Doctoral Degrees Conferred

2016–2017

ALABAMA

Auburn University (13)

DEPARTMENT OF MATHEMATICS AND STATISTICS

Barnett, Johnathan, The fractional chromatic number and the Hall ratio

Costa Lima, Italo Raony, Robust simultaneous inference for functional data analysis

Denu, Dawit, Analysis of stochastic vector host epidemic model with direct transmission

Ghimire, Prakash, Derivations of the Lie algebra of strictly upper triangular matrices and dominate upper triangular ladder matricies

Hollis, Daniel, Disjoint G-designs and the intersection for some seven edge graphs

James, Daniel, Isomorphic Ext functors of torsion-free finite rank modules over a Dedekind domain

Kermausuor, Seth, Atomic characterizatrion of L_1 and the Lorentz–Bochner space $L^X(p,1)$ for $1 \leq p < \infty$ with some applications

Krizan, Christopher, Euclidean Szlam numbers

Liphan, David, Compactifications of indecomposable topological spaces

Perry, Katherine, Rainbow trees in edge-colored complete graphs and block decompositions of almost complete graphs

Weerasinghe, Kariyawasam, Convergence analysis and numerical simulation of particle swarm optimization

Wu, Hao, Mathematical and numerical analysis for linear peridynamic boundary valve problems

Yucel, Ahmet, Machine learning techniques for text classification

University of Alabama (7)

DEPARTMENT OF MATHEMATICS

Al-Jahdaly, Noufe, Linear and nonlinear convection in an infinitely high cavity in the presence of rotation

Cui, Wei, Fractional Brownian motion and managing risk with short-term futures contracts

Hoang, Cong, Sparse technology in weighted harmonic analysis

Liu, Veny, Free inverse semigroupoids and their inverse subsemigroupoids

Sandor, Bryan, On finitely generated nilpotent groups and their subgroups

Vo, Huy, Krylov approximations and model reduction methods for the chemical master equation

Watley, Laura Erin, Structural validity and reliability of two observation protocols in college mathematics

University of Alabama at Birmingham (7)

DEPARTMENT OF BIOSTATISTICS

Venturi, Yogasudha, Methods for the analysis of genetic differences in ethnicity and sex for complex human traits

Zhang, Xinyan, Statistical methods in cancer survival prediction and microbiome data analysis

DEPARTMENT OF MATHEMATICS

Abdul-Rahman, Houssam, Entanglement in disordered quantum XY chains

Antwi-Fordjour, Kwadwo, Pattern formation and semilinear evolution equations in function spaces

Kim, Seonguk, Perturbation formulas for Gross-Pitaevskii equation with periodic potential

Mann, Ivan, A metrically defined uniformization map of planar domains

Moxley, Caleb, Homotopical complexity of several billiard models

University of Alabama–Huntsville (1)

DEPARTMENT OF MATHEMATICAL SCIENCES

Li, Yang, Discrete-time structured models and their dynamics for interactive wild and sterile mosquitos malaria transmission

University of Alabama (1)

DEPARTMENT OF INFORMATION SYSTEMS, STATISTICS AND MANAGEMENT SCIENCE

Zhu, Xuwen, The development of diagnostic tools for mixture modeling and model-based clustering

ARKANSAS

University of Arkansas at Fayetteville (3)

DEPARTMENT OF MATHEMATICAL SCIENCES

Ding, Chao, Construction of conformally invariant operators in higher spin spaces

Dutta, Arnab, On compactness and close-rangeness of composition operators

Juda, Daniel, On rings of invariants for cyclic p-groups

ARIZONA

Arizona State University (16)

MATHEMATICS, COMPUTATIONAL AND MODELING SCIENCES CENTER

Chowell, Diego, Mathematical and computational models of cancer and the immune system

Mamada, Robert, Potential games and competition in the supply of natural resources

Udiani, Oyita, A novel approach to study task organization in animal groups

SCHOOL OF MATHEMATICAL AND STATISTICAL SCIENCES

Al-Suleiman, Sultan, Toward enumerating the chains of maximum length of Cambrian and m-eralized Cambrian lattices

Byerley, Cameron, Secondary teachers' and calculus students' meanings for fraction, measure, and rate of change

The above list contains the names and thesis titles of recipients of doctoral degrees in the mathematical sciences (July 1, 2016, to June 30, 2017) reported in the 2018 Annual Survey of the Mathematical Sciences by 275 departments in 202 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.

Farrell, Alex, Prey-predator-parasite: An ecosystem model with fragile persistence

Gutierrez Cortez, Paloma, Rotating split-cylinder flows

Korytowski, Daniel, Persistence for kill the winner nested infection Lotka-Volterra models

Lanfear, Nathan, The Pauli-Lubański vector in a group-theoretical approach to relativistic wave equations

Liu, Ruowen, Numerical issues arising in the simulations of transient water flow in layered unsaturated soils

Mitrano, Arthur, Properties of divergence-free methods for approximation and solution of partial differential equations

Nelson, Luke, Toward the enumeration of maximal chains in the Tamari lattices

Pell, Bruce, Dynamics and implications of data-based disease models in public health and agriculture

Rutter, Erica, A mathematical journey of cancer growth

Treat, Kevin, On chains in the Tamari lattice

Zhu, Junfei, A power study of GFfit Statistics as components of Pearson Chi-Square

University of Arizona (17)

DEPARTMENT OF MATHEMATICS

Berard, Whitney, Explicit Serre weight conjectures in dimension four

Brown, Tova, Asymptotics and dynamics of map enumeration problems

Davis, Erik, Consistency of modularity clustering on random geometric graphs

Lee, Hyereem, Triples in finite groups and a conjecture of Guralnick and Tiep

Trefethen, Stephen, Non-abelian composition factors of m-rational groups

Williams, Ronnie, Level compatibility in the passage from modular symbols to cup products

Zhelezov, Gleb, Coalescing particle systems. Applications to nonlinear Fokker-Planck equations

PROGRAM IN APPLIED MATHEMATICS

Borghese, Michael, A proof of the soliton resolution conjecture for the focusing nonlinear Schrödinger equation

Burton, Jackson, Theoretical models for drug delivery to solid tumors

Leach, Andrew, Monte Carlo methods for stochastic differential equations and their applications

Ragsdale, Aaron, Multi-allele population genomics for inference of demography and natural selection

Veprauskas, Amy, On the dynamic dichotomy between positive equilibria and synchronous 2-cycles in matrix population models

Young, Alex, Three essays on complex systems

GRADUATE INTERDISCIPLINARY PROGRAM IN STATISTICS

Bear, John, A logistic normal mixture model for compostitions with essential zeros

Fang, Fang, Modern econometric techniques applied to three essays in spatial economics

