
Doctoral Degrees Conferred

2008–2009

ALABAMA

Auburn University (10)

DEPARTMENT OF MATHEMATICS AND STATISTICS

Baker, Charla, The intersection problem for Latin squares with holes of size 2 and 3

Bobga, Benkam, Some necessary conditions for list colorability of graphs and a conjecture on completing partial Latin squares

Chidume, Chukwudi, Iteration methods for approximation of solutions of nonlinear equations in Banach spaces

Divavahi, Venkata, Graph decompositions

Gammon, Kevin, Factorwise rigidity involving hereditarily indecomposable spaces

Jin, Kang, On the lattice Boltzmann method: Implementation and applications

Newman, Nicolas, Enclosings of small cycle systems

Nudurupati, Sai, Robust nonparametric discriminant analysis procedures

Peng, Man, Palm measure invariance and exchangeability for marked point processes

Turkmen, Asuman, Robust partial least squares for regression and classification

University of Alabama-Birmingham (11)

DEPARTMENT OF BIostatistics

Azuero, Andres, Comparisons of sequential testing approaches for detection of association between disease and haplotype blocks

Banerjee, Samprit, Bayesian genome-wide QTL mapping for multiple traits

Chen, Lang, Microarray data analysis for SNPs effects and inferring alternative splicing

Dube, Tina, Assessing and correcting the effects of measurement error among correlated covariates in a proportional hazards setting

Keith, Scott, Free-knot splines and bootstrapping for nonlinear modeling in complex samples

Li, Qing, Interim monitoring efficacy, safety and futility in Phase III clinical trials

Nair, Nitin, Adaptive procedures to detect treatment effects under unexpected covariate interactions

Prucka, William, Wavelet-based regression and classification for longitudinal diffusion tensor imaging data

You, Zhiying, Power and sample size of cluster randomized trials

DEPARTMENT OF MATHEMATICS

Kulkarni, Mandar, Multi-coefficient Dirichlet-Neumann type elliptic inverse problems with application to reflection seismology

Mavinga, Nsoki, Nonlinear second order parabolic and elliptic equations with nonlinear boundary conditions

University of Alabama-Huntsville (2)

DEPARTMENT OF MATHEMATICS

Bowie, Miranda, Liar's domination and the domination continuum

Puckett, Matthew, Minimum wave speed and uniqueness of monotone traveling waves

University of Alabama-Tuscaloosa (4)

DEPARTMENT OF MATHEMATICS

Fayoumi, Hiba, A study of binary systems on sets and applications to several classes of such systems

Kang, Hyuna, Stochastic and key rate duration for value at risk

Liu, Congxiao, Mathematical study for the switch-initiating field of $2d$ ferroantiferromagnet exchange coupled systems

Wu, Leina, Grid refinement method for partial differential equations

ARIZONA

Arizona State University (14)

SCHOOL OF MATHEMATICAL AND STATISTICAL SCIENCES

Alvarado, Alejandra, Arithmetic progressions on curves

Fortney, Jon Pierre, Dirac structures in pseudo-gradient systems with an emphasis on electrical networks

Kang, Yun, The dynamics of plant-herbivore interactions and their implications for spatial expansion

Kelkar, Ashwini, A study of the subgraphs and the conjecture of the middle two layers graph, using modular matchings

Kupresanin, Ana Maria, Topics in functional canonical correlation and regression

La Marca, Michael Benedetto, Control of continuum models of production systems

Park, Russell, Optimal compression and numerical stability for Gegenbauer reconstructions with applications

Saxena, Rishu, High order methods for edge detection and applications

Spiriti, Steven Mark, Random search optimization for free-knot splines and P -splines

Stefan, Wolfgang, Total variation regularization for linear ill-posed inverse problems: Extensions and applications

Unver, Ali Kemal, Observation based PDE models for stochastic production systems

Wallington, Rachel, Number fields with solvable Galois groups and small Galois root discriminants

The above list contains the names and thesis titles of recipients of doctoral degrees in the mathematical sciences (July 1, 2008, to June 30, 2009) reported in the 2009 Annual Survey of the Mathematical Sciences by 223 departments in 158 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 2010 issue of the *Notices*.

Yang, Hongling, A study of additive coefficient models

Zhang, Guoyi, Smoothing splines using compactly supported, positive definite, radial basis functions

University of Arizona (9)

DEPARTMENT OF MATHEMATICS

Bhattacharya, Abhishek, Nonparametric statistics on manifolds with applications to shape spaces

Kalaycioglu, Selin, Computing the projective indecomposable modules of large finite groups

PROGRAM IN APPLIED MATHEMATICS

Arciero, Julia, Theoretical models of blood flow regulation

Beauregard, Matthew, Nonlinear dynamics of elastic filaments conveying a fluid and numerical applications to the static Kirchhoff equations

Rael, Rosalyn, Comparing theory and data on multi-species interactions using evolutionary game theory

Reich, Daniel, Stochastic networks: Tractable approaches for identifying strategic paths

Robertson, Suzanne, Spatial patterns in stage-structured populations with density-dependent dispersal

Stover, Joseph, A general theory of monotonicity for interaction map particle systems and a stochastic spatial model for biological invasions

Vandiver, Rebecca, Morphoelasticity: The mechanics and mathematics of elastic growth

CALIFORNIA

California Institute of Technology (8)

DEPARTMENT OF APPLIED AND COMPUTATIONAL MATHEMATICS

Lyon, Mark, High-order unconditionally-stable FC-AD PDE solvers for general domains

Othmer, Jonathan, Mapping nucleic acid free energy landscapes

Stern, Ari, Geometric discretization of Lagrangian mechanics and field theories

DEPARTMENT OF MATHEMATICS

Pragel, Daniel, Embeddings of one-factorizations of hypergraphs and decompositions of partitions

