Doctoral Degrees Conferred

2010–2011

ALABAMA

Auburn University (6)

DEPARTMENT OF MATHEMATICS AND STATISTICS

Alfonso, Paul, Jr., A generalization of special atom spaces with arbitrary measure

Back, Roxanne, $K4-e$ designs with a hole

Boronski, Jan, Fixed points and periodic points of orientation reversing planar homeomorphisms

Gulderdek, Asli, On continuously Urysohn spaces

McCauley, Laura, Hamiltonian decompositions of multi-partite graphs with specified leaves

Ngwane, Fidele, Integral closures

University of Alabama (1)

DEPARTMENT OF MATHEMATICS

Mahawanniarachchi, Padmal, P-algebras and Q-algebras

University of Alabama at Birmingham (7)

DEPARTMENT OF BIOSTATISTICS

Robertson, Henry, Analysis of survival data with censored outcomes

DEPARTMENT OF MATHEMATICS

Al-Sharadqah, Ali, Statistical analysis of curve fitting in errors-in-variables models

AlAhmad, Rami, On inverse problems for left-definite discrete Sturm-Liouville equations

Freiji, Abraham, The BCS gap equation for asymmetric fermionic systems

Larussa, Mary, Conditional well-posedness and error bounds for the ground water inverse problem

Mimbs, Debra, Laminations: A topological approach

Nichols, Roger, Spectral properties of structurally disordered media

University of Alabama-Huntsville (1)

DEPARTMENT OF MATHEMATICAL SCIENCES

Hughes, Jeremy, Hermite continuation and numerical bifurcation

University of Alabama-Tuscaloosa (3)

DEPARTMENT OF INFORMATION SYSTEMS STATISTICS AND MANAGEMENT SCIENCE

Boone, Jeffrey, Contributions to multivariate control charting: Studies of the Z chart and four nonparametric charts

Michaelson, Greg, On the identification of statistically significant network topology

Sasamoto, Mark, Model tree analysis with randomly generated and evolved trees

ARIZONA

Arizona State University (21)

MATHEMATICS, COMPUTATIONAL AND MODELING SCIENCES CENTER

Cordero-Soto, Ricardo J., Solvable time-dependent models in quantum mechanics

Diaz Herrera, Edgar, Diffusive instability and aggregation in epidemics

Urdapilleta, Alicia, Theoretical studies on a two strain model of drug resistance: Understand, predict, and control the emergence of drug resistance

SCHOOL OF MATHEMATICAL AND STATISTICAL SCIENCES

Castillo-Garsow, Carlos, Teaching the Verhulst model: A teaching experiment in covariational reasoning and exponential growth

Chen, Wang-Juh, Support vector machine–a new model and its application

Dhirasakdanon, Thanate, A model of infectious diseases in amphibian populations with ephemeral larval habitat

Eke, Burce, Statistical models for social network data

Franks, Chase, Classifying lambda modules up to isomorphism and applications to Iwasawa theory

Guevara, Cristi Darley, Global behavior of finite energy solutions to the focusing nonlinear Schrödinger equation in d-dimension

Jennings, Andrew, Monotonicity and manipulability of ordinal and cardinal social choice functions

Kamat, Vikram, Erdős-Ko-Rado theorems: New generalizations, stability analysis and Chvátal's conjecture

Lage Ramirez, Ana Elisa, Mathematical knowledge for teaching: Exploring a teacher's sources of effectiveness

Lin, Youzuo, Numerical issues from inverse problems in image processing: Parameter estimation, and parallel algorithms for a high performance computing environment

Manley, Michael, Saddle squares in random two person zero sum games with finitely many strategies

McCamy, Michael, The efficacy and contribution of microsaccades during visual fixation

Moore, Kevin, The role of quantitative reasoning in precalculus students learning central concepts of trigonometry

Patani, Nura, C^*-correspondences and topological dynamical systems associated to generalizations of directed graphs

Shen, Wei, A sparsity enforcing framework with $TV-L^1$ regularization and its application in MR imaging and source localization

Smith, David, The first-fit algorithm uses many colors on some interval graphs

White, Jacob, On the complement of r-disjoint k-parabolic subspace arrangements

Zuo, Miao, Gamma latent variable model for non-negative matrix factorization

The above list contains the names and thesis titles of recipients of doctoral degrees in the mathematical sciences (July 1, 2010, to June 30, 2011) reported in the 2011 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.