Schissler, Alfred, Contributions to gene set analysis of correlated, paired-sample transcriptome data to enable precision medicine

Zeng, Yue, Variable screening in multi-category classification for ultra-high dimensional data

CALIFORNIA

California Institute of Technology (4)

DEPARTMENT OF COMPUTING AND MATHEMATICAL SCIENCES

Bruer, John, Recovering structured low-rank operators using nuclear norms

Chen, Yuhua, Concentration inequalities of random matrices and solving ptychography with a convex relaxation

Perez Arancibia, Carlos, Windowed integral equation methods for problems of scattering by defects and obstacles in layered media

Zhang, Pengchuan, Compressing positive semidefinite operators with sparse/localized bases

Claremont Graduate University (15)

INSTITUTE OF MATHEMATICAL SCIENCES

Babakhani, Behrouz, Novel microstrip patch antennas with frequency agility, polarization reconfigurability, dual null steering capability and phased array antenna with beam steering performance

Berardi, Vincent, Analytic framework for the design, implementation, and analysis of dynamic, and real-time health interventions

Campbell, Karen, SEIRscape, an agent-based mosquito-human virus basis of Dengue risk across Peru and Thailand

Denaro, Kameryn, Quantifying disease severity of cystic fibrosis using linear quantile mixed models

Flenner, Jennifer, Deep non-negative matrix factorization

Jin, Sixian, Martingale representation theorems based on Malliavin calculus

Leung, Kimberly, Stochastic models for precipitable water in convection

Paluri, Seethal, Cross-layer schemes for enhancing H.264/AVC video quality over wireless channels

Raman, Saravana, Simulation of plethysmographic environment in pulmonary function studies

Rossi, Julia, Non-conservative variational approximation for nonlinear Schrödinger equations and its applications

Silva, Genivaldo, Who is there and what are they doing? An agile and computationally efficient framework for genome discovery and annotation from metagenomic big data

Woolf, Tina, Practical compressed sensing

Xu, Qian, Generalized varying-coefficient mixed models with missing data and surrogate information

Zablocki, Rong, Large-scale inference incorporating covariates and network dependence with application to genome-wide association studies

Zhou, Deng, I/O stade optimization for non-volatile memory based storage systems

Stanford University (20)

DEPARTMENT OF MATHEMATICS

Booher, Jeremy, Geometric deformations of orthogonal and symplectic Galois representations

Brady, Zarathustra, Sieves and iteration rules

Buciumas, Valentin, Quantum groups and the Yang Baxter equation

Diao, Peter, Differential calculus on graphon space and statistical applications of graph limit theory

Florea, Alexandra, Moments and zeros of L functions over function fields

Gao, Jun, The front asymptotics for the non local KPP equation

Greer, Francois, Modular forms in enumerative geometry

Jafarov, Jafar, Loop equations and string dualities in lattice gauge theories

Lawrence, Brian, Two results on period maps

Makisumi, Shotaro, Modular Koszdul duality for Soergel bimodules

Mantoulidis, Christos, Geometric variational problems in mathematical physics

Montague, David, Covariance estimation and graphical models for infinite collections of random variables

Ren, Weilvo, Two models on limit order trading

Ronchetti, Nicolo, On the mod p derived Hecke algebra of a p adic group

Shabani, Beniada, Propogation in multi dimensional Fisher KPP equations

Siegel, Kyler, New constructions and computations on rigid and flexible symplectic geometry and applications to several complex variables

Siu, Ho Chung, Valve distribution of automorphic forms in a family

Thorvaldsson, Sverrir, Boundary fibration structures and quasi homogeneous geometries

Tripathy, Arnav, The symmetric power and etale realization functors commute

White, Graham, Combinatorial methods in Markov chain mixing

University of California, Berkeley (31)

DEPARTMENT OF MATHEMATICS

Anderson, David, Reliable and efficient algorithms for spectrum-revealing low-rank data analysis

Appel, Daniel, Theory of real bundles on the projective line

Chavez, Anastasia, Posets, polytopes, and positroids

Drouot, Alexis, Stability of resonances under singular perturbations

Dudzik, Andrew, Quantales and hyperstructures

Fortunato, Meire, Curved and anisotropic unstructured mesh generation and adaptivity using the Winslow equations

Harrison-Trainor, Matthew, The complexity of countable structures

Kileel, Joseph, Algebraic geometry for computer vision

Kim, Eugenia, Numerical methods for the Landau–Lifshitz equation in micromagnetics: The mimetic finite difference method and the mass-lumped finite element method

Liu, Weihua, Noncommutative distributional symmetries and their related de Finetti type theorems

Park, Doosung, Triangulated categories of motives over fs log schemes

Policastro, Christopher, Integral estimates for approximations by incompressible deformations

Rosu, Eugenia, Integers that can be written as the sum of two rational cubes

Schrader, Gus, Quantum groups, character varieties and integrable systems

Tsukerman, Emmanuel, Combinatorial analysis of continuous problems

Vasquez, Markus, Essays in mathematical economics

Voellmer, Andreas, A partial characterization of $\square_\kappa$ for plus-one premice

Wan, Michael, Towards a model theory of almost complex manifolds

Wells, Christopher, Methods for optimal stochastic control and optimal stopping problems featuring time-inconsistency

DEPARTMENT OF STATISTICS

Hermon, Jonathan, Maximal inequalities and mixing times

Ho, Christine, Statistical modeling and analysis for biomedical applications

Li, Xiang, Inference on graphs: From probability methods to deep neural networks

Regier, Jeffrey, Topics in large-scale statistical inference

Tang, Wenpin, Continuous paths in Brownian motion and related problems

Terhorst, Jonathan, Demographic inference from large samples: Theory and methods

Zhang, Yumeng, Phase transistions of random constraints satisfaction problem

GROUP IN BIOSTATISTICS

Gerlovina, Inna, Small sample inference

Moore, Sara, Yet another local learner (YALL): A localized machine learning algorithm with appliances in precision medicine

Petito, Lucia, Topics in survival analysis

Sarovar, Varada, Targeted maximum likelihood estimation for evaluation of the health impacts of air polution

Toth, Boriska, Targeted learning of individual effects and individualized treatments using an instrumental variable

University of California, Davis (19)

DEPARTMENT OF MATHEMATICS

Castillo Castillo, Federico, Local Ehrhart positivity

Deride Silva, Julio, Essays on variational approximation techniques for stochastic optimization problems

Jana, Indrajit, Spectrum of random band matrices

Koenig, Dale, Trisections in three and four dimensions

Kringe, Henry, A categorification of the crystal isomorphism

Lang, Alexander, On the classification of supercharacter theories

Ling, Shuyang, Bilinear inverse problems: Theory, algorithms, and applications

Rogers, Carson, Fibered links in the 3-sphere

Weaver, Chelsea, Analysis and extensions of sparse representations in signal classification

