence rates.

Liu, Bing, Casual gene network interference from genetical genomics experiments via structural equation modeling.

Pickle, Stephanie, Semiparametric techniques for response surface methodology.

Wang, Li, Recommendations for design parameters for central composite designs with restricted randomization.

Zhang, Hui, Classification analysis of environmental monitoring: Combining information across multiple studies.

Zhang, Ying, Efficient sampling plans for control charts when monitoring an autocorrelated process.

WASHINGTON

University of Washington (23)

APPLIED MATHEMATICS

George, David, Finite volume methods and adaptive refinement for tsunami propagation and inundation.

Jeon, Jihyoun, Mathematical modeling of pre-malignant lesions in multistage carcinogenesis.

Srivastava, Santosh, Bayesian minimum expected risk estimation of distributions for statistical learning.

Toth, Damon, Analysis of age-structured chemostat models.

BIostatistics

Li, Min, Bayesian discovery of regulatory motifs using reversible jump Markov chain Monte Carlo.

MATHEMATICS

Baek, Yeongcheon, An interior point approach to the constrained nonparametric mixture models.

Blazek, Kirk, The one-dimensional inverse problem of reflection seismology on a viscoelastic medium.

Bogart, Tristram, Problems in computational algebra and integer programming.

Doherty, Davis, On singularities of generic projections.

Jabbusch, Kelly, Notions of positivity of vector bundles.

Jin, Hai, The inverse problem of fiber Bragg gratings.

Jones, Brant, Some combinatorics on Hecke algebras of reflection groups.

Kahle, Matthew, Topology of random simplicial complexes.

Lockridge, Keir, The generating hypothesis in general stable homotopy categories.

Schwede, Karl, On F -injective and DuBois singularities.

Shmerkin, Pablo, The structure of overlapping self-affine sets.

Treisman, Zachary, Arc spaces and rational curves.

Tzou, Leo, Partial differential equations.

Zaveri, Sona, The second eigenfunction of the Neumann Laplacian on thin regions.

STATISTICS

Glynn, Adam, Alleviating ecological bias in generalized linear models and optimal design with subsample data.

Nugent, Rebecca, Algorithms for estimating the cluster tree of a density.

Shortreed, Susan, Learning in spectral clustering.

Westveld, Anton, Statistical methodology for longitudinal social network data.

Washington State University (4)

MATHEMATICS

David, Roden Jason A., Algorithms for the unitary eigenvalue problem.

Griffin, Kent, Solving the principal minor assignment problem and related computations.

Zhou, Haujun, Multivariate compound point processes with drifts.

Zhu, Yuntao, Stochastic semidefinite programming.

WEST VIRGINIA

West Virginia University (1)

MATHEMATICS

Aslam, Muhammad, Some new models for image compression.

WISCONSIN

Medical College of Wisconsin (1)

BIostatistics

Liu, Jingxia, Utilizing propensity scores to test treatment effects in survival data.

University of Wisconsin, Madison (44)

MATHEMATICS

Alfeld, Christopher, To branch or not to branch: Branching and non-branching in the Medvedev lattice of Π_1^0 classes.

Anderson, Jaclyn Ann, Two problems in the theory of t -core partitions.

Bowman, John, Finite-dimensional modules for the quantum affine algebra $Uq(\mathfrak{g})$ and its Borel subalgebra.

Chakrabarti, Debraj, Approximation of maps with values in a complex or almost complex manifold.

Funk-Neubauer, Darren, Tridiagonal pairs and their use in representation theory.

Garthwaite, Sharon, On questions of congruence and size for modular forms and Maass-Poincaré series.

Getz, Jayce, Intersection homology of Hilbert modular varieties and quadratic base change.

Griffeth, Stephen, Rational Cherednik algebras and bases for coinvariant rings.

Hartwig, Brian, Tetrahedron algebra and tridiagonal pairs.

He, Weiyong, On the Calabi flow.

Hur, Youngmi, Novel methodologies for effective wavelet constructions in high dimensions.

Kach, Asher, Characterizing the computable structures Boolean algebras and linear orders.

Kane, Benjamin, Computationally feasible bounds for representations of integers by ternary quadratic forms and CM lifts of supersingular elliptic curves.

Kim, Ahyoung, Locating absolutely continuous spectra of Jacobi operators.

Liao, Xiaomei, Computational high frequency waves in heterogeneous media.

