
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

Dabrowski, 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
Rafraedeh, 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 multi-ple 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
Kirtsang, 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
Malmkog, 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
Thipwivatpotjana, 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
Einzigler, 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
Ofofile, 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 \mathbb{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-core 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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Emory University (8)

DEPARTMENT OF BIostatistics AND BIOINFORMATICS

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DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

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Georgia Institute of Technology (9)

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Yerger, Carl, Color-critical graphs on surfaces

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Chasse, Matthew, Linear preservers and entire functions with restricted zero loci

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ILLINOIS

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Illinois State University (4)

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Northern Illinois University (5)

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Kirov, Radoslav, Improved bound for codes and secret sharing schemes from algebraic curves

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Solie, Brent, Algorithmic and statistical properties of filling elements of a free group, and quantitative residual properties of Γ -limit groups

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Chai, Juanjuan, Mathematical and statistical problems in phylogenetics and genetics

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Kim, Jiho, Higher-order algebras and coalgebras

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Manack, Corey, Word maps, character estimates, and random walks on compact simple Lie groups

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Nahm, Sangil, Several problems in number theory

O'Malley, Daniel, Diffusive processes run with non-linear clocks

Rubiano, Andrea, Coupled energetic models for nematic elastomers

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Yang, Yiding, Students of dynamics of infectious diseases using mathematical models

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Gupta, Saptarshi, Computing environment for the statistical analysis of large and complex data

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Mi, Yanhui, Building statistical models for financial asset returns: New stochastic volatility models

Olbricht, Gayla, Incorporating genome annotation in the statistical analysis of genomic and epigenomic tiling array data

Rau, Andrea, Reverse engineering gene networks using genomic time-course data

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Gejji, Richard, Using continuous limit techniques and stochastic computational modeling to predict the biological behavior of aggregating cells

Holliman, Curtis, Continuity properties of the data-to-solution map for the Hunter-Saxton equation

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Kontogiannis, Dimitris, Homogenization problems in random media

Manske, Jacob, Coloring and extremal problems in combinatorics

Miranda-Mendoza, Fernando, An option-theoretic valuation model for residential mortgages with stochastic conditions and discount factors

Row, Darren, Zero forcing number: Results for computation and comparison with other graph parameters

Seo, Yeon-Jung, A mathematical analysis of multiple-target SELEX

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Stanton, Brendon, On vertex identifying codes for infinite lattices

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- Gardner, Stuart*, Investigation of inter-genic regions of Mycoplasma hyopneumoniae and development of statistical methods for analyzing small-scale RT-qPCR assays
- Kientoff, Cherie*, Development of weighted model fit indexes for structural equation models using multiple imputation
- Li, Ming*, New methods for statistical modeling and analysis of nondestructive evaluation data
- Liang, Kun*, Hidden Markov models for simultaneous testing of multiple gene sets and adaptive and dynamic adaptive procedures for false discovery rate control and estimation
- Mueller, Kim*, Construction and behavior of multinomial Markov random field models
- Peterson, Anna*, A separability index for clustering and classification problems with applications to cluster merging and systematic evaluation of clustering algorithms
- Pintar, Adam*, Model selection for good estimation or prediction over a user-specified covariate distribution
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- Shi, Ying*, Contributions to accelerated destructive degradation test planning
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- Correa, Alvaro*, Bifurcation theory for a class of second order differential equations
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- Um, Ko Woon*, Elliptic equations with singular BMO coefficients in Reifenberg domains
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- Yoo, Seonguk*, Extremal sextic truncated moment problems

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- Zhang, Tianyang*, Partly parametric generalized additive model

KANSAS

Kansas State University (8)

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- Manspeaker, Rachael*, Using data mining to differentiate instruction in college algebra
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- Demirkaya, Aslihan*, Long-time behavior and the stability of special solutions of nonlinear partial differential equations
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University of Louisville (3)

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Culbertson, Jared, Perverse Poisson sheaves on the nilpotent cone
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Tulane University (6)

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Purin, Marju, Complexity over finite-dimensional algebras

Venouziou, Moises, Mixed problems with layer potentials for harmonic and bi-harmonic functions

University at Albany, SUNY (4)

DEPARTMENT OF MATHEMATICS AND STATISTICS

Adamczak, William, The alcove path model and tableaux

Atchison, Benjamin, Shift automorphisms of finite outer order

Neville, Richard, On lower bounds of the Chung-Diaconis-Graham random process

Rowe, Niles, Some conditions determining $L(p, q)$ membership of trigonometric series: Methods and applications

University of Rochester (8)

DEPARTMENT OF BIostatistics AND COMPUTATIONAL BIOLOGY

LaCombe, Jason, Non-informative priors for structural inference in Bayesian networks

