

Doctoral Degrees Conferred 2006–2007

Supplementary List

The following list supplements the list of thesis titles published in the February 2008 *Notices*, pages 280–99.

CALIFORNIA

California Institute of Technology (4)

CONTROL AND DYNAMICAL SYSTEMS

Chen, Lijun, Wireless network design and control.

Lui, Xin, Robustness, complexity, validation and risk.

Mysore, Shreesh, Structural plasticity in neuronal networks.

Martinez, Alfredo, A treatise on econometric forecasting.

Naval Postgraduate School (1)

MATHEMATICS

Johnson, Anthony, A time dependent finite element approach to optimizing seismic sonar arrays.

University of California, Berkeley

(14)

STATISTICS

Bourgon, Richard, Chromatin-immune precipitation and high density tiling microarrays: A generative model, methods for analysis and methodology assessment in the absence of a “gold standard”.

Cho, Young, Estimating velocity fields on a freeway from low resolution video.

Lasiecki, Pawel, Assessment of stochastic differential equation and Markov chain models in time series.

Li, Bo, On goodness-of-fit tests of semiparametric models.

Panaretos, Victor, Inverse problems, stochastic geometry, structural biology.

Roch, Sebastien, Markov models on trees: Reconstruction and applications.

Yi, Jing, Absolute and relative quantification of fluorescently labelled DNA.

GROUP IN BIostatISTICS

Bein, Edward, Topics in causal inference: Analyzing psychotherapy outcome studies, convex-combination estimators, and G -computations model selection.

Petersen, Maya, Applications of causal inference methods to improve the treatment of antiretroviral-resistant HIV infection.

Tang, Hui, Finding DNA cis-regulatory elements using regression methods.

Teng, Siew-Leng, Statistical methods in integrative analysis of gene expression data with applications to biological pathways.

Young, Jessica, Statistical methods for complicated current status and high-dimensional data structures with applications in environmental epidemiology.

Zhou, Yun, Statistical issues in a case-control study of gene expression in postmortem human brains.

Wang, Yue, Data-adaptive estimation in causal inference for point treatment study.

University of California, Los Angeles

(9)

BIostatISTICS

Alber, Susan, A partition model for treatment effects and treatment-covariate interactions.

Chiang, Lu-May, A Bayesian adaptive design for 2-drug combination phase I clinical trials with ordinal toxicity outcomes.

Gadallah, May, Combining aggregated and individual level data to estimate individual level parameters: Variance, covariance, and slope coefficient.

Kim, Hyun Jung, Classification in Thoracic computed tomography image data.

Lemus, Hector, Bayesian state space modeling of heterogeneous multivariate longitudinal data.

Park, Grace Song-Ye, Modeling longitudinal radiographic progression patterns in rheumatoid arthritis.

Wu, Tongtong, A partial linear semiparametric additive risk model for two-stage design survival studies.

Zhao, Yu, Additive risks regression for survival data from two-stage designs.

Zhou, Kefei, A unified approach to nonparametric comparisons of receiver operating characteristic curves for longitudinal and clustered data.

Stanford University (9)

STATISTICS

Guo, Yaqian, High dimensional classification with application in microarray analysis.

Jin, Wei, A Bayesian approach for additive-multiplicative hazard models.

Kapp, Amy, Cluster analysis with the in-group proportion.

Mathis, Charles, A statistic for measuring the value of side information in investment.

Park, Mee Young, Generalized linear models with regularization.

Purdum, Elizabeth, Multivariate kernel methods in the analysis of graphical structures.

Shi, Jianxin, Quantitative trait mapping using large pedigrees and model selection.

Stodden, Victoria, Model selection when the number of variables exceeds the number of observations.

Tribble, Seth, Markov chain Monte Carlo algorithms using complexly uniformly distributed sequences.

CONNECTICUT

Wesleyan University (2)

MATHEMATICS AND COMPUTER SCIENCE

Gochev, Vasil, Compact-open-like topologies on $C(K)$ and applications.