Mahlburg, Karl, Congruence properties of modular forms and applications to number theory.

Nguyen, Xuan Hien, Construction of embedded complete self-similar surfaces Part 1.

Novak, Kyle, A semiclassical transport model for thin quantum barriers.

Oberlin, Richard, The (d, k) Keakeya problem and estimates for the X-ray transform.

Petrosyan, Nansen, Jumps in cohomology of groups periodicity and semidirect product.

Doctoral Degrees Conferred

Spaeth, Peter, Floer homology and engulfable Hamiltonian diffeomorphisms.

Sutton, Taliesin, Automorphic forms on quaternion algebras and central critical values of L -functions.

Vasquez, Elisa, Geometric partitions of definite sets and an application of the Cauchy-Crofton formula.

Weber, Brian, Moduli spaces of extremal Kohler manifolds.

STATISTICS

Carew, John, Statistical methods for magnetic resonance images.

Chen, Meng, Statistical methods for expression quantitative trait loci (eQTL) mapping.

Cheng, Guang, Higher order semiparametric frequentist inference and the profile sampler.

Cheng, Yu, Association analysis of multivariate competing risks data.

Fang, Fang, Empirical likelihood approach for stratified samples with non-response.

Fu, Haoda, Sparsity and smoothness for disease rate mapping via Bayesian Lasso.

Hu, Bo, Explained variation for logistic regression and linear mixed-effect model.

Jeon, Yongho, New methods for nonparametric graphical model building and state price density estimation.

Kwak, Minjung, Testing for independence of a survival time from a covariate.

Li, Jialiang, Estimation techniques for multi-dimensional effective dose under parametric and semiparametric models.

Li, Xiaolei, Bayesian analysis of cross-classified spatial data with auto-correlation.

Lu, Fan, Regularized nonparametric logistic regression and kernel regularization.

Mukherjee, Rajat, On accelerated failure time models for forward and backward recurrence times.

Mun, Jungwon, Diagnostics for repeated measurements using residual sum of squares.

Qi, Xin, The central limit theorems for space-time point processes.

Sarkar, Deepayan, On the analysis of optical mapping data.

Song, Rui, Inference for change-point transformation models.

Wei, Xiaodan, A test for non-inferiority with a mixed multiplicative additive null hypothesis.

Wu, Zhengxiao, A filtering approach to abnormal cluster identification.

Xu, Lei, Grouping methods for informative missing data in longitudinal studies.

Doctoral Degrees Conferred 2006–2007

Supplementary List

The following list supplements the list of thesis titles published in the February 2008 *Notices*, pages 280–99.

CALIFORNIA

California Institute of Technology (4)

CONTROL AND DYNAMICAL SYSTEMS

Chen, Lijun, Wireless network design and control.

Lui, Xin, Robustness, complexity, validation and risk.

Mysore, Shreesh, Structural plasticity in neuronal networks.

Martinez, Alfredo, A treatise on econometric forecasting.

Naval Postgraduate School (1)

MATHEMATICS

Johnson, Anthony, A time dependent finite element approach to optimizing seismic sonar arrays.

University of California, Berkeley

(14)

STATISTICS

Bourgon, Richard, Chromatin-immune precipitation and high density tiling microarrays: A generative model, methods for analysis and methodology assessment in the absence of a “gold standard”.

Cho, Young, Estimating velocity fields on a freeway from low resolution video.

Lasiecki, Pawel, Assessment of stochastic differential equation and Markov chain models in time series.

Li, Bo, On goodness-of-fit tests of semiparametric models.

Panaretos, Victor, Inverse problems, stochastic geometry, structural biology.

Roch, Sebastien, Markov models on trees: Reconstruction and applications.

Yi, Jing, Absolute and relative quantification of fluorescently labelled DNA.

GROUP IN BIOSTATISTICS

Bein, Edward, Topics in causal inference: Analyzing psychotherapy outcome studies, convex-combination estimators, and G -computations model selection.

Petersen, Maya, Applications of causal inference methods to improve the treatment of antiretroviral-resistant HIV infection.

Tang, Hui, Finding DNA cis-regulatory elements using regression methods.

Teng, Siew-Leng, Statistical methods in integrative analysis of gene expression data with applications to biological pathways.

Young, Jessica, Statistical methods for complicated current status and high-dimensional data structures with applications in environmental epidemiology.