Lynch, Miranda, Estimation, correlation analysis and identifiability in finite mixture models for point mass data: Methods in a Bayesian framework

Zhang, Hui, Distribution-free models for latent population mixtures

DEPARTMENT OF MATHEMATICS

Dreibelbis, Joel, Bounding intersections of orbit sets with curves

Eswarathasan, Suresh, Microlocal analysis of scattering data for nested conormal potentials

Jin, Tao, On IA_n and derivations of free Lie algebras

Sun, Qiang, Configuration spaces of singular spaces

Todd, Albert James, Moduli spaces of noncompact special Lagrangian submanifolds

NORTH CAROLINA

Duke University (20)

DEPARTMENT OF MATHEMATICS

Aazami, Amir, The geometry of gravitational lensing: Magnification relations, observables, and Kerr black holes

Bowen, Matthew, A spectral deferred correction method for solving cardiac models

Gjoneski, Oliver, Multi-variable period polynomials associated to cusp forms

HB, Aubrey, Persistent cohomology operations

Jenista, Michael, Dynamical principles in switching networks

Lam, Mau-Kwong, The graph cases of the Riemannian positive mass and Penrose inequalities in all dimensions

Little, Anna, Estimating the intrinsic dimension of high-dimensional data sets: A multiscale, geometric approach

Roy, Arya, Towards a stability condition on the quintic threefold

Tegui, Alberto, Stochastic microlensing: Mathematical theory and applications

Watkins, Andrea, On absolute continuity for stochastic partial differential equations and an averaging principle for a queueing network

Wilson, Jason, On computing smooth, singular, and nearly singular integrals on implicitly defined surfaces

DEPARTMENT OF STATISTICAL SCIENCE

Chakraborty, Avishek, Modeling point patterns, measurement error and abundance for exploring species distributions

Hahn, Paul, Probability models for targeted borrowing of information

Heaton, Matthew, Kernel averaged predictors for space and space-time processes

Lum, Kristian, Bayesian spatial quantile regression

Mayrink, Vinicius, Factor models to describe linear and non-linear structure in high dimensional gene expression data

Mukherjee, Chiranjit, Bayesian modelling and computation in dynamic and spatial systems

Schwartz, Scott, Bayesian modeling of intermediate variables and principal stratification for observation settings

Shi, Minghui, Bayesian sparse learning for high dimensional data

Yang, Hongxia, Nonparametric Bayes models for high-dimensional and sparse data

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Abernathy, Kristen, Existence of solutions to nonlinear boundary value problems at resonance

Abernathy, Zachary, Nonlinear dynamic equations subject to global and periodic boundary conditions

Allocca, Michael, L^∞ algebra representation theory

Bostic, Kathryn, Dynamical behavior of a discrete, one-island, selection-migration model with general dominance

Burdis, Joseph, Object-image correspondence of under projections

Capaldi, Alexander, Exploring the inverse problem with infectious disease models

Capaldi, Mindy, Developing a new L^∞ algebra using symmetric brace algebras

Collins, James, Dimension reduction: Modeling and numerical analysis of two applied problems

Dunbar, Jonathan, The affine Lie algebra $\widehat{\mathfrak{sl}}_n(\mathbb{C})$ and its \mathbb{Z} -algebra representation

Fair, Martene, Active incipient fault detection with multiple simultaneous faults

Frank, Dennis, Acute inflammatory response to endotoxin challenge: Model development, parameter estimation, and treatment control

Giffen, Nicholas, Particle size segregation in granular avalanches: A study in shocks

Haugh, Janine, Mathematical modeling of cartilage regeneration in cell-seeded scaffolds

Humber, Cary, Sparse regularization for inverse problems governed by evolution equations

Lakhani, Chirag, Geometric invariant theory compactification of quintic three-folds

Matthews, Jessica, Sensitivity analysis and development of a model that quantifies the effect of soil moisture and plant age on leaf conductance

Peterson, Ellen, Flow of thin liquid films with surfactant: Analysis, numerics, and experiment

Stagg, Kristen, Generalizations and analogs of the Frattini subalgebra

Therkelsen, Ryan, The conjugacy poset of a reductive monoid

Valdez-Jasso, Daniela, Modeling and identification of vascular biomechanical properties in large arteries

DEPARTMENT OF STATISTICS

Ahn, Mihye, Random effect selection in linear mixed models

Alston, Shenek, A Bayesian spatial analysis of extreme precipitation

Arai, Mamiko, Investigation of different input noise types in linear and nonlinear stochastic neural models

Eloyan, Ani, Semi-parametric models for independent component analysis

Franck, Christopher, Latent group-based interaction effects in unreplicated factorial experiments

