Doctoral Degrees Conferred 2004–2005

Supplementary List

The following list supplements the list of thesis titles published in the February 2006 *Notices*, pages 230–45.

ALABAMA

University of Alabama, Huntsville

(2)

MATHEMATICAL SCIENCES

Park, Thomas, Age structure in epidemic models of vector-borne infections.

Wang, Yan, Acquisition numbers and completion-acquisition numbers.

CALIFORNIA

University of California, Irvine (8)

MATHEMATICS

Koslover, Deborah, Quasiperiodic Jacobi matrices of magnetic orign.

Liu, Chiung-ju, Banodo-Futaki invariants on hypersurfaces and Tian-Yau-Zelditch expansions.

Nakamura, Remi, MLE of parameters in the drifted Brownian motion and its error.

Rooze, Matthew, The use of unabounded activation functions in neural networks and neural network approaches to nuisance parameter problems.

Sadovsky, Alexander, A biodynamical study of epidermal wound repair in embryos.

Schulteis, Melinda, Continuity of the Lyapunov exponent for quasiperiodic Jacobi matrices.

Sinek, John, Integrated multi-scale modeling of therapeutics delivery to cancerous lesions.

Xiaoming, Zheng, Adaptive finite-element/level-set methods of free boundary problems: applications to multiphase flows and reaction-diffusion models of tumor growth.

University of California, Santa Cruz

(3)

MATHEMATICS

Bass, Jamey, A Calabi-Yau analogue of the Dedekind Eta function.

Raske, David, Q-curvature on closed Riemannian manifolds of dimension greater than four.

Moura, Francisco, Three novel clustering algorithms and their application to microarray encephalogram data.

Stanford University (7)

MATHEMATICS

Adams, Tarn, Flat chains in Banach spaces.

Godin, Veronique, A category of bordered fat graphs and the mapping class group of a bordered surface.

Grueneberg, Michel, The Yamabe flow on three-manifolds.

Kim, Byoung-Du, The parity conjecture and algebraic functional equations for elliptic curves at primes with supersingular reduction.

Lee, Dan Archibald, Connected sums of special Lagrangian submanifolds.

Shi, Danzhu, Capillary surfaces at a re-entrant corner.

Zhu, Ke, Degeneration of the moduli space of J-holomorphic discs and Legendrian contact homology.

CONNECTICUT

Yale University (7)

MATHEMATICS

Brenner, Eliot Philip, Grenier Domains for arithmetic groups and associated tilings.

Ershov, Mikhail V., On finite presentability of some pro-p groups on related questions

Kim, Sangjib, Standard monomial theory for flag algebras.

Salmasian, Hadi, A new notion of rank for unitary representation based on Kirillov's orbit method.

Samuels, Beth Sharon, Ramanujan complexes, their non-uniform quotients, and isospectrality.

Schul, Raanan, Subsets of rectifiable curves in Hilbert space and the analyst's TSP.

MASSACHUSETTS

Harvard University (8)

MATHEMATICS

Green, Peter, Geometricity of local p-adic representations.

Grigorov, Grigor, Kato's Euler system and the main conjecture.

Kaplan, Jonathan, Morphlets; a multiscale representation for diffeomorphisms.

Khosla, Deepak, Moduli spaces of curves with linear series and the slope conjecture.

Lef, Edward, A modular non-rigid Calabi-Yau threefold.

Mast, Jerrel, Pseudoholomorphic punctured spheres in the symplectization of a quotient.

Mohta, Vivek, Applications of Chiral perturbation theory.

Neel, Robert, The heat kernel at the cut locus.

MICHIGAN

Western Michigan University (5)

MATHEMATICS

Chaiyakarn, Archara, Structure preserving algorithms for computing the symplectic singular value decomposition.

Gera, Ralucca M., Stratification and domination in graphs and digraphs.

Noh, Jihwa, An investigation of secondary teachers' knowledge of rate of change in the context of teaching a standard-based curriculum.

Pacheenburawana, Pariwatana, Global optimality conditions in mathematical programming and optimal control.

Shafer, Kathryn, Two high school teachers' initial use of geometer's sketchpad: Issues of implementation.

MINNESOTA

University of Minnesota, Minneapolis (10)

MATHEMATICS

Alexandrov, Oleg, Wave Propagation in optical fibers analysis and optimization.

Cho, Sungwon, Boundary behavior of solutions to second order elliptic and parabolic equation.

Erban, Radek, From individual to collective behavior in biological systems.

Galbraith, Michael, Geometric optics, convex functions, Carleman estimates and interfaces in the boundary control of the wave equation.

Hall, John, Combinatorial deformations of the full transformation semigroup.

Han, Young Ae, An efficient solver for problems of scattering.

Kang, Minchul, Temporal and spatial aspects of calcium dynamics in astrocyles.

Tarfulea, Nicolae, Constraint preserving boundary conditions for hyperbolic formulations of Einstein's equations.

Yenikaya, Bayram, Adapative methods for Hamilton-Jacobi equations.

Zhang, Jian, Scattering problems in inhomogeneous scalar wave equation.