Young, Amanda, Spectral properties of multi-dimensional quantum spin systems

Zhou, Yuan, Infinite-dimensional relaxations of mixed-integer optimization problems

DEPARTMENT OF STATISTICS

Chan, Stephanie, A maximum entropy approach to joint modeling multiple primate social networks and a new audio classification scheme

Cheung, Rex Che Yeung, Statistical machine learning applications in time series, network, and partition-wise models

Fan, Minjie, Modeling vectorial and non-Gaussian random fields on a sphere

Fujii, Kevin, Ranking, clustering, and data visualization methods for revealing network structure

Ji, Hao, Optimal designs for longitudinal/functional data, extensions and applications

Meng, Haoying, Spatio-temporal modeling and predictions of house prices in San Jose

Qi, Gao, Some contributions to statistical signal processing and machine learning

Yan, Hao, Statistical learning of non-Euclidean objects and applications

University of California, Irvine (14)

DEPARTMENT OF MATHEMATICS

Boling, Jess, Two geometric flows, which are well adapted for non-Kähler geometry

Franco De Leon, Mariano, Numerical methods for curve evolution under dispersive geometric dynamics

Galgon, Geoff, Trees, refining, and combinatorial characteristics

Garrett, Ervin, The cube problem for linear orders

Han, Rui, Discrete ergodic Jacobi matrices: Spectral properties and quantum dynamical bounds

Lopez, Christopher, Compactness and rigidity for the ambient obstruction flow

Peng, Tao, Data-driven models for dynamics of gene expression and single cells

Ren, Rufei, Generic Newton polygon for exponential sums in two variables with triangular base

Ta, Catherine, Miltiscale modeling of the epilthelial-mesenchymal transition

Takahashi, Yuki, Sums and products of Cantor sets and separable two dimensional quasicrystal models

Thomas, Andrew, A general mixture for nonlinear heterogeneous tumor growth

Yang, Jienian, Stochastic modeling of stem cells

Zhang, Cheng, Scalable Hamiltonian Monte Carlo via surrogate methods

Zhang, Shuai, Transformed L_1 function, sparse optimization algorithms and applications

University of California, Los Angeles (29)

DEPARTMENT OF BIOSTATISTICS

Aralis, Hilary, Modeling multistate models with back transitions: Statistical challenges and applications

Malazarte Antonio, Anna Liza, The good, the bad and the fitting: A Bayesian hierarchical model for patient preferences elicited through discrete choice experiments

DEPARTMENT OF MATHEMATICS

Bobkov, Anton, Computations of Vapnik–Chervonenkis density in various model-theoretic structures

Charlesworth, Ian, On bi-free probability and free entropy

Charlie, Marshak, Applications of network science to criminal networks, university education, and ecology

Chongchitmate, Wutichai, New models for multi-party computation

Cook, Nicholas, Spectral properties of non-Hermitian random matrices

Flapan, Laure, Hodge structures with Hodge numbers $(n, 0, \ldots, 0, n)$ and their geometric realizations

Gast, Theodore, Numerical simulation of elastic, viscoelastic, and granular materials

Ge, Stephen, The eigenvalue spacing of i.i.d. random matrices and related least singular value results

Gold, Julian, Isoperimetric shapes in supercritical bond percolation

Greenblatt, Jordan, Dimensional asymptotics for norms of maximal averaging operators on Cartesian powers of finite graphs

Hood, Kaitlyn, Theory of particle focusing in inertial microfluidic devices

Kalyanswamy, Sudesh, Automorphy lifting theorems

Lin, Jeffrey, Understanding probabilistic models through limit theorems

Lindquist, Jeffrey, Weak capacity in Ahlfors regular metric spaces

Mullath Mohammed Sherief, Mohammedzuhair, Ramified lifts and dimension of ordinary deformation rings

Ohrt, Christopher, Higher twisted torsion invariants

Pradhana, Andre, Multiphase simulation using material point method

Sella, Yehonatan, The mixed Tate property of reductive algebraic groups

Stoffregen, Matthew, Pin(2)-equivariant Seiberg-Witten Floer homology

Tekin, Omer Faruk, Application of sparsity promoting techniques in numerical solutions of partial differential equations

Travis, Meyer, Energy models for signal processing and matrix factorization

Vivian, Bailey, Cohomological invariants of finite groups

Wong, Jeffrey, Particle-laden viscous flow on an incline

Wu, Tianyu, Coordinate update algorithms: Theory and applications

Xie, Fei, Toric surfaces over arbitrary fields

Zemke, Ian, TQFT structures in Heegaard Floer homology

Zhu, Wei, Nonlocal variational methods in image and data processing

University of California, Riverside (9)

DEPARTMENT OF MATHEMATICS

Blanton, Donna, On tensor products of demazure modules for sl 2[t]

Castro, Kyle, Multiplicative character sums and the applications to problems in analytic number theory

Choi, Hyun, Semistar operations in integral domains and multiplicative lattices

O'Dell, Matthew, Integrable representations of equivariant map algebras associated with Borel-de Siebenthal pairs

Rajan, Priyanka, Geometry and topology of some fake projective spaces

Roby, Scott, Alpha-scaling zeta functions for self-similar multifractals

Walker, Andrew, Non-Noetherian Cohen-Macaulay rings

Watson, Sean, Fractal zeta functions: To Ahlfors spaces and beyond

Williams, Parker, Information gathering on bounded degree trees and properties of random matrices

University of California, San Diego (8)

DEPARTMENT OF MATHEMATICS

Aksoy, Sinan, Random walks on directed graphs and orientation of graphs

Grogan, Francesca, Computational techniques in molecular dynamics and detonation shock dynamics

Li, Xiaolong, Moduli of continuity, Gauss curvature flow and Ricci solitons

Pu, Xiao, Topics in clustering: Feature selection and semiparametric modeling

Smith, Daniel, A Kodaira vanishing theorem for formal schemes

Spicer, Calum, Higher dimensional foliated Mori theory

Strahl, Perry, The Picard group of the moduli space of genus zero stable quotients to flag varieties

Tobin, Robin, Extremal spectral invariants of graphs

University of California, Santa Barbara (2)

DEPARTMENT OF MATHEMATICS

Cattan, David, On the numerics, generation, and scaling of fluvial landscapes

Lo Kim Lin, Jon, Micro-macro modeling and computation of ferrofluids

University of California, Santa Cruz (4)