Gunes, Funda, Variable selection via confidence regions

Hosein, Althea, Survival of *Escherichia coli* O157:H7 in acidified foods: A predictive modeling approach

Huang, Mingyan, Semi-parametric mixed models for censored longitudinal data

Ku, Yu-Cheng, Essays on multivariate stochastic volatility models using Wishart processes: A general discussion and dimension reduction by latent factor approaches

Sharma, Dhruv, Penalization methods for group identification and variable selection in models with correlated predictors

Su, Yuhua, Mixture models for gene expression experiments with two species

Thielbar, Melinda, Neural networks for time series forecasting: Practical implications of theoretical results

Winham, Stacey, Model selection with epistasis: A focus on comparative performance and prediction to improve the usability of multi-factor dimensionality reduction

University of North Carolina at Chapel Hill (20)

DEPARTMENT OF BIostatISTICS

Hu, Yijuan, Analysis of haplotypes, untyped SNPs, and CNVs in genome-wide association studies

Pierre-Louis, Bosny, Application of novel statistical methods for biomarker selection to HIV infection data

Viswanathan, Shankar, Statistical methods for recurrent event data in the presence of a terminal event and incomplete covariate information

Zhou, Bingqing, Contributions to competing risks regression

DEPARTMENT OF MATHEMATICS

Bu, Sunyoung, Semi-implicit Krylov deferred correction algorithms, applications, and parallelization

Graham-Squire, Adam, Explicit formulas for local formal Mellin transforms

Hamlet, Christina, Mathematical modeling, immersed boundary simulation, and experimental validation of the fluid flow around the upside-down jellyfish *Cassiopea xamachana*

Jensen, Erik, Norms of eigenfunctions to trigonometric KZB operators

Laul, Parul, Localized energy estimates of the wave equation on higher dimensional hyperspherical Schwarzschild spacetimes

Moore, Matthew, Stratified flows with vertical layering of density: Theoretical and experimental study of the time evolution of flow configurations and their stability

Zhang, Bo, Integral-equation-based fast algorithms and graph-theoretic methods for large-scale simulations

Zhao, Longhua, Fluid-structure interaction in viscous dominated flows

DEPARTMENT OF STATISTICS AND OPERATIONS RESEARCH

Cao, Hongyuan, High dimensional statistical inference with applications to genomics

Jung, Sungkyu, High dimensional low sample size analysis and asymptotics for variables on manifolds

Liu, Feng, Statistical analysis on market microstructure models

Liu, Xin, Multiscale diffusion approximations for open queueing networks in heavy traffic

Qiao, Xingye, Weighted distance weighted discrimination and pairwise variable selection for classification

Reinhold, Dominik, Asymptotic behavior of near critical branching process and modeling of cell growth data

Shabalin, Andrey, Detection of low rank signals in noise and fast correlation mining with applications to large biological data

Uzun, Evin, Scheduling in service systems with impatient customers and insights into mass-casualty triage

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DEPARTMENT OF MATHEMATICS AND STATISTICS

Gillespie, Perry, The study of “loop” Markov chains

Kuzhuget, Andrey, Global convergence and quasi-reversibility for coefficient inverse problems

Pichardo Mendoza, Roberto, T -algebras and Efimov’s problem

Shi, Qiang, A convertible bond pricing method based on bond prices on markets

Whitmeyer, Joseph, Mathematical aspects of Markov models for social processes

NORTH DAKOTA

North Dakota State University, Fargo (3)

DEPARTMENT OF MATHEMATICS

Kubik, Bethany, Quasidualizing modules

Trentham, Stacy, Atomicity in rings with zero divisors

Trentham, William, Applications of groups of divisibility and a generalization of Krull dimension

OHIO

Air Force Institute of Technology (2)

DEPARTMENT OF MATHEMATICS AND STATISTICS

Goldberg, Jacob, An analytical model of nanoscale viscoelastic properties of polymer surfaces measured using an atomic force microscope

Mills, David, Consistency properties for growth model parameters under an inflill asymptotics domain

Bowling Green State University (7)

DEPARTMENT OF MATHEMATICS AND STATISTICS

Carr, Benjamin, On flips of unitary buildings

Iverson, Nate, A phan-like theorem for orthogonal groups in even characteristic

Martin, Ozgur, Disjoint hypercyclic and supercyclic composition operators

Nguyen, Ngoc, Estimation of technical efficiency in stochastic frontier analysis

Rahrig, Ryan, Automatic alignment of RNA 3D structure

Seceleanu, Irina, Hypercyclic operators and their orbital limit points

Turcu, George, Hypercyclic extensions of bounded linear operators

Case Western Reserve University (5)