University of Arizona (10)

DEPARTMENT OF MATHEMATICS

Champion, Daniel, Möbius structures, Einstein metrics, and conformal variations on piecewise flat two and three dimensional manifolds

Herzog, David, Ergodicity of certain degenerate complex diffusion processes

Shao, Yijun, A compactification of the space of algebraic maps from P^1 to a Grassmannian

Taft, Jefferson, Intrinsic geometric flows on manifolds of revolution

Weir, Brad, The transfer of momentum from waves to currents due to wave breaking

Yin, Mei, Spectral properties of the renormalization group

PROGRAM IN APPLIED MATHEMATICS

Diniega, Serina, Modeling aeolian dune and dune field evolution

Jimenez, Edward, Simulation and estimation of organ uptake in a digital mouse phantom

Pittman-Polletta, Benjamin, Factorization in unitary loop groups and reduced words in affine Weyl groups

Robertson-Tessi, Mark, Mathematical models of tumor growth and treatment

ARKANSAS

University of Arkansas at Fayetteville (1)

MATHEMATICAL SCIENCES DEPARTMENT

Stovall, Jessica, Nonlinear functionals on Banach lattices and their support sets

CALIFORNIA

California Institute of Technology (9)

DEPARTMENT OF APPLIED AND COMPUTATIONAL MATHEMATICS

Becker, Stephen, Practical compressed sensing: Modern data acquisition and signal processing

Beni, Catherine E., Simulation capabilities for challenging medical imaging and treatment planning problems

Plan, Yaniv, Compressed sensing, sparse approximation, and low-rank matrix recovery

Vyetrenko, Svitlana, Network coding for error correction

DEPARTMENT OF MATHEMATICS

Louwsma, Joel, Extremality of the rotation quasimorphism on the modular group

Lukic, Milivoje, Spectral theory for generalized bounded variation perturbations of orthogonal polynomials and Schrödinger operators

Nelson, Paul, Some new aspects of mass equidistribution

Walji, Nahid, Supersingular distribution, congruence class bias and a refinement of strong multiplicity one

Zhang, Dapeng, Projective Dirac operators, twisted K-theory and local index formula

Claremont Graduate University (3)

SCHOOL OF MATHEMATICAL SCIENCES

Sepikas, John, Enhanced lattice methods for high dimensional quadrature applications

Vu, Hun, A coupled vibratory gyroscope network with bi-directional unidirectional, and direct coupling

Wang, Hsi Ching, Z' of gauged baryon and lepton numbers at the large hadronic collider

Stanford University (26)

DEPARTMENT OF MATHEMATICS

Baskin, Dean, Wave equations on asymptotically de Sitter spaces

Chan, Ken Yin Kwan, Moduli spaces of pseudo-holomorphic disks and Floer theory of cleanly intersecting immersed Lagrangians

Chandee, Vorrapan, Upper bounds and moments of L-functions

Danciger, Jeffrey, Geometric transitions: From hyperbolic to AdS geometry

Gell-Redman, Jesse, On harmonic maps into conic surfaces

Hall, Jack, General existence theorems in moduli theory

Ivanov, Dmitriy, Part I: Symplectic ice; Part II: Global and local Kubota symbols

Lahtinen, Anssi, String topology and twisted K-theory

Malm, Eric James, String topology and the based loop space

Miller, Jason Peter, Limit theorems for Ginzburg-Landau random surfaces

Perea Benitez, Jose Andres, Topology of spaces of micro-images, and an application to texture discrimination

Vacarescu, Anca, Filtering and parameter estimation for partially observed generalized Hawkes processes

Williams, Thomas Benedict, The equivariant motivic cohomology of varieties of long exact sequences

DEPARTMENT OF STATISTICS

Ahmed, Murat, Topics in unsupervised learning: Feature selection and multimodality

Chen, Ling, Option pricing and hedging with transaction costs

Chen, Yi Fang, Statistical combination of climate models

Deng, Shaojie, Sequential methods for rare event simulations: Theory and applications

Dyer, Justin, Visualizing and modeling joint behavior of categorical variables with a large number of levels

