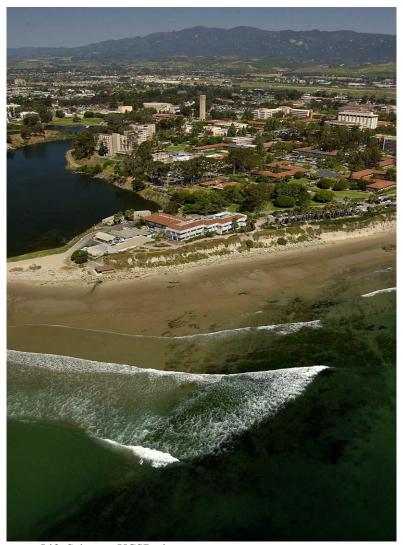
# Statistics and Applied Probability

UNIVERSITY OF CALIFORNIA, SANTA BARBARA



Life Sciences-UCSB pictures

# 2009-10 Annual Report

Department Members	2
Publications and Professional Activities	3
Research Interests	7
Computing Facilities	8
Statlab Report	8
Degrees and Prizes Awarded	9
Seminars and Events	11
Committees and Service	13
Contact information	15

This has been a challenging year due to budget cuts. Nevertheless, through careful planning and a strong commitment by our faculty, staff and students, we have maintained our normal enrollment at both the undergraduate and graduate levels.

We also welcome a new faculty member, Jarad Niemi, to the department. Dr. Niemi received his B.S. in Chemical Engineering and M.S. in Biostatistics from the University of Minnesota, and his Ph.D.in Statistics from the Department of Statistical Science at Duke University. Dr. Niemi's research focuses on Bayesian inference with applications to systems biology and disease outbreak detection.

The department congratulates Dēnna Marie Zamarron as our new Business Officer. Her commitment with the department began in 2001 as the undergraduate advisor. While serving two years in that position, her motivation and interest proved to be worthy to advance to the financial coordinator. After effectively administering finances and managing the department's budgets for six years, her ambition allowed her to successfully pursue the open recruitment for the Business Officer's position.