Saha, Abhishek, On critical values of L -functions for holomorphic forms on $GSp(4) \times GL(2)$

Vuletic, Mirjana, The Pfaffian Schur process

Wong, Manwah, Orthogonal polynomials, paraorthogonal polynomials, and point perturbation

Zhuang, Dongping, A geometric study of commutator subgroups

Claremont Graduate University (7)

SCHOOL OF MATHEMATICAL SCIENCES

Bazan, Carlos, PDE-based image and structure enhancement for electron tomography of mitochondria

Hui, Kwok, Risks analysis of software development using Bayesian belief network and non-linear programming methods

Limon, Alfonso, A multilevel framework for PDEs whose solution exhibits fast transitions

Muhi El-Ddin, Imad, Watermarking schemes robust against affine attacks: An application of digital image processing in information technology

Nguyen, James, A hardware implementation of the level set method for robotic path finding with multiple obstacle avoidance

Park, Jeho, An empirical approach to communication and performance modeling for message passing parallel applications on cluster systems

Zhu, Bing, Computational modeling and bifurcation analysis of bubbling fluidized processes

Naval Postgraduate School (1)

DEPARTMENT OF APPLIED MATHEMATICS

Dea, John, High-order non-reflecting boundary conditions for the linearized Euler equations

Stanford University (5)

DEPARTMENT OF STATISTICS

Hoefling, Holger, Topics in statistical learning

Kapur, Karen, Modelling background and cross-hybridization effects of microarray probes

Khare, Kshitij, Constructions of Gaussian fields from Markov processes, and related topics

She, Yiyuan, Sparse regression with exact clustering

Zhou, Hua, Topics on Markov chains with polynomial eigenfunctions

University of California, Berkeley (41)

DEPARTMENT OF MATHEMATICS

Armstrong, Scott, Principal half-eigenvalues of fully nonlinear homogeneous elliptic operators

Baginski, Paul, Stable \aleph_0 -categorical algebraic structures

Blasiak, Jonah, Cyclage, catabolism, and the affine Hecke algebra

Brown, Jeffrey, Gromov-Witten invariants of toric fibrations

Chen, Qingtao, Some mathematical aspects of quantum field theory

Cotton-Clay, Andrew, Symplectic Floer homology of area-preserving surface diffeomorphisms and sharp fixed point bounds

Dutter, Seth, Logarithmic jet spaces and intersection multiplicities

Flenner, Joseph, The relative structure of Henselian valued fields

Judson, Zachary, Connectivity in the Higson corona of the positive real access

Long, Yun, Mixing time of the Swendsen-Wang dynamics in complete graphs and trees

Mkrtychyan, Sevak, Scaling limits of random skew plane partitions

Peters, Emily, A planar algebra construction of the Haagerup subfactor

Prat-Waldron, Arturo, Pfaffian line bundles over loop spaces, spin structures and the index theory

Ramakrishnan, Janak, Type of o -minimal theories

Rothbach, Brian, Borel orbits of $X^2 = 0$ in GL_n

Sain, Jeremy, Berezin quantization from ergodic actions of compact quantum groups and quantum Gromov-Hausdorff distance

Sammis, Ian, Implicit and fourth-order semi-Lagrangian contouring for geometric moving interface problems

Schommer-Pries, Christopher, The classification of two-dimensional extended topological field theories

Snyder, Noah, Quantum groups, tensor categories and knot invariants

Somersille, Stephanie, Biased tug of war, the biased infinity Laplacian and comparison with exponential cones

Stovall, Lindsay, L^p inequalities for certain generalized Radon transforms

Tohaneanu, Mihai, Local energy estimates and structure estimates on Schwarzschild and Kerr black hole backgrounds

Tolland, Andrew, Gromov-Witten gauge theory

Trokhimchouk, Maxim, Regularity for certain parabolic diffusion systems

Varilly-Alvarado, Anthony, Arithmetic of del Pezzo surfaces of degree 1

Wu, Guoliang, Impulse control of multidimensional diffusion and jump diffusion processes

Zhu, Xinwen, Gerbal representations of double loop groups

DEPARTMENT OF STATISTICS

Ahn, Soyeon, Statistical topics in gene regulation

Bae, Chongsoon, Analyzing random forests

Hather, Greg, Statistical analysis of DNA sequence motifs and microarray data

Liang, Richard, Two continuum-sites stepping stone models in population genetics with delayed coalescence

Obozinski, Guillaume, Simultaneous variable selection and simultaneous subspace selection for multitask learning

Ralph, Peter, Most recent common ancestors, genetic inheritance, stochastic gene transcription and Brownian motion on disconnected sets: A probabilistic analysis of a few models

Rosenberg, David, Semi-supervised learning with multiple views

Sly, Allan, Spatial and temporal mixing of Gibbs measures

Vu, Vince, High dimensional data analysis: Entropy and regression

Xu, Na, Transcriptome detection by multiple RNA tiling array analysis and identifying functional conserved non-coding elements by statistical testing

Yan, Donghui, Some issues with dimensionality in statistical inference

GROUP IN BIOSTATISTICS

Gilbert, Houston, Multiple hypothesis testing: Methodology, software implementation, and applications to genomics

Moore, Kelly, Targeted maximum likelihood estimation of treatment effects in randomized controlled trials and drug safety analysis

Rubin, Daniel, Applications of double robustness

University of California, Davis (20)

DEPARTMENT OF MATHEMATICS

Baba, Shinpei, Decomposition theorems for complex projective structures

Berg, Christopher, Combinatorics of $(l, 0)$ -JM partitions, l -cores, the ladder crystal and the finite Hecke algebra

Hallowell, Karl, Higher spin approaches to quantum field theory and (pseudo)-Riemannian geometries

Haws, David, Matroid polytopes: Algorithms, theory, and applications

Miller, Adam, How disturbance creates the storage effect and promotes maintenance of species diversity

Mulherkar, Jaideep, Some properties of the XXZ spin chain and their applications to quantum computing

Needell, Deanna, Topics in compressed sensing

Raz, Hillel, Lieb-Robinson bounds in the anharmonic lattice

Sershen, Cheryl, A dynamic model of DNA structure and function

Stevens, Alice, Knots in Heegaard surfaces

Strawbridge, Eva, Mechanics, dynamics, and structures of DNA

DEPARTMENT OF STATISTICS

Barkauskas, Donald, Statistical analysis of matrix-assisted laser desorption/ionization Fourier transform ion cyclotron resonance mass spectrometry data with applications to cancer biomarker detection

Chen, Kun, Functional approaches for high dimensional and gene expression data

Chen, Ying, Statistical approaches for detection of relevant genes and pathway in analysis of gene expression data

Liu, Bitao, Functional data analysis for online auction data

Liu, Jingyi, A shrinkage-average method for fitting high dimensional linear models

Liu, Ziqi, Nonparametric bootstrap method on Stiefel manifold and GPAV algorithm for ASP fit

Norris, Ann (Michelle), Parametric and semiparametric joint modeling for longitudinal diagnostic outcomes

Weng, Qian, Modeling progression of neurodegenerative disease with longitudinal neuroimaging data

Xu, Qiuyan, Estimation of integrated covolatility for asynchronous assets in the presence of microstructure noise

University of California, Irvine (8)

DEPARTMENT OF MATHEMATICS

Bjork, Andrew-David, Criteria for rank-one transformations to be weakly mixing, and the generating property

Cao, Yanping, On the α -regularization of nonlinear partial differential equations-analysis and error estimates

Cox, Sean, Covering theorems for the core model, with applications

Hu, Zhengzheng, Phase-field modeling of thin film epitaxial growth

Kypriotakis, Kyriakos, Combinatorial principles in Jensen type extender models of the form $L[E]$

Le, Phong, Coherent decomposition of p -adic Newton polygons for L -functions of exponential sums

Luo, Songting, Numerical methods for static Hamilton-Jacobi equations

Matayoshi, Jeffrey, The zeros of random polynomials

University of California, Los Angeles (22)

DEPARTMENT OF MATHEMATICS

Blunk, Mark, Del Pezzo surfaces of degree 6 over an arbitrary field

Chen, Lin, Chern-Simons theory of knot invariants

Chifan, Ionut, Deformation spectral gap rigidity in von Neumann algebras

Citro, Craig, L -invariants of adjoint square Galois representations coming from modular forms

Conley, Clinton, Some applications of combinatorics in descriptive set theory

Dong, Bin, Applications of variational models and partial differential equations on medical image and surface processing

Gautam, Sushrut Zubin, Two geometric obstruction results in harmonic analysis

Herman Jr., Paul Edward, Applications of beyond endoscopy

Kim, Yunho, Variational methods: Theory and its applications to image deblurring and denoising problems

Lie, Victor Daniel, Relational (quadratic) time-frequency analysis

Liu, Jian, Controlling the dynamics of recurrent neural networks with synaptic learning rules

Lu, Steve, New constructions in pairing-based cryptography

Mathews, Bryant, Canonical dimension of projective homogeneous varieties of inner Type A and Type B

Nguyen, Dinh Huu, On P -generic splitting varieties for Milnor K -symbols mod P

Roy, Tristan, Global analysis of the defocusing cubic wave equation in dimension 3

Shao, Shuanglin, Restriction of estimates for paraboloids and cones in the cylindrically symmetric case

Shiber, Dan, Tracial and non-tracial random matrix models in free probability

Thompson, Alexander, A metamathematical condition equivalent to the existence of a complete left invariant metric for a Polish group

Vanvalkenburgh, Michael, Hermite/Laguerre-Gaussian modes and lower bounds for quasimodes of semiclassical operators

Virtanen, Jukka Tapio, Structure of elementary particles in non-Archimedean spacetime

DEPARTMENT OF STATISTICS

Anderson, Ariana, Machine learning for classification and diagnosis of functional magnetic resonance image scans

Zhu, Long, Recursive composition in computer vision: Modeling, inference, and learning

University of California, Riverside (7)

DEPARTMENT OF STATISTICS

Bi, Yingtao, Theoretical analysis of classification under CCC-noise and its application to semi-supervised text mining

Kim, Sungsu, Inverse circular regression with possibly asymmetric error distribution

Montes de Oca, Veronica, Nonparametric cusum algorithms with applications to network surveillance

Pal, Rupam Ranjan, Efficient designs for discriminating between two competing linear regression models

Shah, Payal, Sequential sampling methods using generalized linear models with applications to pest density estimation

Suarez Espinoza, Javier, Inference for the multiparameter skew normal distribution

Yu, Hua, Neutral zone classifiers within a decision-theoretic framework

University of California, San Diego (16)

DEPARTMENT OF MATHEMATICS

Armel, Jonathan, Holomorphic extension of solutions to homogeneous analytic partial differential equations

Averett, Maia Christine, On real Johnson-Wilson theories

Beeson, Amanda, Groups of special units
Comstock, Jana, A finite presentation of knotted trivalent graphs

Eldredge, Nathaniel, Holomorphic extension of solutions to homogeneous analytic partial differential equations

Fuller, Evan, Generating functions for composition/word statistics

Grice, Jon, Discrete quantum control

Gurvich, Michael, Some results on the topology of quasitoric manifolds and their equivalent mapping spaces

Horn, Paul, Random subgraphs of a given graph

Jehring, Kristin, Harmonic functions on Walsh's Brownian motion

Kinnally, Michael, Stational distributions for stochastic delay differential equations with non-negativity constraints

Lee, Nam Heon, A sufficient condition for stochastic stability of an Internet congestion control model in terms of fluid model stability

Niedermaier, Andrew, Statistics on wreath products

Raleigh, Sean, Ruled Legendrian knots and Lagrangian surfaces

Szypowski, Ryan, Least-squares finite elements and constrained evolution systems

Yacobi, Oded, An analysis of multiplicity spaces in classical symplectic branching

University of California, Santa Barbara (12)

DEPARTMENT OF MATHEMATICS

Dai, Dongyan, Convergence of the Yamabe flow on manifolds with boundary

Hendratta, Melisa, A dynamical system model for simulating myxobacteria life cycle

Kessenich, Paul, Global existence with small initial data for three-dimensional incompressible isotropic viscoelastic materials

Levitt, John, Embeddings of Mori dream spaces

Mohler, George, Efficient, non-stiff, and multiscale methods for complex fluids

Qi, Jiawei, Effective dynamics for ferrofluids

Taylor, Scott, Boring split links and unknots

DEPARTMENT OF STATISTICS AND APPLIED PROBABILITY

Eli, Kollman, Calibrating market and asset returns from stochastic volatility skew effects

Jang, Homin, Shrinkage estimators of variances and their applications to microarray data analysis

Marick, Sinay, Bayesian inference for linear and generalized linear models with flexible prior structure on the covariance matrix

Tung, David, Some contributions to inference based on spacing

Wignall, Brian, Structural modeling and top-down reduced-form modeling for multi-name credit derivatives

University of California, Santa Cruz (1)

DEPARTMENT OF APPLIED MATHEMATICS AND STATISTICS

Schuresko, Michael, Controlling global network connectivity of robot swarms with local interactions

University of Southern California (12)

DEPARTMENT OF MATHEMATICS

Aydilek, Harun, Optimal decisions under recursive utility

Glatt-Holtz, Nathan, Stochastic equations in geophysical fluid dynamics

Guest, Simon, A solvable version of the Baer-Suzuki theorem and generalizations

Jedwab, Andrea, Representations of finite dimensional Hopf algebras

Oleksandr, Lytvak, Fully discrete approach for estimating local volatility in the generalized Black-Scholes setting

Piterbarg, Yuliya, Population modeling and Bayesian estimation for the deconvolution of blood alcohol concentration from transdermal biosensor data

Psiloyenis, Yiannis, Mixing conditions and long return times on Markov towers

Seliger, Philip, Optimal device design

Song, Qian, Optimal and exact control of deterministic, stochastic or parabolic differential equations

Yang, Yan, Mathematical modeling and analysis of representation error and system uncertainties for discretized distributed parameters systems

Zeng, Yu, Large deviations approach to the bi-stable systems

Zhou, Yuegang, Credit risk of a leveraged firm in a controlled optimal stopping framework

COLORADO

Colorado State University (13)

DEPARTMENT OF MATHEMATICS

Bikowski, Jutta, Electrical impedance tomography reconstructions in two and three dimensions; form Calderon to direct methods

Frederick, Christopher, Persistence homology of sequences of neighborhood complexes for graphs

Jamshidi, Arthur, Modeling spatio-temporal systems with skew radial basis functions: Theory, algorithms and applications

Jónsdóttir, Margrét, Automorphism towers of general linear groups

Ladd, Joshua, Large-scale computational analysis of national animal identification system mock data, including trace back and trace forward

Lee, Sheldon, An adaptive algorithm for an elliptic optimization problem, and stochastic-deterministic coupling: A mathematical framework

DEPARTMENT OF STATISTICS

Delorey, Mark, Penalized estimation for sample surveys in the presence of auxiliary variables

E, Lidong, Application of generalized fiducial inference

Hancock, Stacey, Estimating the number of structural breaks in nonstationary time series

Huang, Wenying, Spatial processes with stochastic heteroscedasticity

Iverson, Todd, Kernel methods for a discrete state/continuous time process with auxiliary information

Wang, Ke, Spatial models with applications in computer experiment

Yang, Yu, Estimation for Lévy-driven CARMA processes

University of Colorado, Boulder (13)

DEPARTMENT OF APPLIED MATHEMATICS

Barker, Andrew, Parallel monolithic fluid-structure interaction algorithms with application to blood flow simulation

Haut, Terry, Analysis and applications of nonlocal spectral formulations of fluids with free interfaces and surfaces

Sanders, Geoffrey, Two extensions to adaptive smooth aggregation (aSA) multigrid: Eigensolver initialization and nonsymmetric problems

Simpson, David, Bifurcations in piecewise-smooth, continuous systems

DEPARTMENT OF MATHEMATICS

D'Andrea, Jonas, Wavelet frames on fractal spaces of Dutkay-Jorgensen type

Denoncourt, Hugh, Some combinatorial models for reduced expressions in Coxeter group

Doctoral Degrees Conferred

Ernst, Dana, A diagrammatic representation of an affine C Temperley-Lieb algebra

Formichella, Marc, Functional equations among Barnes' integrals and hypergeometric series

Kang, Sooran, The Yang-Mills functional and Laplace's equation on quantum Heisenberg manifolds

Mishev, Ilija, Coxeter group actions on supplementary pairs of Saalschützian ${}_4F_3(1)$ hypergeometric series