Hiller, David, Alternative splicing analysis using RNA-seq data

Johnson, Nicholas, Efficient models and algorithms for problems in genomics

Ma, Li, Coupling optional Polya trees and the two sample problem

Muralidharan, Omkar, A mixture model approach to empirical Bayes testing and estimation

Pong, Chung Kwan, Interest rate modeling and a time series model for functional data

Sun, Kevin, Dynamic empirical Bayes models and their applications to longitudinal data

Witten, Daniela, A penalized matrix decomposition and its applications

Xu, Ya, Semi-supervised learning on graphs—a statistical approach

University of California, Berkeley (26)

DEPARTMENT OF MATHEMATICS

Anderson, Meghan, Solution spaces for linear equations in valued D-fields

Canez, Santiago, Double groupoids, orbifolds, and the symplectic category

Cartwright, Dustin, Application of nonlinear algebra to biology

Choi, Ka Lun, Constructing a broken Lefschetz fibration of S^4 with a spun or twist-spun torus knot fiber

Cueto, Maria Angelica, Tropical implicitization

Farris, David, The embedded contract homology of circle bundles over Riemannian surfaces

Geraschenko, Anton, Toric stacks

Hill, Cameron, The formation and evolution of giant molecular clouds

Huang, An, On conformal field theory and number theory

Li, Qin, Pontrjagin forms on certain string homogeneous spaces

Lin, Shaowei, Algebraic methods for evaluating integrals in Bayesian statistics

McMillan, Aaron, On embedding singular Poisson spaces

Pavlov, Dmitri, A decomposition theorem for noncommutative L_p-spaces and a new symmetric monoidal bicategory of von Neumann algebras

Peterka, Mira Alexander, Finitely generated projective modules over theta deformed spheres

Raicu, Claudiu, Secant varieties of Segre-Veronese varieties

Scow, Lynn Cho, Characterization theorems by generalized indiscernibles

Tonita, Valentin, Twisted Gromov-Witten invariants and applications to quantum K-theory

Vinzant, Cynthia, Real algebraic geometry in convex optimization

Zhu, John, Sticky incentives and dynamic agency: Optimal contracting with perks and shirking

GROUP IN BIOSTATISTICS

Aguilar-Schall, Raul, Semi-parametric graphical computation approach using loss-based estimation to estimate exposure effects: Applications on infant developmental outcomes

Goldstein, Benjamin, Finding genes related to disease using statistical learning

Gruber, Susan, Collaborative targeted maximum likelihood estimation

Porter, Kristin, The relative performance of targeted maximum likelihood estimators under violations of the positivity assumption

Rose, Sherri, Causal inference for case-control studies

Stitelman, Ori, Targeted maximum likelihood estimation techniques for time to event data and the implications of coarsening an explanatory variable of interest via dichotomization in the context of causal inference in semi-parametric models

Tuglus, Catherine, Robust semiparametric regression estimation using targeted maximum likelihood with application to biomarker discovery and epidemiology

University of California, Davis (21)

DEPARTMENT OF MATHEMATICS

Denton, Tom, Excursions into algebra and combinatorics at q equals zero

Dragon, Patrick, Integrality theorems in Lie groups and quantum mechanics

Hunter, Blake, Data mining compressed, incomplete and inaccurate high dimensional data

Mohammadzadeh, Sonny, Results on the Euler characteristic and cohomology of Hamiltonian vector fields in the plane and its maximal nilpotent subalgebra

Ng, Stephen, Ordering of energy levels of $U_q(sl_2)$ invariant Hamiltonians

Omar, Mohamed, Applications of convex and algebraic geometry to graphs and polytopes

O'Rourke, Sean, Spectral properties of random matrices with independent entries

Pon, Steven, Affine Stanley symmetric functions for the classical groups

Raymer, Anastasia, Mixing time of the 15 puzzle

Reintjes, Moritz, Shock wave interactions in general relativity and the emergence of regularity singularities

Schlichter, Tamara, Modeling the dynamics of central pattern generators and anesthetic action

Schwemmer, Michael, Influence of dendritic properties on the dynamics of oscillatory neurons

Shott, Martha, Traffic oscillations due to topology and route choice in elemental freeway networks

DEPARTMENT OF STATISTICS

Chen, Dong, Manifold models for functional data

Chen, Rongqi, Asymptotic distribution for the plug-in estimation of level sets

Greasby, Tamara, Powering the future: Wind power forecasts for Solano, California