DEPARTMENT OF APPLIED MATHEMATICS AND STATISTICS

Cadonna, Annalisa, Bayesian mixture models for spectral density estimation

Moll, Ryan, The dynamics of layered and non-layered oscillatory double-diffusive convection

DEPARTMENT OF MATHEMATICS

Carman, William Rob, Unit groups of representations rings and their ghost rings as biset functions

Zhang, Linyi, On S-matrix and fusion rules for irreducible V^G modules

University of Southern California (6)

DEPARTMENT OF MATHEMATICS

Acu, Bahar, On fillings of contact manifolds by J-holomorphic curves

Ejder, Ozlem, The torsion subgroups of elliptic curves in elementary Abelian 2-extensions and the monodromy of Fermat surfaces

Lamberto-Egan, Laffite, A braid group action of categorified quantum groups

Tsilifis, Panagiotis, Design, dimensionality reduction, and variational methods in uncertainty quantification

Weisheng, Xie, Stochastic differential equation driven by fractional Brownian motion and Poisson jumps

Xiaojing, Xing, Optimal dividend and investment problems under Sparre Anderson model

COLORADO

Colorado School of Mines (1)

DEPARTMENT OF APPLIED MATHEMATICS AND STATISTICS

Shutt, Deborah, Modeling, analysis and simulation of complex disease dynamics for HIV, Ebola, and Zika virus

Colorado State University (4)

DEPARTMENT OF MATHEMATICS

Arn, Robert, On the formulation and uses of SVD-based generalized curvatures

Dauphin, Stephen, General model-based decomposition framework for Polari metric synthetic apeture images

Hodges, Timothy, Avoiding singularities during homotopy continuation

Marrinan, Timothy, Grassmann, Flag, and Schubert varieties in applications

University of Colorado, Boulder (10)

DEPARTMENT OF APPLIED MATHEMATICS

Jennings, Dale, Advances in MCMC methods with applications to particle filtering, DSMC and Bayesian networks

Martin, Bradley, Application of RBF-FD to wave and heat transport problems in domains with interfaces

Mirzaev, Inomzhon, Analytical and numerical investigation of long term behavior of microbial flocculation equations

Sturdevant, Benjamin, Fully kinetic ion models for magnetized plasma simulations

DEPARTMENT OF MATHEMATICS

Chhay, Boramey, Euler-Arnold equations on the group of contactomorphisms and Teichmuller theory

Krupa, Matthew, Differential geometry of projective limits of manifolds

Moorhead, Andrew, Higher commutator theory for congruence modular varieties

Parker, Keli, Semistable modular compactifications of moduli spaces of genus one curves

Smith, Kathleen, On minimum variance unbiased estimation of a power of an unknown scalar or matrix

Washabaugh, Pearce, The diffeomorphism group approach to vorticity model equations

University of Colorado Anschutz Medical Campus (1)

Department of Biostatistics and Informatics

DeWitt, Peter, Parsimonious *B*-Spline regression models via control polygon and control net reduction for identifying factors explaining variation in daily hormone profile during the menopausal transition

University of Denver (3)

Department of Mathematics

Aguilar, Konrad, Quantum metrics on approximately finite-dimensional algebras

Al-Ali, Masoumah, Z_2-orbifolds of affine vertex algebras and W-algebras

Girón Garnica, Gabriel, Banach spaces from barriers in high dimensional Ellentuck spaces

University of Northern Colorado (1)

School of Mathematical Sciences

King, Jeffrey, Students social adaptation to mathematical tasks

CONNECTICUT

University of Connecticut, Storrs (20)

Department of Mathematics

Andrews, Ulysses, Existence of diffusions of 4N carpets

Arthur, Frank, Liouville-type theorems for higher order elliptic systems

Brzoska, Antoni, Spectral properties of the Hata tree

Chou, Michael, Torsion of rational elliptic curves over Abelian extensions of Q

Corekli, Cagnur, Finite element methods of Dirichlet boundary optimal control problems with weakly imposed boundary conditions

Joseph, Michael, Toggling involutions and homomesies for maps on finite sets, noncrossing partitions, and independent sets of path graphs

Miller, David J, Fast algorithms for structured matrices and Laurent polynomials

Niu, Gao, Actuarial application of agent based modeling

Ou, Tze-Chun, Irreducible modules over KLR algebras of twisted affine type

Ramli, Rozita, Generalized linear model approach to adjusting expected assumptions of long-term care incidence rates

Shum, Fan Ny, Stabilization by noise of systems of complex-valued ODEs

Stahl, Rachel, Computability theoretic results for the game of cops and robbers on infinite graphs

Xhumari, Sandi, Generalized p-adic Gauss sums

Zito, Stephen, Modules from tilted to cluster-titled algebras

Department of Statistics

Bader, Brian, Automatic, efficient, and practical extreme value analysis with environmental applications

Fu, Wei, Predicting ultimate targets with time-dependent predictors

Saha, Abhisek, Bayesian analysis of item response theory and its applications to longitudinal education data

Wang, Chun, On statistical methods for big data

Wang, Yu-Bo, Adaptive partition weighted MCMC estimation

Wu, Qianzhu, Robust scan statistics for detecting a local change in population mean

Wesleyan University (3)

Department of Mathematics and Computer Science

Kreinbihl, James, A Fox–Milnor theorem for knots in a thickened surface

Marino, Alicia, Finiteness of strictly n-regular quadratic forms

Vigliotta, Sarah, Fractional chromatic numbers of incidence graphs

Yale University (11)

Department of Biostatistics

Fu, Zhixuan, Penalized variable selection in competing risks regression

Liu, Tiangi, Some statistical methods for brain gene expression data: Dimension reduction, feature screening and causal inference

Lu, Qiongshi, Integrative functional annotation of the human genome and its applications in post GWAS analysis

Shabarova, Veronika, Multivariate approach to modeling of time to event data with non-susceptible fraction and informative censoring

Sun, Jiehuan, Statistical methods for tanslational medicine in longitudinal genomic studies

Department of Mathematics

Dimitrov, Vesselin, Diophantine approximations by special points and applications to dynamics and geometry

Ehrman, Max, Almost primes in thin orbits of pythagorean triangles

Koplewitz, Shaked, Random graphs, sandpile groups, and surjectivity of random matrices

Luh, Kyle, Universality of random graphs and random matrices

Nguyen, Oanh, Random polynomials

Zhang, Liyang, Quantum unique ergodicity of degereate eisenstein series on $GL(n)$

DELAWARE

Delaware State University (1)

Department of Mathematical Sciences

Zheng, Peng, Automatic image registration by using multi-variate spline functions

University of Delaware (7)

Department of Mathematical Science

Hassell, Matthew, Some applications of integral equations to the solution of transient partial differential equations