# **Faculty**

**Guillaume Bonnet**, PhD University of North Carolina, Chapel Hill 2002

Andrew V. Carter, PhD Yale University 2000

Raisa E. Feldman, DSc Technion-Israel Institute of Technology 1987

Jean-Pierre Fouque, PhD Universite de Paris VI 1979, Director of CRFMS

& FMS Coordinator

David Hinkley, PhD London University 1969

Dawn Holmes, PhD University of Bradford 2000

& Senior Associate Dean, Division of Undergraduate Education

In the College of Letters and Science

John Hsu, PhD University of Wisconsin, Madison 1990

S.Rao Jammalamadaka, PhD Indian Statistical Institute, Calcutta 1969

Michael Ludkovski, PhD Princeton University 2005

Wendy Meiring, PhD University of Washington 1995

Jarad Niemi, PhD Duke University 2009

Yuedong Wang, PhD University of Wisconsin 1994

# Visiting Faculty

Mack Galloway

**Robert Gramacy** 

Michael Landrigan

Sudhir Ranjan Paul

## **Postdocs**

Tomoyuki Ichiba

Adam Tashman

# **Emeritus Faculty**

Joseph Gani, Professor Emeritus; PhD Australian National University

1955; DSc, University of London 1970

Svetlozar Rachev, PhD Lomonosov University, Moscow 1979; DSc Steklov

Institute, Moscow 1986

James Robertson, PhD Indiana University 1964

# Staff

Dēnna Marie Zamarron, Business Officer

Rachel Brown, Financial Coordinator

Angelica Arce, Undergraduate Program Assistant

Rickie Lazzerini, Graduate Program Assistant

Troy Small, Computer Systems Administrator

Patrick Windmiller, Computer Systems Administrator

Qua Nguyen, Student Assistant

## **Graduate Students**

Nathan Bennett

**Guofeng Cao** 

Chi-Yang Chiu

Yi-Tai Chiu

Michael Chou

Fang-I Chou

Robert Eisman

Chunkai Gao

Hamid Ghofrani

Stephen Gosnell

Xueying Shirley Han

Matthew Hancock

Morgan Hansen

Richard Harang

Igor Himelfarb

Mina Hosseini

Wei Hsiang

Susie Kang

Mar Kang

Mee-Kyung Kim

Varvara Kulikova

Jeongjun Lee

Elvynna Leong

Junjing Lin

Ruby Loria

Matthew Lorig

Chunhsiung Lu

Michael Nava Munpyung O

Jose Ochoa

Tony Pourmohamad

Bin Ren

Hoon Rhew

Roberto Rivera

Rai Sau

Jacob Serup

Julianne Shan

**Daniel Sheinson** 

**Qunying Shen** 

Xi Song

Winslow Strong

Li-Hsien Sun

Gaoyuan Tian

Tomohiro Tsuruga

Chunkai Wang

Yao Wang

Matthew Wheeler

Junging Wu

Yan Xu

Yuli Yan

Li Yang

Fengling Yu

Anastasia Zavodny

Kathy Zha

Ting Zhe

### **Publications**

#### Jean-Pierre Fouque

- Multiname and Multiscale Default Modeling (with R. Sircar and K. Solna), SIAM Journal Multiscale Modeling and Simulation 7(4), 1956-1978.
- Interacting Particle Systems for the Computation of Rare Credit Portfolio Losses (with R. Carmona and D. Vestal), Finance and Stochastics 13(4), 613-633.
- Short maturity asymptotics for a fast mean reverting Heston stochastic volatility model (with J. Feng and M. Forde), SIAM Journal on Financial Mathematics Vol.1, 126-141.

#### S. Rao Jammalamadaka

- Analysis of Middle-censored data with Exponential Lifetime Distributions (with S.K. Iyer and D. Kundu), Jour. of Statist, Planning and Inference, (2008), 138, 3550-3560.
- Towards Reliable Reputations for Dynamic Networked Systems (with G. Swamynathan, B.Y. Zhao, K.C. Almeroth), Proceedings of IEEE Symposium on Reliable Distributed Systems (SRDS 2008), Naples, Italy, 2008.
- Addendum to "An Asymptotically Distribution-free test of Symmetry, *Jour of Statistical Planning and Inference* (2007), **137**, 799-810" (with M. Ekstrom), *Jour. of Statistical Planning and Inference*, 2009, **139**, 1569-1571.
- Building Asymmetry into Circular Distributions (with D. Umbach), Statistics and Probability Letters, 2009, 79, 659-663.
- A General Censoring Scheme for Circular Data (with M. Vasudevan), Statistical Methodology, 2009, 6, 280-289.
- Analysis of Microtubule Dynamics using Growth Curve Models (with Ghosh, K. and Siddiqi, M. A.), *Journal of Applied Statistics*, 2009, **36**, 621-631.
- Optimal Text Space Representation of Student Essays using Latent Semantic Analysis (with Alex Villacorta), in
   Advances in Multivariate Statistical methods, Indian Statistical Institute Platinum Jubilee Volume (Ed. A.
   SenGupta), World Scientific Press, 2009, 107-130.

#### Mike Ludkovski

- Optimal Risk Sharing with Distorted Probabilities, with V.R. Young, Mathematics and
- Financial Economics, 2(2), pp. 87—105, 2009.
- Valuation of Energy Storage: An Optimal Switching Approach, with R. Carmona,
- Quantitative Finance, 10(4), pp. 359—374, 2010.
- Inventory Management with Partially Observed Nonstationary Demand, with E. Bayraktar,
- Annals of Operations Research, 176, pp. 7—39, 2010.
- A Simulation Approach to Optimal Stopping under Partial Information, Stochastic
- Processes and Applications, 119(12), pp. 2071—2087, 2009.
- Ex Post Moral Hazard and Bayesian Learning in Insurance, with V.R. Young, Journal of
- Risk and Insurance, 77(4), pp. 829—856, 2010.
- Optimal Dynamic Policies for Influenza Management, with J. Niemi,
- Statistical Communications in Infectious Diseases, 2(1), article 5, 2010.