Pohlmann, Brent, Structural properties of acyclic heaps with applications to Kazhdan-Lusztig theory

Schumacher, Timothy, Removable boundary singularities for the equation $\Delta u = u^\alpha$ in non-smooth domains

Shaw, Jason, Commutator relations and the clones of finite groups

University of Colorado, Denver (5)

DEPARTMENT OF BIOSTATISTICS AND INFORMATICS

Boyd, Adam, Censoring-robust treatment effect estimation in clinical trials with time-to-event outcomes

DEPARTMENT OF MATHEMATICAL AND STATISTICAL SCIENCES

Beezley, Jonathan, High-dimensional data assimilation and morphing ensemble Kalman filters with applications in wildfire modeling

Flink, Stephen, Truncated quadrics and elliptic curves

Harris, Angela, Cycle structures in graphs
Zakharyan, Armen, Stochastic diffusion model of heterogeneous populations

University of Northern Colorado (2)

SCHOOL OF MATHEMATICAL SCIENCES

Phipps, Marnie, A phenomenological investigation on eighth graders' number sense of fractions

Toney, Allison, Women with advanced degrees in mathematics in doctoral programs in mathematics education

CONNECTICUT

University of Connecticut, Storrs (13)

DEPARTMENT OF MATHEMATICS

Alagic, Gorjan, Uncertainty principles for compact groups

Bella, Thomas, Topics in numerical linear algebra related to quasiseparable and other structured matrices

Corluy, Marc, Rates of conveyance in the central limit theorem for Markov chains

Jura, Matthew, Reverse mathematics and the coloring number of graphs

Levin, Oscar, Computability theory, reverse mathematics and ordered fields

Markkanen, Tyler, Separating the degree spectra of structures

Prime, Russell, Averaging quadratic L -functions over function fields

Rong, Zhou, Numerical simulation of cell movement

Sang, Hailin, Asymptotic properties of generalized kernel density estimators

Termine, Lisa, Existence of solutions to semilinear elliptic differential equations using computer verification

Wooster, Robert, Evolution systems of measure for stochastic differential equation with Levy noise

DEPARTMENT OF STATISTICS

Xie, Wangang, Bayesian phylogenetic model selection and applications

Zhao, Yifang, Contributions to microarray data analysis

Wesleyan University (4)

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Gould, Franklin, On certain classes of minimally almost periodic groups

Hall, Becky, An improved method for computing group cohomology of congruence subgroups of $SL_3(\mathbb{Z})$

Pan, WeiWei, Group actions on categorized bundles

Shea, Steve, Finitary isomorphisms of r -processes

Yale University (4)

DEPARTMENT OF MATHEMATICS

Aryapoor, Masood, The Penrose transform and self-dual Yang-Mills equations in split signature

Le Donne, Enrico, Bi-Lipschitz homogeneous geodesic manifolds

Mohammadi, Amir, Unipotent flows in positive characteristics and applications

Warshall, Andrew, Depth and related properties of infinite finitely generated groups

DELAWARE

University of Delaware (8)

DEPARTMENT OF MATHEMATICAL SCIENCE

Gutekunst, Todd, Subsets of finite groups exhibiting additive regularity

Heryudono, Alfa, Adaptive radial basis function methods for the numerical solution of partial differential equations with application to the simulation of the human tear film

Maki, Kara, Computational solutions of linear systems and models of the human tear film

Wang, Zeyang, Skew Hadamard difference sets, strongly regular graphs and p -ary bent functions

Wei, Ang, Random-harmonic functions and multivariate Gaussian estimates

Wu, Junhua, Geometric structures and linear codes related to conics in classical projective planes of odd orders

Xu, Livei, Computational methods for a class of problems in acoustic, elastic and water waves

Zeev, Noam, Direct and inverse scattering problems for thin dielectric and partially coated objects

DISTRICT OF COLUMBIA

George Washington University (4)

DEPARTMENT OF MATHEMATICS

Luse, Terry, Invariants of knots, graphs, and Feynman diagrams

Pingrey, Sarah, Strong degree spectra of relations

DEPARTMENT OF STATISTICS

Hikawa, Hiroyuki, Local linear Peters-Belson regression and its applications to employment discrimination cases

Yan, Lihan, Group sequential robust designs in genetic studies

Howard University (2)

DEPARTMENT OF MATHEMATICS

Al-Islam, Najja, Pseudo almost periodic solutions to some systems of nonlinear hyperbolic second-order partial differential equations

Salaam, Lifoma, Combinatorial statistics on phylogenetic trees

FLORIDA

Florida Atlantic University (4)

DEPARTMENT OF MATHEMATICAL SCIENCES

Bozovic, Vladimir, Algebraic and combinatorial aspects of group factorizations

Hopkins, Mary, Weakly integrally closed monoids and forbidden patterns

Kasprikova, Eva, Higher-order commutators in the method of orbits

Wess, Mark, Computing topological dynamics from time series

Florida Institute of Technology (1)

DEPARTMENT OF MATHEMATICAL SCIENCES

Huang, Weijun, Sequential stochastic games

Florida State University (12)

DEPARTMENT OF MATHEMATICS

- Lebedev, Yuri*, Open math library for computing on Riemann surfaces
- Lin, Haomin*, An optimal control problem for a time dependent Ginzburg-Landau model of superconductivity
- Mavroudis, Konstantinos*, Constant proportions portfolio strategies in an evolutionary context under a dividend factor model
- Salta, Emmanuel*, Variance reduction techniques in pricing financial derivatives
- Shah, Manan*, Randomized quasi-Monte Carlo methods and the computation of endogenous mortgage rates
- Tzigantcheva, Milena*, Stochastic volatility extensions of the swap market model
- Yoo, Eunjoo*, Variance gamma pricing of American futures options