DEPARTMENT OF STATISTICS

Ehrlinger, John, Regularization: Stagewise regression and bagging

Fan, Yiyi, Co-variance estimation and applications to building a new control chart

Fares, Souha, Cox-Ross-Rubenstein option pricing model with dependent jump sizes

Li, Xiasong, Testing on the common mean of normal distributions using Bayesian method

Ma, Junheng, Contributions to numerical formal concept analysis, Bayesian predictive inference and sample size determination

Kent State University, Kent (1)

DEPARTMENT OF MATHEMATICAL SCIENCES

Azizheris, Kamal, Determining group structure from the sets of character degrees

Ohio State University, Columbus (27)

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Ahn, Sungwoo, Transient and attractor dynamics in models for odor discrimination

Danisman, Yusuf, L -factors of supercuspidal representations of p -adic $GS(4)$

File, Daniel, On the degree 5 L -function for $GS(4)$

Huang, Min, Applications of integral transform methods to the Schrödinger equation and dynamical systems

Im, Jeong Sook, Comparison of the Korteweg-de Vries (KdV) equation and the Euler equations with irrotational initial conditions

Joshi, Janhavi, On the L^2 cohomology of complete Kähler convex manifolds

Kim, Kyung-Mi, Test vectors of Rankin-Selberg convolutions for general linear groups

Lee, Gangyong, Theory of Rickart modules

Lim, Changhoon, On the hypersurfaces of constant curvature in S^{n+1} with boundary

Liu, Yu-Han, Gradient ideals

Peng, Na, Fractal gauge for hyperspace: One limit point

Polo, Fabrizio, Equidistribution on chaotic dynamical systems

Ross, Christopher, Properties of random threshold and difference graphs

Su, Shu, Numerical approaches on shape optimization of elliptic eigenvalue problems and shape study of human brains

Valle, Raciél, Polygonal complexes with octahedral links

Wang, Jie, Geometry of general curves via degenerations and deformations

Wang, Ying, Central schemes for the modified Buckley-Leverett equation

Xie, Zhizhang, Analogues of eta invariants for even dimensional manifolds

Zeki, Mustafa, Discrete analysis of synchronized oscillations in excitatory-inhibitory neuronal networks

Zhang, Huaijian, Boundary integral techniques in three dimensions for deep water waves

Zhang, Yanyan, Periodic forcing of a system near a Hopf bifurcation

DEPARTMENT OF STATISTICS

Berrett, Candace, Bayesian probit regression models for spatially-dependent categorical data

Damieder, William, Bayesian methods for data-dependent priors

Hoffman, Lori, Disease gene mapping under the coalescent model

Liu, Yushi, Properties of the SCOOP method of selecting gene sets

Rettiganti, Mallikarjuna, Statistical models for count data from multiple sclerosis clinical trials and their applications

Svenson, Joshua, Computer experiments: Multiobjective optimization and sensitivity analysis

Ohio University, Athens (3)

DEPARTMENT OF MATHEMATICS

Moore, Jeremy, On inverses and linear independence

Schwiebert, Ryan, Faithful torsion modules and rings

Thompson, Scotty, Comparing topological spaces using new approaches to cleavability

University of Cincinnati (8)

DEPARTMENT OF MATHEMATICAL SCIENCES

Bertke, Stephen, Issues with the Cox proportional hazards model and the nested case-control study design

Cabarcas, Daniel, Gröbner bases computation and mutant polynomials

Kang, Zhuang, Illiquid derivative pricing and equity valuation under interest rate risk

Kruglov, Victoria, Growth of the ideal generated by a quadratic multivariate function

Li, Xia, A Bayesian hierarchical model for studying inter-occasion and inter-subject variability in pharmacokinetics

Lin, Min, Correlation of bivariate frailty models and a new marginal Weibull distribution for correlated bivariate survival data

Sun, Yan, Regularization for high-dimensional time series models

Wagner, John, Cryptanalysis of rational multivariate public key cryptosystems

University of Toledo (4)

DEPARTMENT OF MATHEMATICS AND STATISTICS

Crumley, Michael, Ultra products of tannakian categories and generic representation theory of unipotent algebraic groups

Marinov, Petko, Stability analysis of capillary surfaces with planar or spherical boundary in the absence of gravity

Powell, Megan, Mathematical models of the activated immune system during HIV infection

Shabanskaya, Anastasia, Classification of six dimensional solvable indecomposable Lie algebras with a codimension one nilradical over R

OKLAHOMA

Oklahoma State University (1)

DEPARTMENT OF MATHEMATICS

Sharma, Ramjee, Global regularity or finite time singularity of the surface quasi-geostrophic equations

University of Oklahoma (6)