#### **Yuedong Wang**

- Variance Estimation in the Analysis of Microarray Data (with Y Ma and RJ Carroll). Journal of the Royal Statistical Society B, 71 (2009), 425-445
- Smoothing Spline Semi-parametric Nonlinear Regression Models (with C Ke), Journal of Computational and Graphical Statistics, 18 (2009), 165-183.
- Frontiers of Biostatistics and Bioinformatics (with S Ma), edit volume, 2009.

# Accepted for Publications

#### Jean-Pierre Fouque

- Calibration of Stock Betas from Skews of Implied Volatilities (with E. Kollman), To appear in Applied Mathematical Finance.
- Option Pricing Under a Stressed-Beta Model (with A. Tashman), To appear in the Annals of Finance.
- Portfolio Optimization Under a Stressed-Beta Model (with A. Tashman), To appear in Wilmott Journal.

#### S. Rao Jammalamadaka

- Some Moment Properties of Skew-symmetric Circular Distributions, (with D. Umbach), to appear in Metron.
- Predictive Influence of unavailable values of future explanatory variables in a Linear Model, (with S.K.Bhattacharjee, A. Shamiri, and M. Sabiruzzaman), to appear in Comm. In Statistics, Theory and Methods.
- Directional Statistics, to appear in Handbook of Engineering, Quality Control, and Physical Sciences, John Wiley, NY.

#### **Yuedong Wang**

 Tests for Variance Components in Varying Coefficient Mixed Models (with Z Li, P Wu, W Xu and L Zhu), Statistica Sinica.

#### **Presentations**

#### Jean-Pierre Fouque

 Pleanary speaker at the 6<sup>th</sup> World Congress of the Bachelier Finance Society Bachelier Finance Toronto, June 22-26, 2010. http://www.bfs2010.com

#### S. Rao Jammalamadaka

- Statistical Society of Australia, Western Australia Branch, Perth, Australia, "How far from the Bar- A drunk's Random Walk," September 8, 2009.
- Department of Mathematics and Statistics, Curtin University of Technology, Perth, Australia, "Directional Statistics A Brief Overview," September 9, 2009.
- School of Mathematics and Statistics, University of Western Australia, Perth, Australia, "Near matches and Applications," September 10, 2009.
- Business School, University of Queensland, Brisbane, Australia, "On the Robustness of Bayes Predictions in Linear Models with Elliptical Errors," October 29, 2009.
- Department of Statistics, Massey University, Palmerston North, New Zealand, "An overview of Directional Data Analysis," November 2, 2009.
- Conference in Probability and Mathematical Statistics, Victoria University, Wellington, New Zealand, "Testing Isotropy of Directions and a related Random Walk Problem," November 3, 2009.
- Department of Statistics, Auckland University, Auckland, New Zealand, "Some Match Problems and Statistical Applications," November 5, 2009.
- School of Mathematics and Statistics, Curtin University, Perth, Australia, "Statistical Applications of Nearmatches," November 12, 2009.
- Siva Rama Krishna College of Engineering, Palasa, India, "Statistics and Engineering," November 24, 2009.
- Jawaharlal Nehru Technological University, Kakinada, India, "Some Statistical Models in Image Analysis," November 27, 2009.
- Indian Institute of Technology, Kharagpur, India, "Bayesian Methods in Statistics," December 2, 2009.
- Tenth Islamic Countries Conference on Statistical Sciences, Cairo, Egypt, "Middle Censoring in Circular Data,"
   December 23, 2009.
- International Conference on the Frontiers of Interface between Statistics and Sciences, Advanced Institute in Mathematics, Statistics and Computer Science, Hyderabad, India, "Inference based on Spacings," December 30, 2009.