DEPARTMENT OF STATISTICS

- Balov, Nikolay*, Covariance on manifolds
- Ivanescu, Andrada*, Revealing sparse signals in functional data
- Lin, Lanjia*, Association models for clustered data with binary and continuous responses
- Liu, Yang*, Transformation models for survival data analysis and applications
- Simino, Jeanette*, Discrimination and calibration of prognostic survival models

University of Central Florida (8)

DEPARTMENT OF MATHEMATICS

- Boustique, Hatim*, Lattice valued convergence: Quotient maps
- Bryant, Donald*, Analysis of Kolmogorov's superposition theorem and its implications with low and high dimensional data
- Galiffa, Daniel J.*, The Sheffer *B*-type 1 orthogonal polynomial sequences
- Khosravi, Mehrdad*, Pseudoquotients: Construction, applications, and their Fourier transform
- Konate, Souleymane*, Efficient cone beam reconstruction for the distorted circle and line trajectory
- Landon, Benjamin*, Degree of approximation of Holder continuous functions
- Lopez, Jerry*, Optimal dual frames for erasures and discrete Gabor frames
- Macon, Lisa Fischer*, Almost regular graphs and edge face colorings of plane graphs

University of Florida (6)

DEPARTMENT OF MATHEMATICS

- Dashti, Seyyed*, Effective symbolic dynamics
- Nguyen, Hung Ngoc*, Representations of finite groups of Lie type

DEPARTMENT OF STATISTICS

- Li, Zhen*, Bayesian methodologies for genomic data with missing covariates
- Roy, Vivekananda*, Theoretical and methodological developments for Markov chain Monte Carlo algorithms for Bayesian regression
- Wu, Song*, A robust approach for genetic mapping of complex traits
- Yap, John*, Nonparametric covariance estimation in functional mapping of complex dynamic traits

University of Miami (3)

DEPARTMENT OF MATHEMATICS

- Coburn, Brian*, Multi-species influenza models with recombination
- Donzelli, Fabrizio*, Algebraic density property of homogeneous spaces
- Zivanovic, Sanja*, Attractors in dynamics with choice

University of South Florida (1)

DEPARTMENT OF MATHEMATICS AND STATISTICS

- Miladinovic, Branko*, Kernel density estimation of reliability with applications to extreme value distributions

GEORGIA

Emory University (11)

DEPARTMENT OF BIostatistics

- Kwee, Lydia*, Multilocus methods for association mapping of complex traits
- Lu, Chengxing*, Statistical methods to adjust for misclassified repeated exposures in modeling disease-exposure associations
- Price, Megan*, Issues in causal inference and applications to public health
- Wiener, Jeffrey*, Evaluating agreement among observers or methods of measurement for quantitative data

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

- Avart, Christian*, Colorful flowers
- Castle, Mariangely*, Polya's theorem with zeros
- Chung, Julianne*, Numerical approaches for large-scale ill-posed inverse problems
- Dudek, Andrzej*, Problems in extremal combinatorics
- Malagon, Audrey*, Killing forms of Lie algebras
- Poerschke, Annika*, On algorithmic hypergraph regularity
- Razouk, Nader*, Localization phenomena in matrix functions: Theory and algorithms

Georgia Institute of Technology (13)

SCHOOL OF MATHEMATICS

- Bilinski, Mark*, Approximating the circumference of 3-connected claw-free graphs
- Bird, Csaba*, Problems and results in partially ordered sets, graphs and geometry
- Greenberg, Samuel*, Random sampling of lattice configurations using local Markov chains
- Jiménez, David*, Analysis of two problems in signal quantizations and A/D conversion
- Li, Yongfeng*, Nonlinear oscillation and control in the BZ chemical reaction
- Litherland, Trevis*, On the limiting shape of random young tableaux for Markovian words
- Marcus, Adam*, New combinatorial techniques for non-linear orders
- Pearson, John*, The noncommutative geometry of ultrametric Cantor sets
- Pugliese, Alessandro*, Theoretical and numerical aspects of coalescing of eigenvalues and singular values of parameter dependent matrices
- Savinien, Jean*, Cohomology and *K*-theory of aperiodic tilings
- Xu, Hua*, Aspects of random matrix concentration and subsequence problems
- Young, Stephen*, Random dot product graphs: A flexible model for complex networks
- Yurchenko, Aleksey*, Some problems in the theory of open dynamical systems and deterministic walks in random environments

University of Georgia (13)

DEPARTMENT OF MATHEMATICS

- Bagci, Irfan*, Cohomology and support varieties in Lie superalgebras
- Hower, Jeremiah*, On elliptic curves and arithmetical graphs
- Zhuang, Chao*, Approximation methods and applications in financial optimization problems

DEPARTMENT OF STATISTICS

- Brezel, Ellen Hepfer*, Effects of common errors in microsatellite data on estimates of population differentiation and inferring genotypic structure of complex loci using genome-wide expression data
- Chen, Jien*, Applications of empirical likelihood to quantile estimation and longitudinal data
- Le-Rademacher, Jennifer*, Principal component analysis for interval-valued and histogram-valued data and likelihood functions and estimators for symbolic data
- Liu, Shangbin*, Statistical issues on mass spectrometry-based protein identification and quantitation

Qiu, Junshan, Variable selection methods with applications
Sun, Guoying, A genetical genomics to genome scan for complex traits
Tewari, Susanta, Construction of high-resolution likelihood-based integrated genetic and physical map of neurospora crassa
Wang, Qin, Sufficient dimension reduction and sufficient variable selection
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Bauer, Ryan, Disjoint cycles and tree packings in graphs
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Meshes, Jonathan, Functions in class F in the unit disc which have integrals not in F
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A, Min, Solvability of diffusion models of insect movement in complex landscapes
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- Shklyarov, Dmytro*, Hirzebruch-Riemann-Roch theorem for differential graded algebras