Zhou, Yun, Statistical issues in a case-control study of gene expression in postmortem human brains.

Wang, Yue, Data-adaptive estimation in causal inference for point treatment study.

University of California, Los Angeles

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BIOSTATISTICS

Alber, Susan, A partition model for treatment effects and treatment-covariate interactions.

Chiang, Lu-May, A Bayesian adaptive design for 2-drug combination phase I clinical trials with ordinal toxicity outcomes.

Gadallah, May, Combining aggregated and individual level data to estimate individual level parameters: Variance, covariance, and slope coefficient.

Kim, Hyun Jung, Classification in Thoracic computed tomography image data.

Lemus, Hector, Bayesian state space modeling of heterogeneous multivariate longitudinal data.

Park, Grace Song-Ye, Modeling longitudinal radiographic progression patterns in rheumatoid arthritis.

Wu, Tongtong, A partial linear semiparametric additive risk model for two-stage design survival studies.

Zhao, Yu, Additive risks regression for survival data from two-stage designs.

Zhou, Kefei, A unified approach to nonparametric comparisons of receiver operating characteristic curves for longitudinal and clustered data.

Stanford University (9)

STATISTICS

Guo, Yaqian, High dimensional classification with application in microarray analysis.

Jin, Wei, A Bayesian approach for additive-multiplicative hazard models.

Kapp, Amy, Cluster analysis with the in-group proportion.

Mathis, Charles, A statistic for measuring the value of side information in investment.

Park, Mee Young, Generalized linear models with regularization.

Purdum, Elizabeth, Multivariate kernel methods in the analysis of graphical structures.

Shi, Jianxin, Quantitative trait mapping using large pedigrees and model selection.

Stodden, Victoria, Model selection when the number of variables exceeds the number of observations.

Tribble, Seth, Markov chain Monte Carlo algorithms using complexly uniformly distributed sequences.

CONNECTICUT

Wesleyan University (2)

MATHEMATICS AND COMPUTER SCIENCE

Gochev, Vasil, Compact-open-like topologies on $C(K)$ and applications.

Lu, Yun, Reducts of countably categorical graphs.

FLORIDA

University of Florida (16)

MATHEMATICS

Gray, Peter, The predictable projection and the predictable dual projection of a two parameter stochastic process.

Guo, Weihong, Medical Image segmentation and diffusion weighted magnetic resonance image analysis.

Keeran, Willard, Coexistence in a feedback-mediated chemostat.

Liu, Juan, Information theoretic content and probability.

Nenciu, Andriana, Characters of finite groups.

Smith, Justin, Discrete groups from a course perspective.

Turygin, Yuri, Borsuk-Ulam property of finite group actions on manifolds and applications.

Zahnen, Jeffrey, Penalized maximum likelihood methods for emission tomography.

Zhang, Hongchao, Gradient methods for large-scale nonlinear optimization.

STATISTICS

Kim, Bong-Rae, Statistical models for clustering dynamic gene expression profiles.

Liu, Xuefeng, Bayesian methodology for models with multivariate (longitudinal) outcomes.

Mergel, Victor, Divergence loss for shrinkage estimation, prediction and prior selection.

Mukhopadhyay, Siuli, Multiresponse, GLM, and other recent approaches in response surface methodology.

Yang, Jie, Nonparametric functional mapping for quantitative trait loci.

Zhang, Li, Bayesian methods in case-control studies with application in genetic epidemiology.

Zhu, Yun, Application of asymmetric Laplace Law in financial risk measures and time series analysis.

ILLINOIS

University of Illinois at Chicago (1)

DIVISION OF EPIDEMIOLOGY AND BIostatISTICS

Chosy, Erin, Correlates and health consequences of victimization in a sample of chemically-dependent detainees.

IOWA

University of Iowa (2)

APPLIED MATHEMATICS AND COMPUTATIONAL SCIENCE

Coskun, Huseyin, Mathematical models for amoeboid cell motility and model based inverse problems.

Shimanovich, Victoria, Optimization of large scale sparse nonlinear systems for flexible protein conformation.

KANSAS

Kansas State University (3)

MATHEMATICS

Koshkin, Sergiy, Homogeneous spaces & Faddeev-Skyrme.

Pasko, Brian, The cohomology of a matrix subgroup.

Randriampiry, Njinasoa, On A -quasiconvex functions and weak lower semicontinuity.