- Conference of the International Indian Statistical Association and Indian Society for Probability and Statistics, Visakhapatnam, India, "Gaps between Observations –what can one learn from them?," January 5, 2010.
- International Conference on Advances in Statistical Science, Indian Statistical Institute, Kolkata, India, "Middle Censoring and Circular Data," January 10, 2010.
- Jawaharlal Nehru Technological University, Kakinada, India, "Statistics in Technological Research," January 27, 2010.
- Swarnadhra College of Engineering, Narsapur, India, "Statistics in Engineering and Research,"
- January 28, 2010.
- KL University of Engineering, Vijayawada, India, "Statistics and Image Analysis,", January 28, 2010.
- Acharya Nagarjuna University College of Engineering, Guntur, India, "Engineering and Statistics," January 29, 2010.
- Conference on Recent Advances and Applications in Mathematical Modeling, Sri Padmavathi Women's University, Tirupati, India, "Mathematical Modeling- Some Perspectives," February 1, 2010.
- Conference on Recent Advances and Applications in Mathematical Modeling, Sri Padmavathi Women's University, Tirupati, India, "Microtubule Dynamicity using Growth Curve Modeling," February 1, 2010.
- Sri Venkateswara University, Tirupati, India, "Statistical Computing –Then and Now," February 2, 2010.
- Sri Venkateswara University, Tirupati, India, "Statistics and Chance," February 2, 2010.
- Department of Statistics, Sri Venkateswara University, Tirupati, India, "Near Matches and Applications," February 3, 2010.
- Advanced Institute in Mathematics, Statistics and Computer Science, Hyderabad, India, "Goodness-of-fit Testing –I, II," February 9, 2010.
- Advanced Institute in Mathematics, Statistics and Computer Science, Hyderabad, India, "Goodness-of-fit Testing –III," February 10, 2010.
- Advanced Institute in Mathematics, Statistics and Computer Science, Hyderabad, India, "Testing Isotropy and a Related Random Walk Problem," February 11, 2010.
- Institute of Mathematical Sciences, University of Malaya, Kuala Lumpur, Malaysia, "Gaps between Observations—What can one Learn from Them?," March 5, 2010.
- Institute of Statistics Malaysia, Kuala Lumpur, Malaysia, "Directional Data and Pearson's Random Walk Problem," March 10, 2010.
- Center for Foundation Studies in Sciences, University of Malaya, Kuala Lumpur, Malaysia, "Statistics and Chance," March 12, 2010.
- Department of Statistics and Applied Probability, National University of Singapore, Singapore, "Near Matches and Applications," March 17, 2010.
- Department of Mathematics, Universiti Teknologi Malaysia, Johar Bahru, Malaysia, "Spacings and Statistical Inference,", March 18, 2010.
- Institut Statistik Malaysia Annual Meeting and Conference, Shah Alam, Malaysia, "Middle Censoring," March 31, 2010.
- Institute of Mathematical Sciences Conference, Univ of Malaya, Kuala Lumpur, Malaysia, "Statistical Applications of Matches," April 6, 2010.
- University of Malaya Public Lecture, Kuala Lumpur, Malaysia, "Statistics and Chance," April 13, 2010.
- Institute for Stochastics, Karlsruhe Institute of Technology, Karlsruhe, Germany, "Gaps between Observations, What can one learn from them?," May 4, 2010.
- Institute for Statistics, Econometrics, and Mathematical Finance, Karlsruhe Institute of Technology, Karlsruhe, Germany, "Bayes Robustness in Linear Models with Elliptically Symmetric Errors," May 25, 2010.
- Institute of Mathematics, Eötvös Loránd University, Budapest, Hungary, "Gaps between Observations, what can one learn from them?" June 4, 2010.
- Department of Information Technology, University of Debrecen, Debrecen, Hungary, "Testing Isotropy and a Related Random Walk," June 10, 2010.
- Department of Computer and Management Sciences, University of Trento, Trento, Italy, "Robustness of Bayes Predictions," June 24, 2010.
- Institute for Mathematical Statistics and Insurance, University of Bern, Bern, Switzerland, "On the Robustness of Bayes Predictions in Linear Models," June 29, 2010.

#### Mike Ludkovski

- WatRISQ Seminar, U of Waterloo, Waterloo, Canada, March 2010.
- TMU Young Researchers Workshop on Finance, Tokyo, Japan, March 2010.
- IPAM New Directions in Financial Mathematics Workshop, UCLA, January 2010.
- Southern California Probability Symposium, UC Irvine, December 2009.
- Mathematical Finance Seminar, USC, November 2009.
- Financial Mathematics Seminar, UT Austin, September 2009.