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- Tang, Zhongwen*, Lack of fit of logistic GEE models and cost efficient Bayesian optimal designs for nonlinear combinations of parameters in nonlinear regression models
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Yengulalp, Lynne, Coarser connected topologies and non-normality points

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Nicolas, Carlos, Structural and enumerative properties of k -triangulations of the n -gon

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Chirilla, Costel, Empirical processes and ROC curves with an application to linear combinations of diagnostic tests

Yu, Lei, Extended polychotomous logistic Markov model for longitudinal categorical responses

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University of Louisiana at Lafayette (4)

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Chan, Kwun Chuen (Gary), Recurrent marker process before failure event: A backward process approach

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- Li, Xiaohong*, Approaches to estimation of haplotype frequencies and haplotype-trait associations
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DEPARTMENT OF MATHEMATICS AND STATISTICS

- Grigoryan, Viktor*, Stability of geodesic wave maps
- Hall-Seelig, Laura*, Asymptotically good towers of global function fields and bounds for the Ihara function
- Kucuksakalli, Omer*, Class numbers of ray class fields of imaginary quadratic fields
- Milburn, Brett*, Dirac maps and generalized complex geometry on homogeneous spaces
- Shieh, Meng-Shiou*, Correction methods, approximate biases, and inference for misclassified data

Worcester Polytechnic Institute (1)

DEPARTMENT OF MATHEMATICAL SCIENCES

- Huang, Xueying (Shirley)*, In vivo MRI-based three-dimensional fluid-structure interaction models and mechanical image analysis for human carotid atherosclerotic plaques

MICHIGAN

Michigan State University (13)

DEPARTMENT OF MATHEMATICS

- Arikan, Mehmet*, Topological invariants of contact structures and planar open books
- Condori, Alberto*, Thematic indices and superoptimal singular values of matrix functions
- Durusoy, Daniel*, Heegaard Floer homology of certain 3-manifolds and cobordism invariants
- Dyer, Kimberly*, Almost dual FF-modules
- Enders, Joerg*, Generalizations of the reduced distance in the Ricci flow—Monotonicity and applications
- Geng, Weihua*, Interface method and Green's function based Poisson Boltzmann equations solver and interface technique based molecular dynamics
- Kim, Dong-Joong*, Comparison of native-English and native-Korean speaking university students' discourses on infinity and limit
- Knapp, Adam*, Computations of Lagrangian Floer homology and gauge theoretic invariants for Montesinos twins
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- Tsai, Chih-Hsiung*, Algorithms for solving polynomial systems by homotopy continuation method and its parallelization
- Zhang, Ying*, Mixed volume and total degree

DEPARTMENT OF STATISTICS AND
PROBABILITY

- Aggarwal, Deepa*, On some inference problems for current status data
Zhu, Yongfang, Statistical models for assessing the individuality of fingerprints

Oakland University (4)

DEPARTMENT OF MATHEMATICS AND
STATISTICS

- Coffield, Daniel*, A model for single phase flow in horizontally fractured porous media using homogenization techniques
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Jia, Feiyi, Contributions to Bayesian ranking and selection rules and to randomized response survey analysis
Rathugamage, Sriyani Renuka Menike, Models and analysis for adhesive contact, material damage, and cardiac waves

University of Michigan (25)

DEPARTMENT OF MATHEMATICS

- Felgueiras, Oscar*, The ample cone for a morphism
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More, Yogesh, Arc valuations on smooth varieties
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Yang, Bo, Application of perturbation methods to pricing credit and equity derivatives

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- Hamidieh, Kamal*, Topics in statistical modeling of extremes and their dependence
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Yang, Lili, Sample based estimation of network traffic flow characteristics
Zhao, Ou, Isotonic regression and stationary random walks

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- Holdai, Veera*, Multichannel change point problems
Kan, Shaobai, System identification in stochastic hybrid systems
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Truong, Bao, Variational analysis and applications to multiobjective optimization
Zhu, Huiqing, Discontinuous Galerkin methods for singularly perturbed problems

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- Madden, Sandra*, High school mathematics teachers' evolving study of comparing distributions

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- Awosoga, Oluwagbohunmi*, Meta analyses of multiple baseline time series design intervention models for dependent and independent series
Nantz, Eric, Testing equality of competing risks of patient discontinuation across multiple disease states
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Rosales, Mathew, Robustness of confidence intervals for the mean of delta distribution

- Tena, Jezania Kira*, Test procedures for equality of two variances in delta distributions

MINNESOTA

University of Minnesota-Twin Cities (10)

DIVISION OF BIOSSTATISTICS, SCHOOL OF
PUBLIC HEALTH

- Li, Meijuan*, Statistical models for a censored quantitative trait and candidate genes association mapping in structured populations with multilevel genetic relatedness
Wei, Peng, Network-based mixture models for genomic data

SCHOOL OF STATISTICS

- Adraghi, Kofi Placid*, Principal fitted components on small samples
Deng, Qiqi, Developing a distribution-free change-point model for unknown-baseline data
Dong, Hua, Statistical properties of Gaussian reproducing kernel in univariate density estimation
Flegal, James, Monte Carlo standard errors for Markov chain Monte Carlo
Joo, Jonghoon, Curve/surface estimation with possible jumps/roofs/valleys preserved
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Wang, Huixin, On large margin hierarchical classification
Wu, Seongho, Homotopy, nonconvexity and regularization