MARYLAND

John Hopkins University (5)

APPLIED MATHEMATICS AND STATISTICS

Aksakalli, Vural, Protocols for stochastic shortest path problems with dynamic learning.

Feng, Jian, Some probability and statistics problems in proteomics research.

Hu, Jiang, Sequential designing and terminal analysis of multinomial data.

Nickel, Christine, Random dot product graphs: A model for social networks.

Tucker, Kimberly, Exact and asymptotic dot product representations of graphs.

MASSACHUSETTS

Brandeis University (7)

MATHEMATICS

Balasubramanyam, Baskar, Hida families of Hilbert modular forms and p -adic L -functions.

Dousmanis, Gerasimos, Families of Wach modules and two-dimensional crystalline Galois representations.

Gospodinov, Georgi, Relative invariants of Legendrian knots.

Lai, Hsin-Hong, The invariance of virtual classes under blow up of a point when $g=0$.

Li, Ji, Counting prime graphs and point-determining graphs using combinatorial theory of species.

Rajagopalan, Sridhar, Heegaard Floer homology and symmetries of knots and links

Song, Balin, On the equivariant cohomology of the genus zero moduli space for stable maps to a grassmanian.

Harvard University (6)

MATHEMATICS

Chen, Jy-Ying Janet, The degree 4 L -function of an automorphic form full level on the rank 2 real symplectic group.

Cotterill, Ethan, Enumerative geometry of curves with exceptional secant planes.

Jain, Sonal, Minimal heights and regulators for elliptic surfaces.

Lobb, Andrew, A slice genus lower bound from $sl(n)$ Khovanov-Rozansky homology.

Mok, Chung-Pang, The exceptional zero conjecture for Hilbert modular forms.

Shin, Sug Woo, Counting points on Igusa varieties.

MISSISSIPPI

University of Mississippi (7)

MATHEMATICS

Bokka, Sankar, Statistical tests for the identification of differentially expressed genes.

Dolo, Samuel, A nonparametric test for scale in univariate population setup.

Garner, Latonya, A partially exchangeable model with applications to correlated binary data.

Horton, Leslie, Enumerations of independent sets in graph.

Keeton, Stephanie, The semiparametric exchangeable model and its applications.

Nicholson, Emlee, Long cycles and paths containing K -ordered vertices in graphs.

Smith, Pamela, An efficient nonparametric test for bivariate two-sample location problem.

MISSOURI

Missouri University of Science & Technology (1)

MATHEMATICS AND STATISTICS

Hu, Xiaojun, Distributional aspects of P -values and their use in multiple testing situations.

Washington University (9)

MATHEMATICS

Amei, Amei, A time-dependent Poisson random field model of polymorphism within and between two related species.

Brown, Ben, Ehrhart theory of lattice polytopes.

Knese, Greg, Schwartz lemmas on the polydisk.

Koester, Paul, Estimates on a generalization of the Erdős-Tiran function.

Kuttykrishnan, Sooraj, Stably tame polynomial automorphisms of polynomial rings in two variables over a UFD.

Lim, Wang Q., Wavelets with composite dilations and their applications.

Randle, Kim, Combinatorial properties of the conjugacy class subgroup partially ordered set of finite groups.

Vegulla, Prasda, Geometry of distinguished varieties.

Wiechmann, Aaron, Recognition of thin position and the additivity conjectures.

MINNESOTA

University of Minnesota (22)

SCHOOL OF MATHEMATICS

Collins, Kevin, An inverse problem in determining the electrical potential on the heart.

Dong, Bo, Superconvergent discontinuous Galerkin methods for elliptic problems.

Huska, Juraj, Qualitative properties of second order parabolic equations.

Jia, Ning, Matroids, Schubert polynomials and Fibonacci trees.

Karunathilake, Upali, A representation theorem for certain solutions to Burger's equation.

Kim, Pilwon, Invariantization of numerical schemes for differential equations using moving frames.

Kim, Yang-Jin, Mathematical modeling of cell movement and tumor spheroid growth in vitro.

Koch, Gabriel, A Liouville theorem for the two-dimensional Navier-Stokes equations.

Lee, Chang-Hyeong, Stochastic analysis of biochemical reaction networks.

Luo, Jun, On the rate of convergence of the finite-difference approximations for parabolic Bellman equations with constant coefficients.

Nien, Chu-Feng, Models of representations of general linear groups over p -adic fields.

Park, Jinhae, Mathematical modeling and analysis of ferroelectricity in liquid crystals.

Swenson, James, The mod-2 cohomology of finite Coxeter groups.

Tarfulea, Nicoleta, Mathematical modeling of signal transduction and cell mobility in tumor angiogenesis.

Taskin, Muge, Properties of four partial orders on standard young tableaux.

Wang, Haiyang, Hybridization of the continuous Galerkin finite element method for second-order elliptic and linear elasticity problems.

Wittman, Todd, Variational approaches to digital image zooming.

Xu, Fei, Homological properties of category algebras.

Zhang, Tianyu, Numerical simulation of Ferromagnetic shape memory thin film.

Drake, Daniel, Towards a combinatorial theory of multiple orthogonal polynomials.

Gantner, Ryan, Branching annihilating random walks and their application to traffic flow.

Harrelson, Eric, The homology of the open-closed Riemann surface operad and open-closed string topology.

NEW HAMPSHIRE

Dartmouth College (8)

MATHEMATICS

Campos, Oscar, Asymptotic tensor norms.

Dorais, Francois, Souslin trees and degrees of constructibility.

Esselstein, Rachel, On the complexity of building a graph with given neighborhoods.

Klyve, Dominic, Explicit bounds on twin primes and Brun's constant.

Moseman, Elizabeth, The combinatorics of coordinate percolation.

Setyadi, Alison, The affine buildings of SL_n and Sp_n : A combinatorial perspective.

Storm, Christopher, Extending the Ihara-Selberg zeta function of hypergraphs.

Tou, Erik, Zeta Functions for a class of cocompact arithmetic lattices in $SL(3, \mathbb{R})$.

NEW JERSEY

Stevens Institute of Technology (2)

MATHEMATICAL SCIENCES

Babaali, Parisa, Genesis and structural properties of random automata.

Strigul, Nikolai, A new method of scaling vegetation dynamics from individual level to forest ecosystems based on crown plasticity.

Rutgers University - Newark (1)

MATHEMATICS AND COMPUTER SCIENCE

Malik, Vidur, Curves generated on surfaces by the Gilman-Maskit algorithm.

Rutgers University - New Brunswick

(4)

STATISTICS AND BIOSTATISTICS

Chang, Denise, Individualized hospital report cards.

Fang, Jiangang, Network tomography: the estimation of traffic matrix and link delay.

Tang, Weihua, Conditional false discovery rate and significance analysis of microarray data.

Yue, Shentu, Some advances in causal inference with missing data and dichotomization of response in regression analysis.

NEW YORK

New York University, Courant Institute (11)

MATHEMATICS

Ariel, Gil, Effective stochastic dynamics in deterministic systems: Model problems and applications.

Barrerio, Andrea, Wave driven vertex of dynamics in the surf zone.

Calle, Maria, Mean curvature flow and minimal surfaces.

Hayes, Edward, The application of a semi-analytical method for computing asymptotic approximations to option prices.

Konig, Christoff, Arctic landfast sea ice.

Korotianev, Mikhail, Torelli-type theorem for curves defined over finite fields.

Ly, Cheng, Population density approach to neural network modeling: Dimension reduction analysis, technique, and firing rate dynamics.

Mori, Yoichiro, A three-dimensional model of cellular electrical activity.

Rutenburg, Alexander, PoRST Hamiltonian ten bulk-quantified gänge theory.

Wright, Paul, Rigorous results for the periodic oscillation of adiabatic piston.

Zhu, Guo Dong (Ernest), Pricing options on trading strategies.

State University of New York at Buffalo (1)

BIOSTATISTICS

Majumdar, Antara, Maximum likelihood estimation of models based on the Monte Carlo EM.

OHIO

Case Western Reserve University (18)

EPIDEMIOLOGY AND BIOSTATISTICS

Bochud, Murielle, Family-based association studies of the genetic determinants of renal sodium handling.

Hu, Simin, New methods for variable selection with applications to survival analysis and statistical redundancy using gene expression data.

Katamba, Achilles, Efficiency of sputum microscopy in diagnosis and cost-effectiveness of 6-month and 8-month treatment of new smear positive pulmonary setting of high HIV prevalence.

Larkin, Emma, A genetic analysis of correlated traits: The apnea hypopnea index and body mass index.