Lu, Yun, Reducts of countably categorical graphs.

FLORIDA

University of Florida (16)

MATHEMATICS

Gray, Peter, The predictable projection and the predictable dual projection of a two parameter stochastic process.

Guo, Weihong, Medical Image segmentation and diffusion weighted magnetic resonance image analysis.

Keeran, Willard, Coexistence in a feedback-mediated chemostat.

Liu, Juan, Information theoretic content and probability.

Nenciu, Andriana, Characters of finite groups.

Smith, Justin, Discrete groups from a course perspective.

Turygin, Yuri, Borsuk-Ulam property of finite group actions on manifolds and applications.

Zahnen, Jeffrey, Penalized maximum likelihood methods for emission tomography.

Zhang, Hongchao, Gradient methods for large-scale nonlinear optimization.

STATISTICS

Kim, Bong-Rae, Statistical models for clustering dynamic gene expression profiles.

Liu, Xuefeng, Bayesian methodology for models with multivariate (longitudinal) outcomes.

Mergel, Victor, Divergence loss for shrinkage estimation, prediction and prior selection.

Mukhopadhyay, Siuli, Multiresponse, GLM, and other recent approaches in response surface methodology.

Yang, Jie, Nonparametric functional mapping for quantitative trait loci.

Zhang, Li, Bayesian methods in case-control studies with application in genetic epidemiology.

Zhu, Yun, Application of asymmetric Laplace Law in financial risk measures and time series analysis.

ILLINOIS

University of Illinois at Chicago (1)

DIVISION OF EPIDEMIOLOGY AND BIostatISTICS

Chosy, Erin, Correlates and health consequences of victimization in a sample of chemically-dependent detainees.

IOWA

University of Iowa (2)

APPLIED MATHEMATICS AND COMPUTATIONAL SCIENCE

Coskun, Huseyin, Mathematical models for amoeboid cell motility and model based inverse problems.

Shimanovich, Victoria, Optimization of large scale sparse nonlinear systems for flexible protein conformation.

KANSAS

Kansas State University (3)

MATHEMATICS

Koshkin, Sergiy, Homogeneous spaces & Faddeev-Skyrme.

Pasko, Brian, The cohomology of a matrix subgroup.

Randriampiry, Njinasoa, On A -quasiconvex functions and weak lower semicontinuity.

MARYLAND

John Hopkins University (5)

APPLIED MATHEMATICS AND STATISTICS

Aksakalli, Vural, Protocols for stochastic shortest path problems with dynamic learning.

Feng, Jian, Some probability and statistics problems in proteomics research.

Hu, Jiang, Sequential designing and terminal analysis of multinomial data.

Nickel, Christine, Random dot product graphs: A model for social networks.

Tucker, Kimberly, Exact and asymptotic dot product representations of graphs.

MASSACHUSETTS

Brandeis University (7)

MATHEMATICS

Balasubramanyam, Baskar, Hida families of Hilbert modular forms and p -adic L -functions.

Dousmanis, Gerasimos, Families of Wach modules and two-dimensional crystalline Galois representations.

Gospodinov, Georgi, Relative invariants of Legendrian knots.

Lai, Hsin-Hong, The invariance of virtual classes under blow up of a point when $g=0$.

Li, Ji, Counting prime graphs and point-determining graphs using combinatorial theory of species.

Rajagopalan, Sridhar, Heegaard Floer homology and symmetries of knots and links

Song, Balin, On the equivariant cohomology of the genus zero moduli space for stable maps to a grassmanian.

Harvard University (6)

MATHEMATICS

Chen, Jy-Ying Janet, The degree 4 L -function of an automorphic form full level on the rank 2 real symplectic group.

Cotterill, Ethan, Enumerative geometry of curves with exceptional secant planes.

Jain, Sonal, Minimal heights and regulators for elliptic surfaces.