#### **Yuedong Wang**

- Invited talk at the Annual Meeting of Statistical Society of Canada, 2009.
- Invited talk at International Conference on Financial Statistics and Financial Economics in Chengdu, 2009.
- Invited talk at the First Joint Biostatistics Symposium, Beijing, 2010.

# Other Professional Activities

#### Jean-Pierre Fouque, Professor and Director of the CRFMS:

Elected Fellow of the Institute of Mathematical Statistics (IMS) <a href="https://imstat.org/news/2009/05/08/ims-announces-2009-fellows.html">http://imstat.org/news/2009/05/08/ims-announces-2009-fellows.html</a>

#### Mike Ludkovski

• Awarded: Regents Junior Faculty Fellowship, UCSB, Summer 2010.

#### **Wendy Meiring**

Associate Editor, Environmetrics

#### **Yuedong Wang**

- Associate editor, Journal of Nonparametric Statistics.
- Member of Directors of International Chinese Statistical Association Board
- **S. Rao Jammalamadaka** spent this academic year on a Sabbatical Leave, visiting Curtin University of Technology, Australia (July-Nov. 2009), the Advanced Institute in Mathematics, Statistics, and Computer Science, India (Nov. 2009-Jan. 2010), University of Malaya, Malaysia (Feb.-April, 2010), Karlsruhe Institute of Technology, Germany (April-June, 2010), and the University of Trento, Italy (June-July, 2010).
- S. Rao Jammalamadaka honored at International Conference on Statistics, Probability, Operations Research, Computer Science and Allied Areas in January 2010 in India, and who is seen congratulated by legendary figure in Statistics, Professor C. R. Rao.





#### Research Interests

#### **GUILLAUME BONNET**

Research interests include: statistical analysis of high dimensional data and infinite dimensional probability models with applications in population genetics and Internet traffic.

#### **ANDREW CARTER**

Research interests include: asymptotic statistical inference, nonparametric function estimation, and mixture models in econometrics and finance.

#### **RAYA FELDMAN**

Research interests include: stochastic differential equations with non-Gaussian noises, time series, filtering problems.

#### **JEAN-PIERRE FOUQUE**

Research interests include Stochastic Processes, Stochastic Partial Differential Equations, Waves in Random Media, Financial Mathematics.

#### **DAVID V. HINKLEY**

Research interests include: resampling methods, model selection, nonparametric curve fitting (including wavelet methods), comparisons between objective Bayes and frequentist inference.

#### **DAWN HOLMES**

Main research interest is Bayesian Networks. Recent work in this area includes estimating priors using the maximum entropy formalism, quantum computing and maximum entropy in Gaussian networks. Other interests include: How humans process causal knowledge, foundations of Bayesianism, Brouwer's programme and intuitionistic Markov chains. Issues in statistical education.

#### **JOHN HSU**

Dr. Hsu continues to work on Bayesian estimation of covariance matrices. The Bayesian estimation for the

linear mixed effects models, with a very flexible prior structure, has been fully developed. He is also working on a project of Bayesian methods in estimating ordered mortality rates. The project is interesting, however, the computation is challenging due to the constraints of the parameters.

#### S. RAO JAMMALAMADAKA

Dr. Jammalamadaka continues to be interested on topics related to directional data, spacings and nonparametric goodness-of-fit. As part of the ITR project on biomolecular images, techniques of clustering and pattern recognition for high-dimensional data were investigated.

#### MICHAEL LUDKOVSKI

Research interests are applied probability and stochastic control, especially with applications to financial mathematics and insurance.

#### **WENDY MEIRING**

Research interests include: spatial/temporal data analysis, geophysical model evaluation, and functional data analysis in the environmental sciences.

#### **JARAD NIEMI**

Bayesian Inference, Computational Statistics, Time Series, Systems Biology, Ecology

#### YUEDONG WANG

Research interests include: smoothing spline, smoothing spline ANOVA, generalized linear model, mixed-effects models, model selection, survival data, longitudinal data, spatial-temporal data, computational statistics, statistical software, microarray data analysis and biostatistical modeling (circadian rhythm, hormone pulses).