Hagar, Yolanda, Estimating colorectal cancer screening in the presence of missing data in a population with a resistant subset and multiple observations

Mao, Meng, Semiparametric efficient estimation for a class of generalized proportional odds cure models, and an extended hazard model with longitudinal covariates

McAssey, Michael, Topics on associations among random processes

Su, Yu-Ru, Survival analysis for incomplete data

Yang, Wenjing, Functional correlation and dynamic relations for sparsely sampled random processes

University of California, Irvine (13)

DEPARTMENT OF MATHEMATICS

Alexander, Nicholas, Point counting on reductions of CM abelian surfaces

Cox, Geoff, Multi-component vesicle modeling under the influence of spontaneous curvature

Di, Feiyue, Multiple time scales method in HJM model

Klagsbrun, Zev, Selmer ranks of quadratic twists of elliptic curves

Larios, Adam, Inviscid regularization for equations of hydrodynamic models: An analytical and computational study

Lo, Wing-Cheong, Growth and pattern controls by morphogen gradients

Longo, Kate, Fourth order partial differential equations for image processing

Tran, Khang, Regularity of solutions for quasilinear subelliptic equations on Hesenberg group

Urwin, Erin, Stochastic modeling of cellular cooperation: Applications to cancer and evolution

Welters, Aaron, On the mathematics of slow light

Whitney, Joshua, Minimum distance of 3D toric error correcting codes

Zhang, Liping, Polymers with the excluded volume effect

Zhao, Su, Computational study of signaling specificity and epigenetic regulation

University of California, Los Angeles (41)

DEPARTMENT OF BIOSTATISTICS, SCHOOL OF PUBLIC HEALTH

Childs, Erica, Statistical models of maternal and offspring genetic effects for risk of disease

Kovalchik, Stephanie, Individual patient data meta-analysis of intervention studies

Streja, Leanne, Models for motorcycle Grand Prix racing

DEPARTMENT OF MATHEMATICS

Azzam, Jonas, Two applications of B-number techniques

Bedrossian, Jacob, Part I: A virtual node method for elliptic interface problems; Part II: Local and global theory of aggregation equations with nonlinear diffusion

Brakocevic, Miljan, Anticyclotomic p-adic L-function and non-vanishing modulo p of special L-values

Chen, Alexander, Boundary tracking in large data sets and modeling the evolution of landscapes

Creutz, Darren, Commensurated subgroups and the dynamics of group actions on quasi-invariant measure spaces

Dabrowksi, Yoann, Free entropies, free Fisher information, free stochastic differential equations, with applications to von Neumann algebras

Do, Quang Yen, A nonlinear stationary phase method for oscillatory Riemann-Hilbert problems

Gao, Wenhua, The Laplace-Beltrami operator in a level set framework and its applications

Guo, Zhaohui, Applications of fast l_1-minimization algorithms in high-dimensional hyperspectral imagery

Hani, Zaher, Global and dynamical aspects of nonlinear Schrödinger equations on compact manifolds

Huang, Yanghong, Self-similar blowup solutions of the aggregation equation

Kwok, Stephen, Some results in supersymmetric algebraic geometry

Liu, Wangyi, Two dynamical system models based on real-world scenarios: A swarming control model and a surface tension model

Lou, Yifei, Local, non-local and global methods in image reconstruction

Ma, Wenye, Variational models in image and signal enhancement

Maples, Kenneth, Arithmetic properties of random matrices

Mata, Matthew, Particle-laden thin film flow: An alternating direction implicit scheme and comparison between theory, numerical simulation and experiments

McAdams, Aleka, Efficient solutions to voxelized discretizations of elliptic problems with applications to physical simulation in visual effects

Meshkat, Nicolette, A differential algebra method for eliminating unidentifiability

Meyerson, William, Lipschitz and bi-Lipschitz maps on Carnot groups

Peter, Tobias, Prime ideals of mixed Artin-Tate motives

Pozar, Norbert, Free boundary problems

Rodriguez, Nancy, Applied partial differential equations in crime modeling and biological aggregation

Smith, Paul, Subthreshold geometric renormalization and energy-critical Schrödinger maps

Takei, Ryo, Applications of Hamilton-Jacobi equations to homogenization, optimal control and differential games

Tweedy, Eamonn, On the anti-diagonal filtration for the Heegaard Floer chain complex of a branched double-cover