DEPARTMENT OF MATHEMATICS

Breeding, Jeffrey, Irreducible non-cuspidal characters of $GSp(4, \mathbb{F}_q)$

Byun, Taechang, Horizontal displacement of curves in bundle $SO(n) \rightarrow SO_0(1, n) \rightarrow \mathbb{H}^n$

Guan, Wei, Some local and global aspects of mathematical digital signal processing

Munteanu, Laura, Generating simulation relations for certain nonlinear control systems

Doctoral Degrees Conferred

Rajeevsarathy, Kashyap, Roots of Dehn twists about separating curves

Tran, Quan, Snowflake groups with super-exponential 2-dimensional Dehn functions

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EPIDEMIOLOGY

Mushtaq, Nasir, Measuring nicotine dependence among smokeless tobacco users

OREGON

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DEPARTMENT OF MATHEMATICS

Hickethier, Don, Covariant derivatives on null submanifolds

Hickmann, Kyle, Unique determination of acoustic properties from thermoacoustic data

Kim, Hoe Woon, The Stokes problem of fluid mechanics, Riesz transform, and Helmholtz-Hodge decomposition: Probabilistic methods and their representations

Klein, Vivian, Error analysis for coupled elliptic and parabolic systems with applications to flow and transport problems

Manore, Carrie, Non-spatial and spatial models for multi-host pathogen spread in competing species: Applications to BYDV and Rinderpest

Morales, Fernando, Multiscale analysis of saturated flow in a porous medium with an adjacent thin channel

Seaders, Nicole, Splittings of skeletal homotopy modules

Wing, David, Notions of complexity in substitution dynamical systems

DEPARTMENT OF STATISTICS

Starceвич, Leigh Ann, Propensity score methodology for nonignorable nonresponse

University of Oregon (2)

DEPARTMENT OF MATHEMATICS

Conner, Andrew, A -infinity structures, generalized Koszul properties, and combinatorial topology

Jasper, John, Infinite dimensional versions of the Schur-Horn theorem

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DEPARTMENT OF MATHEMATICAL SCIENCE

Bichuch, Maxim, Asymptotic analysis for optimal investment and consumption with transaction costs with two futures contracts

Klipper, Michael, Analysis for the beginning mathematician

Lumsdaine, Peter LeFanu, Higher categories from type theories

Spector, Daniel, Characterization of Sobolev and BV spaces

Szudzik, Matthew, Some applications of recursive functionals to the foundations of mathematics and physics

Yu, Hang, Horizon dependence of utility optimizers in incomplete models

Yust, Anne, Data driven modeling and intervention design in large biological systems

DEPARTMENT OF STATISTICS

Buchman, Susan, High-dimensional adaptive basis density estimation

Heinz, Daniel, Hyper Markov non-parametric processes for mixture models and graphical model determination

Manrique Vallier, Daniel, Longitudinal mixed membership models with applications to disability survey data

Richards, Joseph, Fast and accurate estimation for astrophysical problems in large databases

Sarkar, Avranil, Power prediction in large scale multiple testing: A Fourier approach

Xi, Peiyi, Detection of bursts in neuronal spike trains using hidden semi-Markov point process models

Zhao, Linqiao, A model of limit-order book dynamics and a consistent estimation procedure

Drexel University (3)

DEPARTMENT OF MATHEMATICS

Kimsey, David, Matrix-valued moment problems

Milgrom, Timur, A study of boundary-value problems in interfacial fluid dynamics

Zhuravytska, Svitlana, Noise-induced phenomena in electrically coupled neuronal networks

Lehigh University (2)

DEPARTMENT OF MATHEMATICS

Lambright, Justin, A generalization of Kazhdan and Lusztig's R -polynomials

Stoner, Melissa, Existence and stability of standing and traveling wave solutions arising from synaptically coupled neuronal networks

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Climenhaga, Vaughn, Thermodynamic formalism and multifractal analysis for general topological dynamical systems

Cyr, Van, Transient Markov shifts

Fang, Yang, Zeta functions of complexes from PGSP(4)

Gyrya, Vitaliy, Effective viscosity and dynamics of suspensions of microswimmers

Hair, Steven, Homological methods in coarse geometry

Kibelbek, Jonas, Formal groups and Atkin and Swinnerton-Dyer congruences

Skukalek, John, On the Higson-Mackey analogy, group C^* -algebras, and K -theory

Sun, Peng, Entropy and invariant measures for skew product maps

Wang, Chenying, Analysis of finite-length low-density parity-check codes

Wang, Zhenqi, Partially hyperbolic actions

Xue, Jiangwei, The endomorphism algebras and Hodge groups of certain superelliptic Jacobians

DEPARTMENT OF STATISTICS

Artemiou, Andreas, Topics on supervised and unsupervised dimension reduction

Bhat, Kabekode, Inference for complex computer models and large multivariate spatial data with applications to climate science