MISSISSIPPI

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DEPARTMENT OF MATHEMATICS AND
STATISTICS

- Shahul-Hameed, Jaffar Ali*, Multiple positive solutions for classes of elliptic systems with combined nonlinear effects

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DEPARTMENT OF MATHEMATICS

- Chism, Lyrial*, On independence polynomials and independence equivalence in graphs
Craddock, Michelle, Reflexivity and the Grothendieck property for positive tensor products of Banach lattices
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Song, Lanzhen, Independence polynomials of k -tree related and well-covered graphs

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Lin, Xiaoyan, Bayesian hierarchical models for the recognition-memory experiment

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Zhu, Min, Functional transformed models: Frequentist on Bayesian approaches

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Zhang, Wei, Modularity of generating functions of special cycles on Shimura varieties
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Verdugo, Angel, Dynamics of gene networks with time delays

DEPARTMENT OF MATHEMATICS

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Murgescu, Radu, On the p -class groups of the pure number field $\mathbb{Q}(N^{1/p})$ and its Galois closure $\mathbb{Q}(N^{1/p}, \zeta_p)$
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- Freire, Juliana*, Analysis techniques for nudged random processes
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- Kerzhner, Yakov*, Eisenstein series, uniqueness principle, and finite order bounds
- Le, Nam Quang*, Analysis of several sharp-interface limits in variational problems
- Lee, Darren*, Two constructions of complete minimal surfaces
- Mintchev, Stanislav*, Self-organization phenomena in networks of pulse-coupled phase oscillators
- Momin, Al Saeed*, Intersection theory in 3-dimensional linearized contact homology
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- Tulloch, Ross*, Geostrophic dynamics at surfaces in the atmosphere and ocean

- Yarmola, Tatiana*, Invariant measures for degenerate random perturbations of discrete-time dynamical systems
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- Lin, Kui*, Error estimation for the direct inversion model and numerical schemes for the full inversion model in elastography
- Morales, Jose*, Synthetic-aperture radar imaging and waveform design for dispersive media
- Rasmussen, Kathryn*, Optical pulse dynamics in active media with negative refractive index
- Saintval, Wendy*, Influence of modal attenuation on shallow water propagation
- Wang, Chaoxiong*, Power control for multiuser communication systems and computation of generalized Nash equilibria

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- Cai, Xueya*, Generalized linear model approach for estimating and testing equality of control correlations
- Miller, Austin*, Statistical methods for biodosimetry in the presence of both Berkson and classical measurement error

DEPARTMENT OF MATHEMATICS

- Buettgens, Matthew*, Property Tao and von Neumann algebras
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- Li, Bo*, Regularity estimates for Berezin's operator calculus

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- Kim, Daesang*, Network flow model for the simulation of CO2 sequestration process
- Kim, Dongyung*, Conservative data collections and comparison study for front-tracking
- Lee, Jungyeon*, Extending commingling analysis to exponential distributions and its genetic applications
- Yongzhi, Chen*, Task mapping on supercomputers with cellular networks

DEPARTMENT OF MATHEMATICS

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- Hazard, Peter*, Hénon-like maps renormalisation
- Ostrowsky, Stanislov*, Weighted L^2 interpolation on non-uniformly separated sequences
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- Thind, Jaimal*, Categorical combinatorial constructions of A, D, E root systems
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DEPARTMENT OF MATHEMATICS AND STATISTICS

Clark, Timothy, Poset resolutions of monomial ideals

Savvopoulou, Anna, Almost everywhere convergence of convolution measures

Wedrychowicz, Christopher, Almost everywhere convergence of weighted averages

University of Rochester (7)

DEPARTMENT OF BIostatistics AND COMPUTATIONAL BIOLOGY

Chen, Linlin, The correlation structure of microarray data and its statistical implications

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Pearson, Alexander, Subset selection for high-dimensional data, with applications to gene array data

DEPARTMENT OF MATHEMATICS

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Scott, James, Bayesian adjustment for multiplicity

Vance, Eric Alan, Statistical methods for dynamic network data

Zhang, Liang, Statistical computation for model space exploration in high-dimensional problems

North Carolina State University (40)

DEPARTMENT OF MATHEMATICS

Andjelkovic, Ivan, Auxiliary signal design for fault detection for nonlinear systems: Direct approach

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Davis, Jimena, Uncertainty quantification in the estimation of probability distributions on parameters in size-structured population models

Dickson, Kelly, Condition estimates for numerical continuation with applications to atomic and molecular fluids

Ellwein, Laura, Cardiovascular and respiratory regulation, modeling and parameter estimation

Ernstberger, Jon, High speed parameter estimation for a homogenized energy model

Ernstberger, Stacey, Sensitivity methods for dynamical systems

Govan, Angela, Ranking theory with application to popular sports

Janovitz-Freireich, Itnuit, Computation of the exact and approximate radicals of ideals: Techniques based on matrices of traces, moment matrices and Bezoutians

Jiang, Qunlei, Analysis and computation for a fluid mixture model of tissue deformations

Kalhorn, Rebecca, On the solvability of nonlinear boundary value problems on time scales

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Levy, Louis, Multipliers for the lower central series of strictly upper triangular matrices

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Selee, Teresa, Stochastic matrices: Ergodicity coefficients and applications to ranking

Siskind, Ryan, Model development for shape memory polymers

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Liu, Song, Variable selection in generalized additive models and additive Cox models with nonnegative garrote

Ogorek, Benjamin, Orthology-based multilevel modeling of mouse and human gene pairs

Saha, Paramita, Robust inference with quantile regression in stochastic volatility models with application to value at risk calculation

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Zhang, Ying, Testing for unit roots in seasonal time series with long period

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