Vanderberg-Rodes, Alexander, Generating function zeros of Markov processes and their applications

Wadhar, Hem, Energy driven pattern formation in strained materials

Wong, Tsz Wai, Computational quasiconformal geometry and its applications on medical morphometry and computer graphics

Zhu, Yongning, Multigrid methods for solids simulation

Department of Statistics

Brodsky, Janice, A multivariate methodology for genome association studies

Cetinkaya, Mine, Estimating the impact of air pollution using small area estimation

Chen, Hsiu Wen, The augmented desirability function: Methods and applications

Clements, Robert, A comparison of residual analysis methods for space-time point with applications to earthquake forecast models

Nichols, Kevin, New nonparametric methods for the summary and description of marked point processes

Patel, Rakhee, Testing local self-similarity in univariate heavy-tailed data

Si, Zhang Zhang, Learning hierarchical image templates for object recognition and detection

Wilson, Brigid, Statistical techniques for the analysis of questionnaire data with images

University of California, Riverside (19)

Department of Mathematics

Chamberlin, Samuel, Integral bases for the universal enveloping algebras of map algebras

Dolbin, Ronald, Abelian subalgebras of Z_2-graded Lie algebras; partitions, Young diagrams, and ballot numbers

Han, Richard, A construction of the "2221" planar algebra

Huerta, John, Supersymmetry, division algebras and higher gauge theory

Rafradeh, Azadeh, Using twisted Alexander polynomials to detect fiberability

Ridenour, Timothy, Faces of weight polytopes and a generalization of a result of Vinberg

Rodgers, Christopher, Higher symplectic geometry

Rolle, Brian, Construction of weak mirror pairs by deformations

Walker, Christopher, A categorification of Hall algebras

Department of Statistics

Banerjee, Hiya, Estimation of parameters for logistic regression model in dose response using mixture experiments with known or unknown relative potency

Chen, Xin, Low-level and high-level microarray data analysis

Dey, Debarshi, Estimation of the parameters of skew normal distribution using simple approximations of the ratio of the normal density and distribution functions

Huang, Hung-Jen, Bayesian analysis of errors-in-variables growth curve models

Huang, Michael (Fu Ze), Robust and optimum fractional factorial designs

Li, Judy (Xiang), Sequential probability ratio tests for generalized linear mixed models

Pettyjohn, Jeffrey, Model-based estimation and inference procedures for clock synchronization

Shao, Nan, Modeling almost periodicity in point processes

Wang, Bushi, Solving consistency problems in multiple testing procedures with consonant closed likelihood ratio test

Wen, Musen, Statistical modelling of marked point processes and high frequency data

University of California, San Diego (15)

Department of Mathematics

Chang, Christopher, Topics in nonparametric statistics

Driscoll, Patrick R., Smooth densities for solutions to differential equations driven by fractional Brownian motion

Ferry, Michael William, Projected-search methods for box-constrained optimization

Greene, Jeremy Michael, Noncommutative plurisubharmonic polynomials

Jamall, Mohammad, Coloring triangle-free graphs and network games

Minor, Andre, Transversal CR mappings

Nguyen, Hieu, p-adaptive and automatic hp-adaptive finite element methods for elliptic partial differential equations

Pesic, Vladimir, On dynamic scheduling of a parallel server system with certain graph structure

Petrillo, Thomas A., Number theory type formulae appearing in graphs

Scheinker, David, Bounded analytic functions on the polydisc

Scullard, Michael Scott, The Russian option in a jump-diffusion model

Shakeel, Asif, Implementing measurements and optimizing queries for the quantum hidden subgroup problem

Shroff, Ravi, Rigidity properties of CR embeddings into hyperquadrics

Vallieres, Daniel, On a generalization of the rank one Rubin-Stark conjecture

Wong, Elizabeth Lai Sum, Active-set methods for quadratic programming

University of California, Santa Barbara (8)

Department of Mathematics

Cloutier, John, The universal pairing of graphs

Finegold, Brie, The torus complex and special linear groups over rings

Howard, Thomas, Homological invariants in the representation theory of finite dimensional algebras

Sulway, Robert, Braided versions of crystallographic groups

Department of Statistics and Applied Probability

Bennett, Nathan, Some contributions to middle-censoring

Rivera, Roberto, Multivariate spatial temporal model with application to ocean color data