Jin, Ke, On the length of the longest common subsequence of two independent mallows pemutations

Kapita, Shelvean, Plane wave discontinuous Galerkin methods for acoustic scattering

Plaza, Rafael, Representation theory methods in extremal combinatorics

Sánchez-Vizuet, Tonatiuh, Integral and coupled integral-volume methods for evolutionary wave structure interaction

Sun, Shuying, On some families of algebraically defined graphs

Xu, Peng, Some topics in random walks on graphs, harmonic analysis and rogozin type inequalities for locally compact groups

DISTRICT OF COLUMBIA

George Washington University (3)

Department of Mathematics

Aganezov, Sergey, Phylogenomics meets genome assembly: From evolutionary analysis to scaffolding

Walker, Hakim, Computable isomorphisms of directed graphs

Yang, Seung Yeop, Khovanov homology, distributive structure homology and applications to knot theory

FLORIDA

Florida Atlantic University (4)

Department of Mathematical Sciences

Amento, Brittanney, Quantum circuits for cryptanalysis

Hurley, Michael, New geometric large sets

Kasti, Dinesh, An algorithmic approach to the lattice structures of attractors and Lyapunuv functions

Khadka, Bal, Techniques in lattice basis reduction

Florida Institute of Technology (5)

DEPARTMENT OF MATHEMATICAL SCIENCES

Ben-Rabha, Raja, Initial boundary value problems for higher order nonlinear hyperbolic equations with two independent variables

Binmahfoudh, Ahmed, New bounds for K-out-of-n type probabilities and their applications

Iqbal, Naveed, On the classification of the second minimal orbits of the continuous endomorphisms on the real line and universality in chaos

Iwezulu, Kenneth, Discrete and continuous operational calculus in stochastic games

Mandelkern, Jeremy, Sturm–Liouville equations with singular endpoints of Poincarè rank zero and one

Florida State University (27)

DEPARTMENT OF MATHEMATICS

Aktas, Mehmet, Topology of N-gonal curves

Billet, Robert, Flow equivalence classes and Psuedo-Anosov

Chen, Yuanda, Modeling limit order book dynamics using Hawkes processes

Chiu, Chun-Yuan, Modeling credit risk in the default threshold framework

Dai, Yao, Game-theoretic models of animal behavior observed in some recent experiments

Eilertsen, Justin, Local and global bifurcations in finite-dimensional center manifold equations of double-diffusive convection

Gu, Fangxi, Exponential convergence fourier method and its application to option pricing with Levy processes

Harris, Corey, Effective methods in intersection theory and combinatorial algebraic geometry

Mandel, David, Random Sobol' sensitivity analysis and model robustness

Mayhook, Dane, Conformal tilings and type

McKenna, Joseph, Insulin secretion rhythms: Calcium regulation of beta-cell metabolism and rescue of islet oscillations

Tai, Liang-Hsuan, Trend and variable-phase seasonality estimation from functional data

Weingard, Daniel, Scroll waves: And how they interact with non-reactive knots, tori, and spheres

Wyse, John, The impact of competition on temporal musth strategies: A game-theoretic approach

Yao, Kovadio, Statistical analysis on object spaces with applications to 3D face analysis and exchange rates data

Yildirim, Vehpi, Mathematical modeling and analysis of gene knockout compensation in pancreatic beta-cells

DEPARTMENT OF STATISTICS

Alzahrani, Hissah, Multivariate binary longitudinal data analysis

Anaya, Josue, First steps towards image denoising in low-light conditions

Cleveland, Jason, Robust function registration using depth on the phase variablility

Geng, Junxian, Bayesian models for capturing heterogeneity in discrete data

Gordon, Glenna, Intensity estimation in Poisson processes with phase variability

Gupta, Ajay, Modeling multivariate data with parameter-sensitive subspaces

Gupta, Cherry, Bayesian inference and novel models for survival data with cured fraction

Huang, Xue, Sparse feature and element selection in high-dimensional vector autoregressive models

Lee, JiWon, Small area estimation with automatic random effects selection

Lester, David, High level image analysis on manifolds via projective shapes and 3D reflection shapes

Orndorff, Mark, Nonparametric detection of arbitrary changes to distributions in process control

University of Central Florida (2)

DEPARTMENT OF MATHEMATICS

Dutta, Aritra, Weighted low-rank approximation of matrices: Some analytical and numerical aspects

Rolek, Martin, Coloring graphs with forbidden minors

University of Florida (18)

DEPARTMENT OF MATHEMATICS

Adams, Francis, Anticliques in Borel graphs on polish spaces and computable ultrahomogeneous structures

Borchering, Rebecca, Population thresholds and disease ecology

Cyr, Christopher, On S-semipermutable subgroups of simple groups

Milliken, Evan, Metrapopulation models of infectious salmon anemia

Molnar, Todd, Local distribution of the number of small prime factors

Saucedo, Omar, Mathematical modeling of avian influenza

Ward, Larie, Shift operators on Hilbert spaces arising from trees

Zhang, Hao, Modeling and algorithm of information sharing in inverse problem

DEPARTMENT OF STATISTICS

Abrahamsen, Tavis, Convergence analysis of MCMC samplers for Bayesian linear mixed models with $P > N$

Feng, Wei, Models for the analysis of repeated attempt designs

Ha, Trung, Convergence analysis of birth-death Markov chains and Gibbs samplers

Parker, Robert, Some strong and weak limit theorems for double sums of random elements in branch spaces

Saha, Abhishek, Bayesian inference in Gaussian graphical models when the underlying graph is non-decomposable

Wang, Chuan, Contributions to Bayesian statistical methods for agricultural and biological engineering

Xiang, Ruoxuan, Consistency of high dimensional Bayesian models

Xu, Dandan, Bayesian nonparametric methods for analysis of electronic health records

Zhong, Xiaolong, Essays on empirical likelihood

Zhu, Guangyu, Likelihood based partial least squares

University of Florida College of Public Health (4)

DEPARTMENT OF BIOSTATISTICS

An, Qi, Optimal group sequential designs

Jingnan, Zhang, An early warning system for modeling and monitoring spatio-temporal pattern of infectious disease

Li, Yang, Population-based unified cure rate model and population-based Gompertz cure rate model

Xinrui, Zhang, Internal pilots with the univariate approach to repeated measures

University of Miami (2)

DEPARTMENT OF MATHEMATICS

Cardona Caviria, Jorge, On statistical solutions of evolution equations

Langdon, Christopher, Symmetric 1-twisted differentials and the quadric algebra

University of South Florida (11)

DEPARTMENT OF MATHEMATICS AND STATISTICS

Assonken Tonfack, Patrick, Modeling in finance and insurance with Levy-Ito driven dynamic processes under semi Markov-type switching regimes and time domans