Chung, Yeojin, Likelihood-tuned density estimation and its application to clustering

Feng, Yijia, Robust nonparametric function estimation with serially correlated data

Groendyke, Christopher, Inference for social networks based on epidemic data

Hammel, Tracey, Semiparametric estimation for finite mixture models using an exponential tilt

Hummel, Ruth, Improving estimation for exponential-family random graph models

Kim, Kion, The recent history functional linear model and its extension to sparse longitudinal data

Kim, Min-Hee, Thresholding methods for hypothesis testing in HANOVA

Lee, Hyang Min, Variable selection and regularized mixture modeling for clustering

Mao, Xianyun, Density estimation and modal based method for haplotyping and recombination

Smucker, Byran, By design: Exchange algorithms to construct exact model-robust and multiresponse experimental designs

Sun, Jianping, Composite likelihood in long sequence data

Teng, Huei-Wen, Bayesian nonparametric approaches for financial option pricing

Temple University (10)

DEPARTMENT OF MATHEMATICS

Dobbins, Michael, Representations of polytopes

Hanson-Hart, Zachary, A Cauchy problem with singularity along the initial hypersurface

Xiong, Sheng, Stochastic differential equations: Some risk and insurance applications

DEPARTMENT OF STATISTICS

Chen, Jing, Choice experiments for estimating main effects and interactions

Chen, Jingru, Selection of optimal threshold and near optimal interval using profit function and ROC

Gong, Hui, Modeling volatility in financial series with applications

He, Li, Incorporating correlation to improve multiple testing procedures

Liu, Fang, New results on the false discovery rate

Zheng, Lingyu, Estimation of the linkage matrix in O-GARCH and GO-GARCH models

Zheng, Shuo, New hierarchical nonlinear modeling for count data

University of Pennsylvania (13)

DEPARTMENT OF MATHEMATICS

Deliu, Dragos, Homological projective duality for $\text{Gr}(3, 6)$

DeVito, Jason, The classification of biquotients of dimension less than or equal to 7 and 3 new examples of almost positively curved manifolds

DeVries, Timothy, Algorithms for bivariate singularity analysis

Gupta, Shuvra, Generic Galois extensions for families of finite groups

Hom, Jennifer, Heegaard Floer invariants and cabling

Isik, Mehmet Umut, The derived category and the singularity category

Mendes, Ricardo Augusto, Equivariant tensors on polar manifolds

Pandit, Pranav, Moduli problems in derived noncommutative geometry

Smith, Aaron, The higher Riemann-Hilbert correspondence and multi-holomorphic mappings

Tolga, Karayayla, Classification of automorphism groups of rational elliptic surfaces

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Baiocchi, Michael, Methods for observational studies

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Nie, Hui, Ensemble minimax estimation for multivariate normal means

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Atem, Folefac Desire, Rationale for choosing explicit correlation in multilevel analysis with bivariate outcomes

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Kang, Dongwan, Statistical issues in combining multiple genomic studies: Quality assessment, dimension reduction, and integration of transcriptomic and phenomic data

Kim, Sung Hee, A correlated random effects hurdle model for excess zeros with clustered data based on BLUP (REML) estimation

Kim, Yeonhee, Statistical methods for evaluating biomarkers subject to detection limit

Ko, Jin-Hui, Statistical issues in the design and analysis of sequentially randomized trials

Kuo, Chia-Ling, Topics in statistical methods for human gene mapping

Kwon, Yu Mi, An imputation method under a pseudolikelihood method for analysis of missing data

Lee, MinJae, Multiple imputation and quantile regression methods for biomarker data subject to detection limits

Luong, The Minh, Weakest-link methods in modeling joint effects in biology

Shook, Stephanie, The randomized placebo-phase design: Evaluation, interim monitoring and analysis

Tanaka, Yoko, An adaptive two-stage dose-response design method for establishing proof of concept in drug development

Tang, Xinyu, Analyzing survival data for sequentially randomized designs

Wang, Yuanyuan, Open-source simulation experiment platform for evaluating clinical trial design with applications to phase I dose-finding clinical trials

Zhao, Xinhua, Bayesian analysis of latent trait hierarchical models for multiple binary outcomes in cluster randomized clinical trials

DEPARTMENT OF MATHEMATICS

Connors, Jeffrey, Partitioned time discretization for atmosphere-ocean interaction

DeSantis, Mark, Dynamics of asset price changes: Statistical and differential equations models

Feng, Ziqin, Hilbert's 13th problem

Hu, Xianpeng, Weak solutions and incompressible limits of multi-dimensional magnetohydrodynamic flows