Strong, Winslow, Arbitrage and stochastic portfolio theory in stochastic dimension

Wu, Junqing, Basis selection from multiple libraries

University of California, Santa Cruz (5)

Department of Applied Mathematics and Statistics

Datta, Saheli, Bayesian hierarchical models in characterizing molecular adaptation

Holsclaw, Tracy, Statistical modeling for dark energy and associated cosmological constants

Simon, Christopher, Statistical analysis of single molecule experiments

Traxler, Adrienne, Double-diffusive convection at high and low Prandtl numbers

Department of Mathematics

Espina, Jacqueline, The mean Euler characteristic of contact manifolds

University of Southern California (8)

Department of Mathematics

Chen, Jianfu, Regime switch term structure model with forward-backward stochastic differential equations

Keilberg, Marc, Higher indicators for some groups and their doubles

Kirtsaeng, Supap, Embedded contact homology of a unit cotangent bundle via string topology

Liu, Wei, Statistical inference for stochastic hyperbolic equations

Roger, Julien, Factorization rules in quantum Teichmüller theory

Tan, Minshao, Mathematical properties of ensemble Kalman filter

Vicol, Vlad, Analyticity and Gevrey class regularity for the Euler equations

Zhang, Changyong, Numerical weak approximation of stochastic differential equations driven by Lévy processes

COLORADO

Colorado State University (10)

DEPARTMENT OF MATHEMATICS

Benoit, Steven, Analysis and modeling of cells, cell behavior, and helical biological molecules

Farnell, Shawn, Artin-Schreier curves

Kim, Byungsoo, Constrained dynamics of rolling balls and moving atoms

Malmskog, Elisabeth, Automorphisms of a family of maximal curves

McBee, Cayla, Some topics in combinatorial phylogenetics

Olson, Travis, Hopf bifurcation in anisotropic reaction diffusion systems posed in large rectangles

Smith, Elin, Algorithms and geometric analysis of data sets that are invariant under a group action

Whitfield, JaDon, A simplicial homotopy group model for K_2 of a ring

Ziliak, Ellen, Arithmetic in group extensions using a partial automation

DEPARTMENT OF STATISTICS

Chung, Sunghoon, Saddlepoint approximation to functional equations in queueing theory and insurance mathematics

University of Colorado, Boulder (10)

DEPARTMENT OF APPLIED MATHEMATICS

Park, Min, Relaxation-corrected bootstrap algebraic multigrid (rBAMG)

Snyder, Krissy, Tuning and control in human locomotion

Tang, Lei, Parallel efficiency-based adaptive local refinement

Young, Patrick, Numerical techniques for the solution of partial differential and integral equations on irregular domains with applications to problems in electrowetting

DEPARTMENT OF MATHEMATICS

Dent, Topaz, Clones of finite idempotent algebras with strictly simple subalgebras

Kim, Eun, Giving Spitzer's zero range process a positive range

Noyes, Michael, Spectral properties of the general beta Hermite and beta Laguerre ensembles in the limit beta to infinity

Roy, Michael, Coxeter group actions on complementary pairs of very well-poised ${}_9F_8(1)$ hypergeometric series

Stackpole, Matthew, Dynamic equivalence of control systems via infinite prolongations

Wiscons, Joshua, Moufang sets of finite Morley rank

University of Colorado, Denver (6)

DEPARTMENT OF MATHEMATICS AND STATISTICAL SCIENCES

Morrison, Tod, A new paradigm for robust combinatorial optimization: Using persistence as a theory of evidence

Stock, Elizabeth, Gradual numbers and fuzzy optimization

Thipwiwatpotjana, Phantipa, Linear programming problems for generalized uncertainty

Vecharynski, Yaugen, Preconditioned iterative methods for linear systems, eigenvalue and singular value problems

Vis, Timothy, Monomial hyperovals in Desarguesian planes

Wojciechowski, Keith, Analysis and numerical solution of nonlinear Volterra partial integrodifferential equations modeling swelling porous materials

University of Denver (2)

DEPARTMENT OF MATHEMATICS

Pula, Jon Kyle, Approximate transversals in latin squares

Von Stroh, Jonathan, Lifting module maps between different noncommutative domain algebras

University of Northern Colorado (1)

SCHOOL OF MATHEMATICAL SCIENCES

Parker, Catherine "Frieda", How intuition and language use relate to students' understanding of span and linear independence in an elementary linear algebra class

CONNECTICUT

University of Connecticut, Storrs (13)

DEPARTMENT OF MATHEMATICS

Fang, Zhang, A qualitative research on Allen-Cahn equations

Huang, Xiang, Nonrigid image registration problem using fluid dynamics and mutual information

Ledford, Jeffrey, On the convergence of one parameter families of interpolators

Liang, Su, Investigating the model of high school mathematics teacher preparation in China

Mang, Wu, Stochastic analysis on some infinite dimensional groups

Whitehead, Brian, Time spent in sets by jump processes

Xu, Fangjun, A class of singular symmetric Markov processes

Zhlobich, Pavel, Quasiseparable matrices and polynomial

DEPARTMENT OF STATISTICS

Fama, Yuchen, A self-exciting switching model

Hurtado-Rua, Sandra, A new class of Bayesian survival models and beyond

Prates, Marcos, Link specification and spatial dependence for generalized linear mixed models

Stratton, Jeffrey, Diagnostic accuracy of a binary test in the presence of two types of missing values

Tchumtchoua, Sylvie, Bayesian semiparametric models for discrete longitudinal data

Wesleyan University (4)

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Bravo-Vivallo, Daniel, The stable derived category of a ring via model category

Burke, John, On infection by string links and new structure in the knot concordance group

Fera, Joseph, On exceptional points for cocompact Fuchsian groups

Lazowski, Andrew, Results on the size of limit sets of Kleinian groups

Yale University (5)

DEPARTMENT OF MATHEMATICS

Kong, Wai Yip, Efficient solution of several types of partial differential equations

DIVISION OF BIOSTATISTICS

Cislo, Paul, Spatial mixture models with ecological and public health applications

Hsieh, Fu-Chi, A Bayesian hierarchical spatial approach for the misalignment problem in disease mapping

Li, Shu-Xia, Covariate-adjusted response-adaptive randomization procedures in multi-arm clinical trials with continuous response variables

Zhang, Lixun, A Bayesian spatio-temporal model for estimating daily nitrogen dioxide levels

DELAWARE

University of Delaware (2)

DEPARTMENT OF MATHEMATICAL SCIENCE

Cromer, Michael, Jr., A tale of two micelles: The analysis and simulation of a two-species scission/reforming model for wormlike micellar solutions

Zhu, Qinghua, Pricing exchange options with stochastic correlations

DISTRICT OF COLUMBIA

George Washington University (5)

DEPARTMENT OF MATHEMATICS

Coleman, Michael, Surface accuracy analysis and mathematical modeling of deployable large aperture elastic antenna reflectors

Einziger, Hillary, Incidence Hopf algebras: Antipodes, forest formulas, and noncrossing partitions

Fisher, Forest, CoZinbiel Hopf algebras in combinatorics

Lee, Jieun, Modeling the equilibrium configuration of a piecewise orthotropic pneumatic envelope and the phase separation problem in a membrane

DEPARTMENT OF STATISTICS

Adeshiyan, Samson, Unification of randomized response designs and certain aspects of post-randomization for statistical disclosure control

Howard University (6)

DEPARTMENT OF MATHEMATICS

Gbade-Oyelakin, Adebukola, On Bayesian and hybrid inferences in statistics with application to the non-nested disposition model for correlated binary outcomes

Nelson, Fredrick, A geometric approach to ratios of $\pi/3$-congruent numbers

Ofodile, Chinenye, The enumeration of Dumont permutations with few occurrences of three and four letter patterns

Simon, Lois, Character sums and hyperelliptic curves associated with subsets of finite fields with square order

Wiley, Shari, Population dynamics of discrete-time predator-prey exploited fishery models

Williams, Kendall, Separating Milliken-Taylor systems and variations thereof in the dyadics and the Stone-Čech compactification of N

FLORIDA

Florida Atlantic University (6)

DEPARTMENT OF MATHEMATICAL SCIENCES

Ay, Basak, Unique decomposition of direct sums of ideals

Ilic, Ivana, The discrete logarithm problem in non-abelian groups

Matheis, Kenneth, An algebraic attack on block ciphers

Singhi, Nidhi, On the minimal logarithmic signature conjecture

Singhi, Nikhil, The existence of minimal logarithmic signatures for classical groups