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Fleeman, Matthew, Putnam's inequality and analytic content in the Bergman space

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Lappano, Stephen, Some results concerning permutation polynomials over finite fields

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Iowa State University (29)

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Nawaz, Tayyab, Applications of Stein's method and large deviations principle's in mean-field $O(\mathbb{N})$ models

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Pechenik, Oliver, K-Theoretic Schubert calculus and applications

Petrickova, Sarka, Extremal problems on counting combinatorial structures

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Santana, Michael, Extremal problems on cycle structure and colorings of graphs

Sharifzadeh, Maryam, Embedding problems and Ramsey-Turan variation in extremal graph theory

Spinoza, Hannah, On some problems in reconstruction

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Sengupta, Srijan, Statistical analysis of networks with community structure and bootstrap methods for big data

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Louisiana Tech University (5)

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Brantner, David, The Lubin-Tate theory of spectral lie algebras

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Bai, Yun, Statistical methods for genetic and epigenetic studies

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Lin, Lifeng, Statistical methods for meta-analysis

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Wen, Chenxu, Amenable extensions in II_1 factors

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DEPARTMENT BIOSTATISTICS

Liu, Qi, Covariate-adjusted Spearman's Rank correlation with probability-scale residuals

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Smith, Derek, Empirical Bayes methods for modern statistical problems

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STATISTICAL SCIENCE DEPARTMENT

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DEPARTMENT OF MATHEMATICS AND STATISTICS

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Elmagbri, Fairouz, Moment-type nonparametric estimation in some direct and indirect models

LaRue, Renee, An analysis of student approaches to solving optimization problems in first semester calculus

Vincent, Brittany, First semester caculus students' concept definitions and concept images of the tangent line and how these relate to students' understandings of the derivative

WISCONSIN

Marquette University (5)

DEPARTMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

Addo, Ivor, Designing human-centered collective intelligence

Baur, Brittany, Inferring regulators from multiple types of biological data in cancer

Gani, Md Osman, A novel approach to complex human activity recognition

Kociuba, Mary, A Fourier description of covariance, and separation of simultaneously encoded slices with in-plane acceleration in fMRI

Stamm, Karl, Gene set enrichment and projection displays: A computational tool for knowledge discovery in transcriptomes

Medical College of Wisconsin (2)

DIVISION OF BIOSTATISTICS

Martens, Michael, Group sequential design and sample size calculations for covariate adjusted competing risks and survival analysis

Shi, Yushu, Weibull mixture models for regression in the context of time-to-event data

University of Wisconsin, Madison (30)

DEPARTMENT OF MATHEMATICS

Abbott, Carolyn, Acylindrical actions on hyperbolic spaces

Dimou, Evangelos, Maximal estimates for solutions to dispersive equations

Emrah, Elnur, Exactly solvable inhomogeneous corner growth models

Jain, Lalit, Big model monodromy for families of G-covers

Janjigian, Christopher, Large deviations for certain solvable directed polymer models

Kabakulak, Ahmet, A-infinity algebras and ribbon graphs

Li, Yu, Ricci flow on asymptotically Euclidean manifolds

Matei, Vlad, A geometric perspective on some arithmetic statistics questions over function fields over finite fields

Mueller, Peter, Unsteady biomixing and heat transfer in microchannels

Poskin, Jeff, Representability in mixed integer quadratic programming

Ross, Daniel, The Ulam sequence and related phenomena

Rush, Keith, Orthogonal polynomials on the unit circle: Steklov problems and weight perturbations

Tveite, Paul, Effectivizations of dimension and cardinal characteristics

Wang, Jason, Phylogenetic reconstruction accuracy in the face of heterogeneity, recombination, and reticulate evolution

Wang, Kejia, A journey to low spherical discrepancy

Wen, Huanyu, Winding problems of planar Markov processes

DEPARTMENT OF STATISTICS

Choi, Jeea, Pre-processing and stastistical inference methods for high-throughput genomic data with application to biomarker detection and regenerative medicine

Davis, John, Size-biased sampling in disparity analysis

Kim, Donggyu, Statistical inferences on high-frequency financial data and quantum state tomography

Li, Yuanzhi, Contributions to classification and regression trees

Liu, Shixue, Regularized outcome weighted subgroup identification with smooth hinge loss

Nie, Xiao, Some methods for large-scale statistical computing and modeling computer simulations

Park, Gunwoong, Large-scale directed graphical model learning

Qi, Cuicui, Model-assisted regression estimator for longitudinal data with nonignorable dropout

Sadeghi, Soheil, Sliced designs for multiplatform online experiments

Ta, Tram, Generalized regression estimators with high-dimensional covariates

Vieira Nunes Ludwig, Guilherme, Data fusion and spatial confounding in semiparametric methods for spatial and spatio-temporal data

Wendelberger, Barbara, Exploiting biology's structure-function relationship to improve effective connectivity estimates in neuroimaging

Xie, Yaoguo, Topics on multivariate semicontinuous proportionally constrained two part models

Zhang, Grace (Xin), Statistical methods for high frequency financial data

University of Wisconsin, Milwaukee (10)

DEPARTMENT OF MATHEMATICAL SCIENCES

Asante-Asamani, Emmanuel, A real distinct poles exponential time differencing scheme for advection-diffusion reaction equations

Barrera, Joseph, Asymptotic expansion of the L^2-norm of a solution of the strongly dumped wave equation

Harlass, Carsten, Density estimation for lifetime distributions under semiparametric random censorship models

Jiang, Yi, Nonlocal Debye–Hückel equations and nonlocal linearized Poisson-Boltzmann equations for electrostatics of electrolytes

Tidmore, Joseph, Cocompact cubulations of mixed 3-manifolds

Ying, Jinyong, Domain decomposition based hybrid methods of finite element and finite difference and applications in biomolecule simulations

DEPARTMENT OF MATHEMATICS

Bauer, Tyler, Estimating the selection gradient of a function-valued trait

Hoeppner, Matthew, On some one-complex dimensional slices of the boundedness locus of a multi-parameter rational family

Zhao, Qian, Robust and computationally efficient methods for fitting loss models and pricing insurance risks

DEPARTMENT OF MATHEMATICS AND ATMOSPHERIC SCIENCES

Haulmark, Matthew, Splittings of relatively hyperbolic groups and classifications of 1-dimensional boundaries

WYOMING

University of Wyoming (4)

DEPARTMENT OF MATHEMATICS

Jennings, Rachel, Modeling the transmission and maintenance of low pathogenic Avian influenza among wild birds with environmental heterogeneity and host conditions

Kuang, Dongyang, A particle method for Euler Poincare equation and its applications in analysis of landmark based image templates

Seo, Mookwon, Alternative models for water in filtration and oil reservoirs in ground

Torsu, Prosper, Uncertainty quantification and models of multiphase flow in porous media

Listings of the actual departments that comprise these groups are available on the AMS website at www.ams.org/annual-survey/groupings.