Lozovskiy, Alexander, Numerical analysis of the aerodynamical noise prediction in direct numerical simulation and large eddy simulation

Sun, Qiang, Analysis of importance sampling in parameter estimation of a stochastic volatility model

Sviridov, Alexander, Elliptic equations in graphs via stochastic games

Tang, Saishuai, Mathematical modeling of immune response and vocal fold inflammation

Trofimov, Evgueni, Shocks versus kinks in a discrete model of dispersive phase transition

Tsui, Lung K., Multi-name credit risk modeling

Vassilev, Danail, Discretizations and solvers for coupling Stokes-Darcy flows with transport

Verduzco-Flores, Sergio, Working memory and oscillations: The implications of neural populations

Yu, Yan, Traveling waves of a nonlocal conservation law

DEPARTMENT OF STATISTICS

Baik, Seo Hyon, Mapping underlying dynamic effective connectivity in neural systems using the deconvolved neuronal activity

Obreja, Mihaela, Reconstructing images from in vivo laser scanning microscope data

Sovak, Melissa, The effect of student-driver projects on the development of statistical reasoning

Zhang, Yao, Statistical treatment of gravitational clustering algorithm

Zhao, Mengyuan, Statistical methods for exploring neuronal interactions

Zhou, Dongli, Functional connectivity analysis of fMRI time-series data

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DEPARTMENT OF BIostatISTICS

Kang, Hakmook, Spatio-temporal models for functional magnetic resonance images

Mwangi, Ann, Addressing selection bias in observational event history data, with application to HIV data from western Kenya

DEPARTMENT OF MATHEMATICS

Ben-Artzi, Jonathan, Linear instability of nonmonotone super heated plasmas

Chen, Qile, Logarithmic stable maps to Deligne-Faltings pairs

Chhita, Sunil, Scaling windows of dimer models

Giansiracusa, Noah, Birational models from rational normal curves

Gokturk, Ali, Comparison of Teichmüller geodesics and Weil-Petersson geodesics

Kim, Chanwoo, Initial boundary value problem of the Boltzmann equation

Li, Zhongyang, Vertex models, Ising models and Fisher graphs

Ma, Xiaomin, Discrepancy of point distribution in two dimensions and application of quasi-Monte Carlo method in integral estimation

Marcus, Steffen, Spaces of stable maps, evaluation spaces, and polynomial families of tautological classes

Spencer, Matthew, Moduli spaces of power series in finite characteristic

Zhang, Xiangxiong, Maximum-principle-satisfying and positivity-preserving high order schemes for conservation laws

DIVISION OF APPLIED MATHEMATICS

- Lee, Chia Ying*, Effective approximations of stochastic partial differential equations based on Wiener chaos expansion and the Malliavin calculus
- McCalla, Scott*, Localized structures in the multi-dimensional Swift-Hohenberg equation
- Pfrang, Christian*, Diagonalizing random matrices with integrable systems
- Yeo, Kyongmin*, Some aspects of suspension flows: Stokes to turbulent flows

SOUTH CAROLINA

Clemson University (4)

DEPARTMENT OF MATHEMATICAL SCIENCES

- Henry, Stephen*, Tight polyhedral relaxations of discrete sets using projections, simplices, and base-2 expansions
- Kuruwita, Chinthaka*, Nonparametric methods in varying coefficient models and quantile regression models
- Layne, Lori*, Biologically relevant classes of Boolean functions
- Volny, Frank*, New algorithms for computing Gröbner bases

Medical University of South Carolina (3)

DEPARTMENT OF BIostatistics AND EPIDEMIOLOGY

- Ciolino, Jody*, Measuring continuous baseline covariate imbalance in clinical trial data
- Shotwell, Mary*, Missing data methods in marine mammal strandings research
- Shotwell, Matthew*, Product partition modeling and inference for biomedical research

University of South Carolina (5)

DEPARTMENT OF MATHEMATICS

- Boozer, John*, On the finite axiomatizability of equational theories of automatic algebras
- Webb, John*, The behavior of partition values
- Yang, Yiting*, Genome rearrangement, randic index and routing number
- Zhelto, Pavel*, Additive Lebesgue-type inequalities for greedy approximation

DEPARTMENT OF STATISTICS

- Habiger, Joshua*, p -values for multiple testing procedures

TENNESSEE

University of Memphis (7)

DEPARTMENT OF MATHEMATICAL SCIENCES

- Benevides, Fabricio*, On Ramsey theory and slow bootstrap percolation

Czerwinska, Malgorzata, Geometric properties of symmetric spaces of measurable operators

Davis, Annita, Models for unsupervised learning

Johannson, Karen, Probabilistic problems in graph theory

Kurmashv, Dias, On the local solvability of the initial-boundary value problem of fiber spinning of the upper convected Maxwell fluid

