Department of Statistics



NEWSLETTER

Purdue University

Spring 2001

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A Message from the Department Head



Dear Alums and Friends,

One of the hardest things to do is keep up with the pace of change in our field. An important resource for students and faculty here is the array of different seminar series that the department supports. These series of talks play an important role in broadly educating students and keeping faculty abreast of new developments in our field. The speakers from across the campus and around the world bring vitality and new ideas to us. These speakers often offer clarity and insight not available in published works and they allow us to ask questions on the spot, a luxury not to be had when we are reading an

article or a book. Some speakers inform us about changing job prospects and their experience with the broad range of opportunities available to those educated in the statistical sciences.

For Fall 2001 six different seminar series, most of which meet weekly, will be offered to students and faculty in statistics as well as in other departments and to visitors who come to the campus expressly to hear the speakers. (You are all welcome to come to the seminars. You may have to come early for a seat in the extremely popular talks.) They include one series principally in mathematical statistics, one in probability, one in bioinformatics, one in computational finance, one on the role of statistics in the pharmaceutical industry, and one which is an introduction to research areas of the statistics and mathematics faculty at an introductory overview level. There are many other special colloquia as well and they can be found on the department web page. (I even learn from the ones I cannot attend by reading the abstracts, which are also on the web page.)

Best regards to you,

Many Eller Bolh

Mary Ellen Bock

Calendar of Coming Events

The 2001 Joint Statistical Meetings will be held in Atlanta, Georgia, August 5-9, 2001. The annual Purdue Alumni and Friends Dinner will be held nearby at the home of Professor Brani Vidakovic of Georgia Institute of Technology on Monday, August 6, 2001. For reservations send e-mail to nlucas@stat.purdue.edu.

The 2001 Fall Department Picnic will be held on Sunday, August 26 at Fort Ouiatenon Historical Park in West Lafayette, Indiana.

The 2001 Holiday Party will be held in the Outlook Room at The Trails, Lafayette, Indiana on Thursday, December 6, 2001.

2000-01 Traveling Speakers

Jason C. Hsu, The Ohio State University, "Multiple Comparisons for Making Decisions", September 7, 2000.

Fred Regnier, Purdue University, "Beyond Genomics", September 19, 2000.

Jorge A. Leon, Departamento de Matematicas, CINVESTAV-IPN, "Stratonovich Stochastic Calculus for Fractional Browning Motion with Hurst Parameter Lesser Than 1/2", September 21, 2000.

Karen Schlauch, National Center for Genome Resources, "GeneX: Analysis and Database Server of Gene Expression Data", September 26, 2000.

Katie Kerr, Jackson Labs, "Statistical Analysis and Experimental Design for Gene Expression Microarrays", October 3, 2000.

Walter Philipp, University of Illinois, Urbana-Champaign, "Empirical Processes, Pair Correlations and U-Statistics for Weakly Dependent Data", October 5, 2000.

Lynne Billard, University of Georgia, "From the Statistics of Data to the Statistics of Knowledge: Symbolic Data Analysis, October 12, 2000.

Christina Kendziorski, University of Wisconsin, "Hierarchical Models for the Analysis of Gene Expression Microarray Data", October 17, 2000.

Jaya Satagopan, Memorial Sloan-Kettering Cancer Center, "Two-Stage Designs for Genome Scanning", October 19, 2000. Dr. Satagopan gave a talk on, "On the Harmonic Mean Estimator of Marginal Probability", January 18, 2001.

Diane Moody, Purdue University, "Microarray Experiments in Animal Science", October 24, 2000.

Jeff Wu, University of Michigan, "A System of Experimental Design", October 26, 2000.

Jeffrey Skolnick, Danforth Plant Science Center, "Prediction of Protein Structure and Function on a Genomic Scale", October 31, 2000.

Dibyen Majumdar, University of Illinois-Chicago, "Efficient Designs in the Presence of Trends", November 2, 2000.

Tony Long, University of California, