
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 $GS(4) \times GL(2)$

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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Ndum, Edwin, Individual treatment effect heterogeneity in multiple time points trials

Tang, Zhongwen, Lack of fit of logistic GEE models and cost efficient Bayesian optimal designs for nonlinear combinations of parameters in nonlinear regression models

Zhang, Ke (Kurt), Inference of nonparametric hypothesis testing on high dimensional longitudinal data and its application in DNA copy number variation and microarray data analysis

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Wichita State University (1)

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

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Stokes, Erik, The h -vectors of matroids and the arithmetic degree of squarefree strongly stable ideals

DEPARTMENT OF STATISTICS

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- Shieh, Meng-Shiou*, Correction methods, approximate biases, and inference for misclassified data

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

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

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Wei, Peng, Network-based mixture models for genomic data

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- Adraghi, Kofi Placid*, Principal fitted components on small samples
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- Shahul-Hameed, Jaffar Ali*, Multiple positive solutions for classes of elliptic systems with combined nonlinear effects

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Onwuzulike, Kaine, The genetics and definition of salt-sensitivity hypertension in African Americans

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Liu, Peng, Adaptive mixture estimation and subsampling PCA

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Taylor, Aimee, Statistical enhancement of support vector machines

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Sircar, Sarthok, Dynamics and rheology of biaxial liquid crystal polymers

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Miyamoto, Kazutoshi, Bayesian and maximum likelihood methods for some two-segment generalized linear models

Powers, Stephanie, Bayesian approaches to inference and variable selection for misclassified or under-reported response models

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Mathaes, Matthias, Statistical tests of neutrality based on SNP and Alu repeat data
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Southern Methodist University (2)

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- Shomberg, Joseph*, Explicit construction of a robust family of compact inertial manifolds
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WYOMING

University of Wyoming (2)

DEPARTMENT OF MATHEMATICS

Rahunathan, Arunasalam, A study of spatial and time discretizations for discontinuous Galerkin methods

DEPARTMENT OF STATISTICS

Li, Yumei, Hidden Markov modeling of earthquake swarms

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Supplementary List

The following list supplements the list of thesis titles published in the February 2010 *Notices*, pages 281–301.

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Devasher, Michael, An evaluation of optimal experimental designs subject to parameter uncertainty for properties of compartmental models used in individual pharmacokinetic studies.

CALIFORNIA

California Institute of Technology

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CONTROL AND DYNAMICAL SYSTEMS

Shi, Ling, Resource optimization for networked estimator with guaranteed estimation quality.

University of California, Riverside (3)

MATHEMATICS

Alvarez, Vicente, A numerical computation of eigenfunctions for the Kusuoka laplacian on the Sierpinski gasket.

Childress, Scot Paul, Quantum measures, arithmetic coils, and generalized fractal strings.

Wong, Chau Yim, On a class of commuting squares.

University of California, Santa Cruz (1)

MATHEMATICS

Marks, Christopher, Classification of vector-valued modular forms of dimensions less than six.

COLORADO

University of Denver (1)

MATHEMATICS

Daly, Dan, Permutation patterns, reduced decompositions with few repetitions and the Bruhat order.

ILLINOIS

University of Chicago (8)

STATISTICS

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De la Cruz Cabrera, Omar, Geometric approaches in the analysis of genetic data.

Li, Yingying, Robustness of volatility estimations.

Matteson, David, Statistical inference for multivariate nonlinear time series.

Rosenthal, Dale, W. R., Trade classification and nearly-gamma random variables.

Song, Minsun, Restricted parameter space models for testing gene-gene interactions.

Zheng, Xinghua, Critical branching random walks and spatial epidemic.

Zibman, Chava, Adjusting for confounding in a semi-parametric Bayesian model of short term effects of air pollution on respiratory health.

IOWA

University of Iowa (4)

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Ahn, Kwang Woo, Topics in statistical epidemiology.

Fang, Xiangming, Generalized additive models with correlated data.

Hao, Xuemiao, Asymptotic tail probabilities in insurance and finance.

Song, Jung-Eun, Bayesian linear regression via partition.

KENTUCKY

University of Louisville (1)

BIOINFORMATICS AND BIostatISTICS

Lan, Ling, Inference for multistate models.

LOUISIANA

Tulane University (1)

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Yi, Yeonjoo, Two part longitudinal models of zero heavy data.

MASSCHUSETTS

Harvard University (8)

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Edlefsen, Paul, Profile HMMs for DNA sequence families: the conditional Baum-Welch and dynamical model-surgery algorithms.

Lenarcic, Alan, Bayesian two-glasso for the study of financial contagion.

Morgan, Charity, Assessing thought disordered behavior using finite mixture models and comparing approximations for logistic regression.

Olding, Benjamin, Methods of approximate inference: applications to stochastic differential equations, video microscopy, and network data.

Zhang, Jing, Bayesian inference of interactions in biological problems.

Zhang, Tingting, Nonparametric studies of doubly stochastic poisson processes, binomial data, and high dimension, low sample size data.

Zhang, Wei, Statistical methods for detecting expression quantitative trait loci (eQTL).

Yuan, Yuan, Decoding gene expression regulation through Motif discovery and classification.

MICHIGAN

Michigan Technological University (3)

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Tang, Rui, Statistical methods for genome-wide association study.

Wang, Xuexia, Genetic association studies considering LD information and genome-wide application.

Ye, Zhan, Genetic association studies under the population stratification, family pedigree and application to genome-wide association studies

MINNESOTA

University of Minnesota (12)

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Bellay, Jeremy, The stability and transitions of coherent structures on excitable and oscillatory media.

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Li, Fang, Stability from the point of view of diffusion, relaxation and spatial inhomogeneity.

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Zhang, Wenliang, Lyubeznik numbers.

NEW HAMPSHIRE

Dartmouth College (3)

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NEW JERSEY

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Wood, Philip, On the probability that a discrete complex random matrix is singular.

Stevens Institute of Technology (3)

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NEW YORK

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PENNSYLVANIA

Bryn Mawr College (1)

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Drexel University (1)

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- Cooke, Ben*, Theory and practice in replica-exchange molecular dynamics simulation.
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- Law, Jing*, Approximately counting perfect and general matchings in bipartite and general graphs.
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RHODE ISLAND

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VIRGINIA**University of Virginia (2)**

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Virginia Commonwealth University (1)

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Wilson, Sarah, Control charts with missing observations.

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