Lobb, Andrew, A slice genus lower bound from $sl(n)$ Khovanov-Rozansky homology.

Mok, Chung-Pang, The exceptional zero conjecture for Hilbert modular forms.

Shin, Sug Woo, Counting points on Igusa varieties.

MISSISSIPPI

University of Mississippi (7)

MATHEMATICS

- Bokka, Sankar*, Statistical tests for the identification of differentially expressed genes.
- Dolo, Samuel*, A nonparametric test for scale in univariate population setup.
- Garner, Latonya*, A partially exchangeable model with applications to correlated binary data.
- Horton, Leslie*, Enumerations of independent sets in graph.
- Keeton, Stephanie*, The semiparametric exchangeable mode and its applications.
- Nicholson, Emlee*, Long cycles and paths containing K -ordered vertices in graphs.
- Smith, Pamela*, An efficient nonparametric test for bivariate two-sample location problem.

MISSOURI

Missouri University of Science & Technology (1)

MATHEMATICS AND STATISTICS

- Hu, Xiaojun*, Distributional aspects of P -values and their use in multiple testing situations.

Washington University (9)

MATHEMATICS

- Amei, Amei*, A time-dependent Poisson random field model of polymorphism within and between two related species.
- Brown, Ben*, Ehrhart theory of lattice polytopes.
- Knese, Greg*, Schwartz lemmas on the polydisk.
- Koester, Paul*, Estimates on a generalization of the Erdos-Tiran function.
- Kuttykrishnan, Sooraj*, Stably tame polynomial automorphisms of polynomial rings in two variables over a UFD.
- Lim, Wang Q.*, Wavelets with composite dilations and their applications.
- Randle, Kim*, Combinatorial properties of the conjugacy class subgroup partially ordered set of finite groups.
- Vegulla, Prasda*, Geometry of distinguished varieties.
- Wiechmann, Aaron*, Recognition of thin position and the additivity conjectures.

MINNESOTA

University of Minnesota (22)

SCHOOL OF MATHEMATICS

- Collins, Kevin*, An inverse problem in determining the electrical potential on the heart.
- Dong, Bo*, Superconvergent discontinuous Galerkin methods for elliptic problems.
- Huska, Juraj*, Qualitative properties of second order parabolic equations.
- Jia, Ning*, Matroids, Schubert polynomials and Fibonacci trees.
- Karunathilake, Upali*, A representation theorem for certain solutions to Burger's equation.
- Kim, Pilwon*, Invariantization of numerical schemes for differential equations using moving frames.

- Kim, Yang-Jin*, Mathematical modeling of cell movement and tumor spheroid growth in vitro.

- Koch, Gabriel*, A Liouville theorem for the two-dimensional Navier-Stokes equations.

- Lee, Chang-Hyeong*, Stochastic analysis of biochemical reaction networks.

- Luo, Jun*, On the rate of convergence of the finite-difference approximations for parabolic Bellman equations with constant coefficients.

- Nien, Chu-Feng*, Models of representations of general linear groups over p -adic fields.

- Park, Jinhae*, Mathematical modeling and analysis of ferroelectricity in liquid crystals.

- Swenson, James*, The mod-2 cohomology of finite Coxeter groups.

- Tarfulea, Nicoleta*, Mathematical modeling of signal transduction and cell mobility in tumor angiogenesis.

- Taskin, Muge*, Properties of four partial orders on standard young tableaux.

- Wang, Haiyang*, Hybridization of the continuous Galerkin finite element method for second-order elliptic and linear elasticity problems.

- Wittman, Todd*, Variational approaches to digital image zooming.

- Xu, Fei*, Homological properties of category algebras.

- Zhang, Tianyu*, Numerical simulation of Ferromagnetic shape memory thin film.

- Drake, Daniel*, Towards a combinatorial theory of multiple orthogonal polynomials.

- Gantner, Ryan*, Branching annihilating random walks and their application to traffic flow.

- Harrelson, Eric*, The homology of the open-closed Riemann surface dioperad and open-closed string topology.