A department is in Group...	...when its subject area, highest degree offered, and PhD production rate p
Math Public Large	Math PhD, $7.0 \le p$
Math Public Medium	Math PhD, $3.9 \le p < 7.0$
Math Public Small	Math PhD, $p < 3.9$
Math Private Large	Math PhD, $3.9 \le p$
Math Private Small	Math PhD, $p < 3.9$
Applied Math	Applied mathematics, PhD
Statistics	Statistics, PhD
Biostatistics	Biostatistics, PhD
Masters	Math, masters
Bachelors	Math, bachelors
Doctoral Math	Math Public, Math Private, & Applied Math
Stat/Biostat or Stats	Statistics & Biostatistics
Math	All groups except Statistics & Biostatistics

Department Response Rates by Grouping

Group	Received
Math Public Large:	26 of 26 including 0 with no degrees
Math Public Medium:	40 of 40 including 0 with no degrees
Math Public Small:	67 of 68 including 8 with no degrees
Math Private Large:	23 of 24 including 0 with no degrees
Math Private Small:	28 of 28 including 1 with no degrees
Applied Math:	30 of 30 including 2 with no degrees
Statistics:	58 of 59 including 4 with no degrees
Biostatistics:	33 of 46 including 4 with no degrees
Total:	315 of 321 including 4 with no degrees

As of press time for this issue of *Notices*, the following departments had not responded to the survey. Therefore, any PhDs which may have been awarded by these departments are not included in this report.

Mathematics Departments
California Institute of Technology
University of Puerto Rico, Rio Piedras

Statistics Departments
University of Pennsylvania

Biostatistics Departments
Saint Louis University College for Public Health & Social Justice
University of Illinois at Chicago
University of Texas–School of Public Health

Doctoral Degrees Conferred 2016–2017

Supplementary List

The following list supplements the list of thesis titles published in the September 2018 *Notices*, pages 969–999.

CALIFORNIA

Stanford University (26)

Statistics

Choi, Yunjin, Selecting the dimension of a subspace in principal component analysis and canonical correlation analysis.
Dobriban, Edgar, Topics in high-dimensional asymptotics.
Erdogdu, Murat Anil, Stein's Lemma and subsampling in large-scale optimization.
Fukuyama, Julia, Multivariate methods for the analysis of structured data.
Gorham, Jackson, Measuring sample quality with Stein's method.
He, Hera, Efficient permuation P-value estimates for gene set tests.
Huang, Ruojun, Monotone interactions of random walks and graphs.
Janson, Lucas, A model-free approach to high-dimensional inference.
Jiang, Bai, Two parameter inference methods in likelihood-free models: approximate Bayesian computation and contrastive divergence.
Kou, Jiyao, Large-scale inference with block structure.
Kuang, Yuming, Adaptive particle filters in hidden Markov models: A new approach and its application.
Lee, Minyong, Prediction and dimension reduction methods in computer experiments.
Liu, Linxi, Convergence rates of a class of multivariate density estimators based on adaptive partitioning.
Loftus, Joshua, Post-selection inference for models characterized by quadratic constraints.
Michael, Haben, Evaluating diagnostics under dependency.
Pekelis, Leonid, Flase discoveries with dependence, towards an objective inference.
Powers, Scott, Leveraging similarity in statistical learning.
Sen, Subhabrata, Optimization, random graphs, and spin glasses.
Sepehri, Amir, Non-parametric goodness-of-fit testing and applications.
Tian, Xiaoying, Topics in selective inference.
Wager, Stefan, Causal inference with random fields.
Wang, Chaojun, Financial markets and trading networks.
Wang, Jingshu, Factor analysis for high dimensional inference.
Xiang Gao, Katelyn, Scalable estimation and inference for massive linear mixed models with crossed random effects.
Zhao, Qingyuan, Topics in causal and high dimensional inference.
Zheng, Charles Yang, Supervised evaluation of representations.

University of California, Los Angeles (10)

Statistics

Gordon, Joshua Seth, Nonparametric estimation forecasts, and model evaluation of spatial temporal point process models for California seismicity.
Ho, Hao, Integrative analysis of genomic and transcription data in Taiwanese lung and adenocarcinomas.
Lu, Yang, Coupling and learning hierarchical generative and descriptive models for image systems and analysis.
Mao, Junhua, Multimodal learning for vision and language.
Razaee, Zahra, Community detection in networks with node covariates.

ANNUAL SURVEY

Rosario, Ryan Robert, A data augmentation approach to short text classification.
Wang, Jianyu, Modeling objects and parts by compositional relations.
Wang, Peng (Jerry), Joint multiple visual task understanding from a single image via deep learning and conditional random field.
Xia, Fangting, Pose-guided human semantic part segmentation.
Yu, Chengcheng (Joey), Single view 3D reconstruction and parsing using geometric commonsense for scene understanding.

University of California, Merced (5)

School of Natural Sciences
Adhikari, Lasith, Nonconvex sparse recovery methods.
Dark, Julie, A theoretical understanding of circular polarization memory.
Davis, Jason Karl, Mathematical models of prions in S.cerevisiae.
Madushani, R.W.M.A., Parameter inference for stochastic differential equations.
Sandoval, Christopher, Generalized Kubelka-Munk theory—A derivation and extension from radiative transfer.

University of California, Santa Barbara (3)

Statistics & Applied Probability
He, Jingyi, Fixed mixed effects models with big data.
Shi, Jian, Some contributions to smoothing spline density estimation and inference.
Zhu, Ling, Regularization and look-ahead procedures for selection of basic functions from multiple libraries.

COLORADO

Colorado State University (3)

Statistics
Liao, Xiyue, Change-point estimation using shape-restricted regression splines.
Wang, Lulu, Some topics on model-based clustering.
Weller, Zachary, Nonparametric tests of spatial isotropy and calibration-capture-recapture.

CONNECTICUT

Yale University (1)

Statistics and Data Science
Shaham, Uri, Algorithms, applications and theoretical properties of deep neural networks.