MISSOURI

University of Missouri, Columbia (6)

MATHEMATICS

Batchenko, Volodymyr, On the spectra of Schrödinger and Jacobi operations with complex-valued quasi-peridoc algebra-geometric coefficients.

Bilyk, Dmytro, Distributional estimates for multilinear operatiors.

Cramer, David, Fredholm determinants and the Evans function.

Honzik, Petr, Maximal operators associated with Fourier multipliers.

Luo, Shangzhen, Filtering of hidden weak Markov chain and its application to finance.

Mayboroda, Svitlana, The Poisson problem in Lipschitz domains.

NEW JERSEY

Rutgers University, Graduate School (6)

STATISTICS

Ganning, Kenneth, An examination of the mean and quantiles from a relational system with a fixed just unnoticeable difference representation.

Grothendieck, John, Tracking changes in language.

Heath, Susan, A new model for wireless telephony.

Lakshminarasimhan, Ramprasath, Statistical options-crash resistant financial contracts based on robust location estimators.

Wang, Hongwei, Selected topics in longitudinal data analysis and modeling.

Xia, Qi, Exact methods applied to group sequential and other stratified comparative Poisson designs.

NEW York

Courant Institute, New York University (14)

MATHEMATICS

Apfaltrer, Felix, Population density methods in 2 spatial dimensions and application to neural networks with realistic synapitc kinetics.

Siefring Richard, Intersection theory of finite energy surfaces.

Eng, David, Scaling limits of random Schrodinger equations.

Feng, Fan-Fu, On the totally asymptotic zero range process.

Kobre, Elisha, Rates of diffusion in dynamical systems with random groups.

Rottenstreich, Sivan, Error bounds for the weak coupling Schrodinger equation.

Sun, Rongfeng, Convergence of coalescing nonsimple random walks to the Brownian web.

Wendl, Chris, Finite energy foliations and surgery on transverse links.

Cascini, Paolo, On the cotangent bundle of a projective variety.

Ko, Yueh Joy, Partially regular and singular solutions to the Landau-Lifshits (Gilbert) equations.

McGahagan, Helena, Some existence and uniqueness results for Schrodinger maps and Landau-Lifshitz equations.

Oliveira, Roberto, Preferential attachment.

Zygouras, Nikolaos, Limit Theorems: for a periodically or randomly driven semilinear equation.

Papazoglu-Statescu, Oana, Maximizing the expected utility of final time wealth with little trading.

Polytechnic University (1)

MATHEMATICS

Pistoia, Marco, A unified mathematical model for stack- and role-based authorization systems.

Syracuse University (1)

MATHEMATICS

John, Thomas, Selection procedures for lognormal populations.

TEXAS

Rice University (6)

COMPUTATIONAL AND APPLIED MATHEMATICS

Castillo, Zenaida, A new algorithm for continuation and bifurcation analysis of large scale free surface flows.

Nguyen, Hoang, Domain decomposition methods for linear-quadratic elliptic optimal control problems.

Padula, Anthony, Software design for simulation driven optimization.,

Teng, Cong, Model reduction of second linear dynamical systems.

Vincent-Finely, Rachel, A reduced basis method for molecular dynamics simulation.

Wrightman, Jennifer, Approximation and computation of the solution to the magneto-ionosphere coupling equation via mixed formulation.

Southern Methodist University (4)

STATISTICAL SCIENCE

Carmack, Patrick, Recursive partitioning in spatially correlated data.

Liu, Yushan, On estimation of the number of multinomial cells from cluster sampling.

Wang, Zhu, The application of the Kalman filter to nonstationary time series chirp process through exponential transformation.

Shen, Shuyi, Minimum L_2 estimation for Poisson mixtures.

WASHINGTON

University of Washington(6)

BIOSTATISTICS

Bergemann, Tracy Lee, Image analysis and signal extraction from cDNA microarrays.

Buzkova, Petra, Marginal regression analysis of longitudinal data with irregular, biased sampling.

Chen, Lu, Semiparametric analysis of failure time data from case-control family studies on candidate genes.

Haneuse, Sebastein, Ecological studies using supplemental case-control data.

Liu, Hao, Semiparametric marginal mean models for multivariate counting processes.

Zhang, Zheng, Semiparametric least-squares analysis of the receiver operating characteristic curve.

WISCONSIN

University of Wisconsin, Madison

(13)

MATHEMATICS

Benesh, Bret, Counting generators in finite groups that are generated by two subgroups of prime power order.

Taylor, Paul, Bochner-Riesz means with respect to a rough distance function.

Chatterjee, Rohit, On class polynomials and supersingular j-invariants.

Cossey, James, Generalizations of the Fong Swan Theorem.

Sutherland, Jamie, Values in university mathematics placement practice.

Stefansson, Narfi, The structure of sparse representations of images using tight frames.

El-Guindy, Ahmad, Weierstrass point on modular curves.

Halfpap, Jennifer, Contributions to the theory of the holomorphic extension of CR functions.

Laghi, Norberto, A topics in the regularity theory of fourier integral operators.