NEW HAMPSHIRE

Dartmouth College (8)

MATHEMATICS

- Campos, Oscar*, Asymptotic tensor norms.

- Dorais, Francois*, Souslin trees and degrees of constructibility.

- Esselstein, Rachel*, On the complexity of building a graph with given neighborhoods.

- Klyve, Dominic*, Explicit bounds on twin primes and Brun's constant.

- Moseman, Elizabeth*, The combinatorics of coordinate percolation.

- Setyadi, Alison*, The affine buildings of SL_n and Sp_n : A combinatorial perspective.

- Storm, Christopher*, Extending the Ihara-Selberg zeta function of hypergraphs.

- Tou, Erik*, Zeta Functions for a class of cocompact arithmetic lattices in $SL(3, \mathbb{R})$.

NEW JERSEY

Stevens Institute of Technology (2)

MATHEMATICAL SCIENCES

- Babaali, Parisa*, Genesis and structural properties of random automata.

Strigul, Nikolai, A new method of scaling vegetation dynamics from individual level to forest ecosystems based on crown plasticity.

Rutgers University - Newark (1)

MATHEMATICS AND COMPUTER SCIENCE

Malik, Vidur, Curves generated on surfaces by the Gilman-Maskit algorithm.

Rutgers University - New Brunswick

(4)

STATISTICS AND BIOSTATISTICS

Chang, Denise, Individualized hospital report cards.

Fang, Jiangang, Network tomography: the estimation of traffic matrix and link delay.

Tang, Weihua, Conditional false discovery rate and significance analysis of microarray data.

Yue, Shentu, Some advances in causal inference with missing data and dichotomization of response in regression analysis.

NEW YORK

New York University, Courant Institute (11)

MATHEMATICS

Ariel, Gil, Effective stochastic dynamics in deterministic systems: Model problems and applications.

Barrerio, Andrea, Wave driven vertex of dynamics in the surf zone.

Calle, Maria, Mean curvature flow and minimal surfaces.

Hayes, Edward, The application of a semi-analytical method for computing asymptotic approximations to option prices.

Konig, Christoff, Arctic landfast sea ice.

Korotianev, Mikhail, Torelli-type theorem for curves defined over finite fields.

Ly, Cheng, Population density approach to neural network modeling: Dimension reduction analysis, technique, and firing rate dynamics.

Mori, Yoichiro, A three-dimensional model of cellular electrical activity.

Rutenburg, Alexander, PoRST Hamiltonian ten bulk-quantified gänge theory.

Wright, Paul, Rigorous results for the periodic oscillation of adiabatic piston.

Zhu, Guo Dong (Ernest), Pricing options on trading strategies.

State University of New York at Buffalo (1)

BIOSTATISTICS

Majumdar, Antara, Maximum likelihood estimation of models based on the Monte Carlo EM.

OHIO

Case Western Reserve University (18)

EPIDEMIOLOGY AND BIOSTATISTICS

Bochud, Murielle, Family-based association studies of the genetic determinants of renal sodium handling.

Hu, Simin, New methods for variable selection with applications to survival analysis and statistical redundancy using gene expression data.

Katamba, Achilles, Efficiency of sputum microscopy in diagnosis and cost-effectiveness of 6-month and 8-month treatment of new smear positive pulmonary setting of high HIV prevalence.

Larkin, Emma, A genetic analysis of correlated traits: The apnea hypopnea index and body mass index.

Miller, Katherine, Genetic susceptibility in Alzheimer's disease and the role of lipid metabolism.

Nakku-Joloba, Edith, The seroprevalence and incidence of Herpes 1 and 2 in Kampala, Uganda.

Peterson, Lars, Contextual associations of unmet health care locations.

Sinha, Moumita, Estimation of haplotype frequencies from data.

Sinha, Ritwik, Efficient confidence sets for disease gene.