Sullivan, Shaun, Multivariate finite operator calculus applied to counting ballot paths containing patterns

Florida Institute of Technology (5)

DEPARTMENT OF MATHEMATICAL SCIENCES

Al-Mater, Najeeb, Random walk analysis in queues with multiple control and maintenance

Alghamdi, Abdullah, Multiple fluctuation analysis in a queue with an enhanced maintenance

Koursaris, Constantine, Statistical control of peer review cost

Motir, Ramy, Random walk processes in a bilevel $(M - N)$-policy queue with multiple vacations

Salem Alzahrani, Mohammed, Fluctuation analysis in a queue with (L, N)-policy and secondary maintenance

Florida State University (30)

DEPARTMENT OF MATHEMATICS

Acosta-Minoli, Cesar, Discontinuous Galerkin spectral element approximations on moving meshes for wave scattering from reflective moving boundaries

Bayazit, Dervis, Sensitivity analysis of options under Lévy processes via Malliavin calculus

Cha, Yongjae, Closed form solutions of linear difference equations

Chen, Xiao, 4-D Var data assimilation and POD model reduction methodologies applied to geophysical fluid dynamics models

Duffy, Austen, Massively parallel algorithms for CFD simulation and optimization on heterogeneous many-cove architectures

LePoudre, Philip, Computational aeroacoustics cascade model of fan noise

Liu, Xinyang, Shape spaces, metrics and their applications to brain anatomy

Mortada, Jamil, Artin and Dehn twist subgroups of the mapping class group

Qi, Chunhong, Numerical optimization methods on Riemannian manifolds

Shen, Ji, No-reference natural image/video quality assessment of noisy, blurry, or compressed images/videos based on hybrid curvelet, wavelet and cosine transforms

Simakhina, Svetlana, Level set and conservative level set methods on dynamic quadrilateral grids

Tatar, Ahmet Emin, Picard 2-stacks and length 3 complexes of Abelian sheaves

Wang, Yaohong, Numerical methods for two-phase jet flow

Willyard, Matthew, Adaptive spectral element methods to price American options

DEPARTMENT OF STATISTICS

Badshah, Muffasir, Analysis of the wealth distribution at equilibrium in a heterogeneous agent economy

Crane, Michael, Nonparametric estimation of three dimensional projective shapes with applications in medical imaging and in pattern recognition

Dutton, Matthew, Individual patient-level data meta-analysis: A comparison of methods for the diverse populations collaboration data set

Gu, Yu, New semiparametric methods for recurrent events data

Lawhern, Vernon, Statistical modeling and applications of neural spike trains

Li, Xiaoyun, Analysis of multivariate data with random cluster size

Li, Yan, The effect of risk factors on coronary heart disease: Age relevant multivariate meta analysis

Li, Zhi, Multistate intensity model with AR-GARCH random effect for corporate credit rating transition analysis

Olumide, Kunle, A probabilistic and graphical analysis of O. J. Simpson's murder case using Bayesian networks

Tang, Anqi, A class of mixed-distribution models with applications in financial data analysis

Wang, Wenting, Practical uses and methods for survival models

Wiltshire, Jelani, Age effects in the extinction of Planktonic Foraminifera: A new look at Van Valen's Red Queen hypothesis

Wu, Sutan, Goodness-of-fit tests for logistic regression

Yang, Fang, Bayesian generalized polychotomous response models and applications

Zhao, Feng, Bayesian portfolio optimization with time-varying factor models

Zhao, Haiyan, Time-varying coefficient models with ARMA-GARCH structures for longitudinal data analysis

University of Central Florida (2)

DEPARTMENT OF MATHEMATICS

Shao, Haimei, Price discovery in the U.S. bond market—trading strategies and the cost of liquidity

Smith, Todd Blanton, Variational embedded soliton, and traveling wavetrains generated by generalized Hopf bifurcations, in some NLPDE systems

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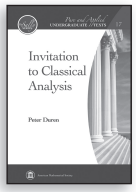

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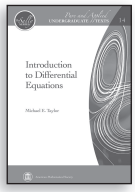

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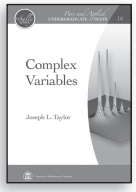

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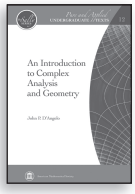

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