# **Computing Facilities**

Departmental servers and server room temperature are monitored both in network and out of network. Notifications of critical issues are texted to support staff. Lab computer hardware has been updated. Additional storage capacity for staff, student and faculty shares has been added. Documentation on web for new equipment and finer detail of setups and solutions has been updated. Helpdesk software for greater staff, faculty and student support has also been added.

# Statlab Report

The Statlab assisted many clients during the past year, both from on and off campus. On campus clients came from many departments/schools, including Geography, Anthropology, Bren School for Environmental Science and Management, Sociology, EEMB, Physics, Communication, ISBER, and Psychology. Statistical methods discussed during consultations included principal component analysis, analysis of variance, space-time correlation models, state-space models, bootstrap, factor analysis, analysis of contingency tables, and sample size calculations/power analyses. Software used by clients included Excel, R and SAS. Dr. Wendy Meiring served as Statlab Director. Graduate student consultants included Junqing Wu and Yan Xu. There is clear evidence of continued demand for Statlab services from UCSB researchers, as well as some off-campus clients.



Life Sciences—UCSB pictures

# **Degrees Awarded 2009-10**

# **Masters of Arts**

#### **Summer 2009:**

Jaspreet Singh Winslow Strong

#### Fall 2009:

Guofeng Cao Chunhsiung Lu Munpyung O Jose Ochoa Chunkai Wang

#### **Winter 2010:**

Susie Kang Jacob Serup Li-Hsien Sun Tomohiro Tsuruga

#### **Spring 2010:**

Chi-Yang Chiu
Robert Eisman
Xueying Shirley Han
Tony Pourmohamad
Yao Wang
Matthew Wheeler
Li Yang
Fengling Yu
Kathy Zha

# **Wald Prize**

Li-Hsien Sun

Awarded for excellence in graduate studies as selected by the faculty for the best grade on the Qualifying Exams. Awarded in memory of Dr. Abraham Wald, eminent American Statistician.

# **Ruth and Joe Gani Prize**

Brian Wignall

Awarded to a graduate student for excellence in research as selected by the faculty.

# PhD Degrees Awarded

Eduardo Montoya – Ph.D. in Statistics & Applied Probability – Summer 2009 "Constrained Functional Data Models with Environmental Applications" Advisor: Wendy Meiring

Yihua Jiang - Ph.D. in Statistics & Applied Probability—Summer 2009 "Markov Chain Monte Carlo Stochastic Approximation Algorithms, Smoothing Spline ANOVA Frailty Models and Applications" Advisor: Yuedong Wang

# Bachelor of Arts/Science

#### Statistical Science, B.S.

Do, Phuong
Feinberg, Joseph Paul
Figg, Jeannette Ashley
Griffin, Lisa Renee
Hu, Yu Yan
James, Dewey Mario
Marks, Cassandra Shea
Martinez, Cherrylee
Montero, Matthew Louis
Steinhart, Thomas Jordan
Wong, Vincent
Zhang, Wenyi

#### Financial Mathematics & Statistics, B.S.

Buron, Eric Barry Chang, Ian James Cortes, Matthew Adam Dror, Adi Graham, Alexandra Marie Hsin, Wendy Pei-Chin Luc, Kelly Korklong Miller, Jason Todd O'Brien, Marc Charles Pase, Dylan Alexander Quinn, Devin Samuel Ritchie, Ashley Nicole Saadatmand Sara Shepardson, Stephen Michael Smith Christopher Alan Stahl, Roman Sterling, Brandon Thomas Taing, Christina Terzic, Justin Michael Vasquez, Ryan Therese Wang, Yifan Yaari, Noa Yip, Eric Andrew Zegollari, Adita Zhang, Yi Zhang, Yuan

#### Statistical Science, B.A.

Glance, Allison Michelle

#### **Minors**

Arlotti, Ashley Eccleshall Sebastian Zhu, Sasha

# Rama Thogarati Prize Awarded to

# Wenyi Zhang

The Rama Thogarati Prize is awarded annually to a senior undergraduate student for high academic achievement. The prize is in memory of Rama Thogarati, a graduate student.