Stubblefield, Angelique, Healthcare utilization and risk for intentional injury death among Ohio children enrolled in Medicaid, 1992-1998.

Sucheston, Lara, Statistical methods for the genetic analysis of developmental disorders.

Terris, Darcey, Maximizing efficiency in risk adjustment under conditions of uncertainty and resources constraints.

Thompson, Cheryl, Stratified linkage analysis based on population substructure.

Trapl, Erika, Understanding adolescent survey responses: impact of mode and other characteristics on data outcomes and quality.

Xing, Chao, Topics in multipoint linkage and association analysis.

Xing, Guan, A simple new method for robust estimation.

Xu, Zhiying (Cindy), A quantitative trait linkage method for longitudinal pedigree data and its application.

Zhou, Esther, Treatment outcomes for socialized prostate patients: From individual to population.

Ohio State University, Columbus (1)

MATHEMATICS

Stey, George Carl, Asymptotic expansion for the L' Norm of N-fold convolutions.

PENNSYLVANIA

University of Pittsburgh (9)

BIOSTATISTICS

Chen, Huanyu, Experimental design for unbalanced data involving a two level logistic model.

Dai, Feng, Variance components models in statistical genetics: Extensions and applications.

Dean, Leighton, A method for detecting optimal splits over time in survival analysis using tree-structured models.

Ko, Feng-shou, Identification and assessment of longitudinal biomarkers using frailty models in survival analysis.

Li, Jia, A strategy for stepwise regression procedures in survival analysis with missing covariates.

Lin, Yan, Statistical issues in family-based genetic association studies with application to congenital heart defects in Down syndrome.

Soaita, Adina, GEE models for the longitudinal analysis of the effects of occupational radiation exposure on lymphocyte counts in Russian nuclear workers.

Xu, Qing, Inference on survival data under nonproportional hazards.

Yu, Shui, A tree-structured survival model with incomplete and time-dependent covariates: Illustrations using type 1 diabetes data.

RHODE ISLAND

Brown University (3)

BIostatISTICS

Lee, Joo Yeon, Sensitivity analysis and informative priors for longitudinal binary data with dropout.

Shiu, Shang-Ying, PROC and ROC analysis: Effective of threshold value for diagnostic test and reference standard.

Su, Li, Bayesian semiparametric regression for censored and incomplete longitudinal data.

SOUTH CAROLINA

Clemson University (4)

MATHEMATICAL SCIENCES

Engau, Alexander, Beyond pareto optimality: Domination and decomposition in multiobjective programming.

Eyabi, Gilbert, Some properties of $L(2,1)$ -coloring as related to the channel assignment problem.

Lockard, Shannon, Random vectors over finite fields.

Singh, Vijay, Equitable efficiency in multiple criteria optimization.

TEXAS

Southern Methodist University (3)

STATISTICAL SCIENCE

Chen, Zhongxue, Probe-level data analysis for high-density oligonucleotide arrays.

Gu, Kangxia, The comparison of two poisson rates.

Lin, Qihua, Bayesian hierarchical spatiotemporal modeling of functional magnetic resonance imaging data.

Texas Tech University (3)

MATHEMATICS AND STATISTICS

McGee, Shelly, Computational modeling of chemical transport in flow structure interaction in porous media.

McGee, Wayne, h-p-k least squares finite element methodology and implementation for fluid-structure interaction.

Yan, Ke, Variance reduction for kernel estimators in clustered longitudinal data analysis.

VIRGINIA

Virginia Commonwealth University

(2)

BIostatISTICS

Davenport, James, An adaptive dose-finding design using a non-responders model.

Zhao, Jianmin, Optimal clustering: genetic constrained K- and linear programming algorithms.

WISCONSIN

University of Wisconsin - Milwaukee

(2)

MATHEMATICAL SCIENCES

Geliazkova, Maya, Spatial thresholding procedures in fMRI data.

Van Groningen, Anthony, Graded multiplicities of the nullcone for the algebraic symmetric pair of type G.