Mezei, Alexandru Razvan, Approximation methods by singular integral operators

Yan, Xiaowei, Stochastic and state space models of carcinogenesis under complex situation

University of Tennessee, Knoxville (10)

DEPARTMENT OF MATHEMATICS

- Bodine, Erin*, Optimal control for species augmentation conservation strategies
- Bunn, Jared*, Bounded geometry and property A for nonmetrizable coarse spaces
- Gewecke, Nicholas*, Dynamics of mushy layers on a finite domain
- Gray, Jonathan*, On the homology of automorphism groups of free groups
- Laska, Jason*, On conjectures concerning nonassociative factorizations
- Leander, Rachel*, Optimal control applied to population and disease models
- Lynch, Benjamin*, Elasticity of Krull domains with infinite divisor class group
- Turner, Matthew*, Explicit L_p -norm estimates of infinitely divisible random vectors in Hilbert spaces with applications
- Wilkins, Leonard*, Discrete geometric homotopy theory and critical values of metric spaces
- Yoon, Miun*, Differential equation models and numerical methods for reverse engineering genetic regulatory networks

Vanderbilt University (4)

DEPARTMENT OF MATHEMATICS

- Davis, Tara*, Subgroup distortion in metabelian and free nilpotent groups
- Fitzpatrick, Justin*, The geometry of optimal and near-optimal Riesz energy configurations
- Lopez-Garcia, Abey*, Two problems in computational mathematics: Multiple orthogonal polynomials and greedy energy points
- Sinclair, Thomas*, Deformations of Π_1 factors with applications to their structural theory

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Baylor University (2)

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- Lyons, Jeff W.*, Boundary data smoothness for solutions of nonlocal boundary value problems

Williams, Brian, Indecomposability in inverse limits

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Chidyagwai, Prince, Coupling surface flow and porous media flow

Enriquez, Marco, The effects of coupling adaptive time stepping and adjoint state methods for optimal control problems

Mamonov, Alexander, Resistor networks and optimal grids for the numerical solution of electrical impedance tomography with partial boundary measurements

Nammour, Rami, Approximate multiparameter inverse scattering using pseudodifferential scaling

Raol, Jay, Recovery of neuronal channel densities from calcium fluorescence

DEPARTMENT OF MATHEMATICS

Dahl, Janine, The spectrum of the off-diagonal Fibonacci operator

Fickenscher, Jon, Self-inverses in Rauzy classes

Lu, Shuijing, Rational points on del Pezzo surfaces of degree 1 and 2

McGaffey, Thomas, Regularity and nearness theorems for families of local Lie groups

Otto, Carolyn, The (n) -solvable filtration of the link concordance group and Milnor's invariants

Scott, Ryan, Minimizing the mass of the codimension two skeleton for unit volume convex polyhedra

DEPARTMENT OF STATISTICS

Bower, Beth, Forecasting wind power and prices for increased revenue in the Texas electricity market

Guo, Beibei, Statistical methods for bioinformatics: Estimation of copy number and detection of gene interaction

Southern Methodist University (4)

DEPARTMENT OF MATHEMATICS

Nagasinghe, Iranga, Computing principal eigenvectors of large web graphs: Algorithms and accelerations related to PageRank and hits

Stowell, David, Computing eigensolutions for singular Sturm-Liouville problems

DEPARTMENT OF STATISTICAL SCIENCE

Haney, James, Analyzing time series with time-varying frequency behavior and conditional heteroskedasticity

Zou, Kun, Clustering raw distributions of intensities from affymetrix gene expressions microarrays in order to evaluate statistical preprocessing methods

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DEPARTMENT OF MATHEMATICS

- Buczynska, Weronika*, Phylogenetic toric varieties on graphs
Georgieva-Hristova, Yulia, Mathematical problems of thermoacoustic and Compton camera imaging
Hitchcock, James, Generic properties of actions of F_n
Kravchenko, Rostyslav, Measure theory of self-similar groups and digit tiles
Lutes, Brad, Special values of Goss L -functions and special polynomials
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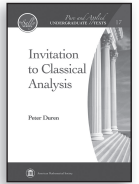
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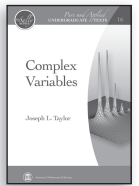


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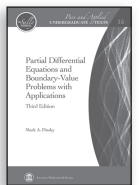


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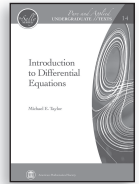
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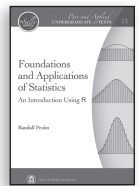


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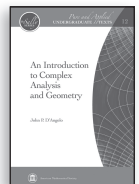
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