DISTRICT OF COLUMBIA

George Washington University (8)

Statistics
Chen , Chen, Advances in urn models and applications to self-similar bipolar networks.
Cheung, Li, Mixture models for left- and interval-censored data and concordance indices for composite survival outcomes.
Feng, Yarong, On fast growth models for random structures.
Huang, Hailin, Semi-parametric and structured nonparametric modeling.
Wang, Cong, Analysis for familial aggregation using recurrence risk for complex survey data.
Yang, Aotian, Constrained maximum entropy models for selecting genotype interactions associated with interval-censored failure times and methods for power calculation in a three-arm four-step clinical bioequivalence study.
Yang, Bioa, Particle and ensemble methods for state space models.
Zhao, Wanying, Adaptive designs utilizing covariates for precision medicine and their statistical inference.

Howard University(1)

Mathematics
Pleasant, Kendra, When Ramsey meets Stone-Cech: Some new results in Ramsey theory.

FLORIDA

University of South Florida (2)

Epidemiology & Biostatistics
Nash, Michelle, Deployment, post-traumatic stress disorder and hypertensive disorders of pregnancy among US active-duty military women.
Sebastião, Yuri Combo Vanda, Racial and ethnic differences in low-risk cesarean deliveries in Florida.

ILLINOIS

Northwestern University (4)

Statistics
Gao, Yi, On a generalization of the Gini correlation for statistical data mining.
Hu, Xiaofei, Volatility estimation for integer-valued financial time series.
Mei, Xuan, Small dispersion asymptotics in stratified models.
Seeskin, Zachary, Topics on official statistics and statistical policy.

KENTUCKY

University of Louisville (2)

Bioinformatics & Biostatistics
Dutta, Sandipan, Some contributions to nonparametric inference for clustered and multistate data.
Shah, Jasmit, Novel statistical approaches for missing values in truncated high-dimensional metabolomics data with a detection threshold.

MISSOURI

University of Missouri–Columbia (3)

Statistics
Cheng, Yuan, Bayesian analysis of fMRI data and RNA-Seq time course experiment data.
Wang, Henan, Bayesian partition models for DNA methylation analysis.
Yu, Guanglei, Regression analysis of panel count data with informative observations and drop-outs.

NEW YORK

Clarkson University (1)

Mathematics & Computer Science
Al Basheer, Aladeen, A mathematical investigation of the effects of cannibalism in two and three species predator-prey systems.

Columbia University (4)

Applied Physics & Applied Mathematics
Dandapani, Aditi, Enlargement of filtration and the strict local Martingale property in stochastic differential equations.
Shaevitz, Daniel, Extreme weather: Subtropical floods and tropical cyclones.
Tian, Xiaochuan, Nonlocal models with a finite range of nonlocal interactions.
Biostatistics
Chen, Yakuan, Methods for functional regression and nonlinear mixed-effects models with applications to PET data.

Cornell University (7)

Biological Statistics & Computational Biology

Dias, Jishnu, Using protein interactome networks to understand human disease and evolution.

Gao, Feng, Utilizing rare and X-linked variants for inference of population size history and association studies of complex diseases.

Huang, Lei, Information topology of kinetic models of metabolism.

Meyer, Michael J., Methods for functional inference in the proteome and interactome.

Ramstetter, Monica, High resolution relative detection via inference of identical by descent sharing of sample ancestors.

Sinclair, David Giles, Model selection results for latent high-dimensional graphical models on binary and count data with applications of fMRI and genomics.

Zawack, Kelson, A comprehensive analysis of the United States' National Resistance Monitoring System.

Rensselaer Polytechnic Institute (3)

Mathematical Sciences

Heath, Emily, Optimization approaches to problems in network mitigation and restoration.

Pickering, William, Solution of urn models by generating functions with applications to social, physical, biological, and network sciences.

Shen, Xin, Complimentary formulations for problems with sparcity objective.

NORTH CAROLINA

North Carolina State University (12)

Statistics

Alfaro Cordoba, Marcela, Variable selection methods with applications to atmospheric sciences.

Choi, Bong Seog, Testing and estimation under hidden activity.

Das, Priyam, Bayesian quantile regression.

Hager, Sarah Rebecca, Optimal dynamic treatment regimes from a classification perspective for two stage studies with survival data.

Kang, Suhyun, Flexible estimation and testing methods for survival data with application in epidemiology and precision medicine.

Li, Yuan, GPU computing in statistics and R solution.

Morris, Samuel Alan, Spatial methods for modeling extreme and rare events.

Park, So Young, Longitudinal functional data analysis with biomedical applications.

Peng, Huimin, Selection and inference for high-dimensional regression with applications in biomedical research.

Peterson, Geoffrey Cohn Lee, Mean-dependent spatial prediction methods with applications to materials sciences.

Wang, Chong, A study of sufficient dimension reduction methods.

Xu, Yingzi, Binormal precision-recall and ROC classification and variable selection.

NORTH DAKOTA

North Dakota State University, Fargo (1)

Statistics

Sattler, Elizabeth, Subfractals induced by subshifts.

PENNSYLVANIA

Carnegie Mellon University (2)

Statistics

Asher, Jana, Methodological innovations in the collection and analysis of human rights violation data.

Chen, Yen-Chi, Statistical inference using geometric features.

Pennsylvania State University (6)

Statistics

Berstein, Jason, Inference of biophysical diffusion with transient binding using particle filters and stochastic EM.

Chu, Wanghuan, Feature screening for ultra-high dimensional longitudinal data.

Hao, Han, Modeling the genetic architecture of complex traits.

Russell, James, Stochastic models for individual and collective animal movement.

Taoufik, Bahaeddine, Functional data based inference for high frequency financial data.

Xu, Zhanxiong, Efficient parameter estimation methods using quantile regression in heteroscedastic methods.

University of Pittsburgh (2)

Statistics

Lee, Sung Won, Analysis of variation structure of high-dimensional multi-block data.

Zhang, Yun, Cluster analysis and network community detection with application to neuroscience.

SOUTH CAROLINA

University of South Carolina (1)

Epidemiology & Biostatistics

Xu, Xinling, Statistical methods for multivariate and correlated data.

VERMONT

University of Vermont (4)

Mathematics & Statistics

Cody, Emily, Mathematical modeling of public opinion using traditional and social media.

McAndrew, Thomas, Weighted networks: Applications from power grid construction to crowd control.

Regan, Andrew, Towards a science of human stories: Using sentiment analysis and emotional arcs to understand the building blocks of complex social systems.

Stephens, Thomas, Topological methods for evolution equations.

VIRGINIA

Virginia Commonwealth University, Medical Center (4)

Biostatistics

Czarnota, Jenna, Modeling spatially varying effects of chemical mixtures.

Evani, Bhanu, Weighted quantile sum regression for analyzing correlated predictors acting through a mediation pathway on a biological outcome.

Ferber, Kyle, Methods for predicting an ordinal response with high-throughput genomic data.

Joshi, Kabita, Finding the cutpoint of a continuous covariate in a parametric survival analysis model.