Miller, Katherine, Genetic susceptibility in Alzheimer's disease and the role of lipid metabolism.

Nakku-Joloba, Edith, The seroprevalence and incidence of Herpes 1 and 2 in Kampala, Uganda.

Peterson, Lars, Contextual associations of unmet health care locations.

Sinha, Moumita, Estimation of haplotype frequencies from data.

Sinha, Ritwik, Efficient confidence sets for disease gene.

Stubblefield, Angelique, Healthcare utilization and risk for intentional injury death among Ohio children enrolled in Medicaid, 1992-1998.

Sucheston, Lara, Statistical methods for the genetic analysis of developmental disorders.

Terris, Darcey, Maximizing efficiency in risk adjustment under conditions of uncertainty and resources constraints.

Thompson, Cheryl, Stratified linkage analysis based on population substructure.

Trapl, Erika, Understanding adolescent survey responses: impact of mode and other characteristics on data outcomes and quality.

Xing, Chao, Topics in multipoint linkage and association analysis.

Xing, Guan, A simple new method for robust estimation.

Xu, Zhiying (Cindy), A quantitative trait linkage method for longitudinal pedigree data and its application.

Zhou, Esther, Treatment outcomes for socialized prostate patients: From individual to population.

Ohio State University, Columbus (1)

MATHEMATICS

Stey, George Carl, Asymptotic expansion for the L' Norm of N-fold convolutions.

PENNSYLVANIA

University of Pittsburgh (9)

BIOSTATISTICS

Chen, Huanyu, Experimental design for unbalanced data involving a two level logistic model.

Dai, Feng, Variance components models in statistical genetics: Extensions and applications.

Dean, Leighton, A method for detecting optimal splits over time in survival analysis using tree-structured models.

Ko, Feng-shou, Identification and assessment of longitudinal biomarkers using frailty models in survival analysis.

Li, Jia, A strategy for stepwise regression procedures in survival analysis with missing covariates.

Lin, Yan, Statistical issues in family-based genetic association studies with application to congenital heart defects in Down syndrome.

Soaita, Adina, GEE models for the longitudinal analysis of the effects of occupational radiation exposure on lymphocyte counts in Russian nuclear workers.

Xu, Qing, Inference on survival data under nonproportional hazards.

Yu, Shui, A tree-structured survival model with incomplete and time-dependent covariates: Illustrations using type 1 diabetes data.

RHODE ISLAND

Brown University (3)

BIostatISTICS

Lee, Joo Yeon, Sensitivity analysis and informative priors for longitudinal binary data with dropout.

Shiu, Shang-Ying, PROC and ROC analysis: Effective of threshold value for diagnostic test and reference standard.

Su, Li, Bayesian semiparametric regression for censored and incomplete longitudinal data.

SOUTH CAROLINA

Clemson University (4)

MATHEMATICAL SCIENCES

Engau, Alexander, Beyond pareto optimality: Domination and decomposition in multiobjective programming.

Eyabi, Gilbert, Some properties of $L(2,1)$ -coloring as related to the channel assignment problem.

Lockard, Shannon, Random vectors over finite fields.

Singh, Vijay, Equitable efficiency in multiple criteria optimization.

TEXAS

Southern Methodist University (3)

STATISTICAL SCIENCE

Chen, Zhongxue, Probe-level data analysis for high-density oligonucleotide arrays.

Gu, Kangxia, The comparison of two poisson rates.

Lin, Qihua, Bayesian hierarchical spatiotemporal modeling of functional magnetic resonance imaging data.

Texas Tech University (3)

MATHEMATICS AND STATISTICS

McGee, Shelly, Computational modeling of chemical transport in flow structure interaction in porous media.

McGee, Wayne, h-p-k least squares finite element methodology and implementation for fluid-structure interaction.

Yan, Ke, Variance reduction for kernel estimators in clustered longitudinal data analysis.

VIRGINIA

Virginia Commonwealth University

(2)

BIostatISTICS

Davenport, James, An adaptive dose-finding design using a non-responders model.

Zhao, Jianmin, Optimal clustering: genetic constrained K- and linear programming algorithms.

WISCONSIN

University of Wisconsin - Milwaukee

(2)

MATHEMATICAL SCIENCES

Geliazkova, Maya, Spatial thresholding procedures in fMRI data.

Van Groningen, Anthony, Graded multiplicities of the nullcone for the algebraic symmetric pair of type G.