# **Lowes Scholarship** *Awarded for Support in 2009-2010*

#### Eric Buron and Adi Dror

The Robert and Barbara Lowes Scholarships in Financial Mathematics and Statistics are awarded each year to talented undergraduate students enrolled in the major. The Lowes scholarship is funded by Robert and Barbara Lowes.

# **Department Seminars**

October 7, 2009, Dr. Robert B. Gramacy, Cambridge University, Particle Learning for Sequential Design and Optimization

October 14, 2009, Dr. Rohini Kumar, UCSB, Current Fluctuations for Independent Random Walks

October 21, 2009, Dr. Jarad Niemi, UCSB, A sequential Monte Carlo Primer

November 18, 2009, Dr. Bruce Kendall, Bren School of Environmental Science and Management UCSB, Population Consequences of Individual heterogeneity in Demography and Growth

December 2, 2009, Dr. Chetan Pahlajani, UCSB Math, Averaging for a Multiscale Stochastic Model of Gene Expression

January 13, 2010, Dr. Paul Atzberger, UCSB Math, Spatially Adaptive Stochastic Numerical Methods for Intrinsic Fluctuations in Reaction-Diffusion Systems

January 20, 2010, Dr. Linda Petzold, UCSB Comp. Sci., Discrete Stochastic Simulation of Spatially Inhomogeneous Biochemical Systems

February 3, 2010, Dr. Thomas Richthammer, UCLA Math, A Proof of Aldous' Spectral Gap Conjecture

February 10,2010, Dr. Sudhir Paul, UCSB PSTAT, Testing Homogeneity in Clustered (Longitudinal) Count Data Regression Model with Over-Dispersion

February 17, 2010, Dr. Joao Hespanha, UCSB Electrical and Comp. Engineering, Stochastic Hybrid Systems: Application and Mathematical Tools

February 24, 2010, Dr. Joseph Stover, UCSB Bren School, Exact Sampling for Interacting Particle Systems

March 3, 2010, Dr. Nizar Touzi, Ecole Polytechnique, France, Wellposedness of Second Order Backwards SDEs

March 10, 2010, Dr. Riccardo Gatos, University of Bern, The Distribution of the inhomogeneous Discounted Compound Poisson Process

March 17, 2010, Dr. Penghu Sun, USC Computational Biology, Power of Pattern Counting in Molecular Sequence Analysis

April 14, Dr. Matzner-Lober, University Rennes, Iterative Bias Correction for Multivariate Smoothers

May 5, 2010, Dr. Cherie Briggs (Professor of Ecology, Evolution and Marine Biology, UCSB) and Dr. Leah Johnson (Postdoc, UCSB), Likelihood-Based Inference for an Individual based Model of Chytridiomycosis in Frogs

May 12, 2010, Dr. Christopher Costello, Bren School of Environmental Science and Management UCSB, Estimation the value of Spatial Information: An Application to Fisheries

May 19, 2010, Dr. Marc Fisher, Federal Reserve Bank of Atlanta, PPP and unit Roots: Learning Across Regimes

June 2, 2010, Eric Hillebrand, Dept. of Economics, Louisiana State University, Temporal Correlation of Defaults in Subprime Securitization

# CRFMS (Center for Research in Financial Mathematics and Statistics)

The CRFMS provides a new environment that brings together the academic and financial communities. The combination of the two communities will increase the diversity of research and teaching at UCSB.

## Thanks to donors of CRFMS

Skyler Technology Santa Barbara Asset Management Robert and Barbara Lowes

#### **Seminars**

September 21, 2009, Dr. Tomoyuki Ichiba, UCSB Pstat, Hybrid Atlas Models Part 1

September 28, 2009, Dr. Tomoyuki Ichiba, UCSB Pstat, Hybrid Atlas Models Part 2

October 12, 2009, Adam Tahman, UCSB Pstat, Option Pricing Under a Stressed-Beta Model

October 19, 2009, Winslow Strong, UCSB Pstat, regulation and the Removal of Arbitrage in Strongly Markovian Equity Market Models

October 26, 2009, Peter Van De Zilver, PIMCO Newport Beach CA, Tracking Error Models and Implementation

November 16, 2009, Hao Xing, Boston University, Strict Local Martingale Deflators and Pricing American Call-Type Options January 25, 2010, David German, Claremont McKenna College, Pricing and Hedging in an Equilibrium-Based Model for a Large Investor

February 22, 2010, Erhan Bayraktar, University of Michigan, Optimal Stopping for Dynamic Convex Risk Measures

March 3, 2010, Dr. Nizar Touzi, Ecole Polytech, France, wellposedness of Second Order Backward SDEs

April 26, 2010, Kostas Kardaras, Boston University, Numeraire-Invariant Choices in Financial Modeling

May 17, 2010, Kasper Larsen, Carnegie Mellon University, Horizon Dependence of Utility Optimizers in Incomplete Models

June 2, 2010, Eric Hillebrand, Dept. of Economics, Louisiana State University, Temporal Correlation of Defaults in Subprime Securitization

# Committees and Service

**Department Chair** 

Yuedong Wang

**Department Vice Chair** 

John Hsu

**Academic Advising Committees** 

Undergraduate Programs

Raya Feldman, Director of Undergraduate Studies
and Undergraduate Advisor

Graduate Programs

Andrew Carter, Graduate Director and Advisor
John Hsu, Recruiting and Admissions
Wendy Meiring, Recruiting and Admissions

Director(s) of Actuarial Studies

Raya Feldman Michael Ludkovski

Seminars

Guillaume Bonnet
David Hinkley
Wendy Meiring

**Faculty Computer Liaison** 

Guillaume Bonnet, Jarad Niemi

**Concurrent Enrollment Liaison** 

Raya Feldman

**TA Training** 

Dawn Holmes, Coordinator Nate Bennett, Lead TA PSTAT 5A/5E Coordinator

John Hsu Yuedong Wang

**Qualifying Exam Committees** 

Applied Statistics
Yuedong Wang, Chair
David Hinkley
Wendy Meiring

Mathematical Statistics
Andrew Carter, Chair
David Hinkley
John Hsu

Probability Raya Feldman, Chair Jean-Pierre Fouque Michael Ludkovski

Statistical Laboratory

Wendy Meiring, Director

Student Representative

Richard Harang

Gani Dissertation Prize Committee

Drew Carter Jarad Niemi John Hsu

**Lowes Scholarship** 

Raya Feldman, Administrator

Library Representative
Jarad Niemi

#### **University Committees**

Academic Senate Council on Research and Instructional Resources

> Andrew Carter Jean-Pierre Fouque S. Rao Jammalamadaka

Applied Statistics Qualifying Exam Committee

Yuedong Wang

**Central Fellowships**Wendy Meiring

Chancellor's Outreach Advisory Board (COAB)

Wendy Meiring

Computing and Communications Campus
Representative

S. Rao Jammalamadaka

**Coordinating Committee** 

Yuedong Wang

Earth Research Institute (ERI) Advisory Committee

Undergraduate Council and Committee on Admissions, Enrollment, and Relations with schools (CAERS) Wendy Meiring

Faculty Legislature Representative

Michael Ludkovski

Graduate Division's Continuing Student Fellowship

**Review Committee** 

**Andrew Carter** 

**Hellman Awards Committee** 

Jean-Pierre Fouque

Institute for Computational and Earth System Sciences (ICESS)/ Earth Research Institute (ERI)

Advisory

Committee

Wendy Meiring

**Quantitative Methods in the Social Sciences** 

Yuedong Wang, Chair

**Subcommittee on Faculty Grants** 

Jean-Pierre Fouque Raya Feldman

# **Contact Information**

Statistics and Applied Probability
5607A South Hall
University of California
Santa Barbara, CA 93106-3110
www.pstat.ucsb.edu
805-893-2129

Department Chair: Yuedong Wang yuedong@pstat.ucsb.edu

Business Officer: Dēnna Zamarron zamarron@pstat.ucsb.edu

Financial Coordinator: Rachel Brown brown@pstat.ucsb.edu

Undergraduate Program: Angelica Arce arce@pstat.ucsb.edu

Graduate Program: Rickie Lazzerini lazzerini@pstat.ucsb.edu



Statistics and Applied Probability University of California Santa Barbara, California 93106-3110 www.pstat.ucsb.edu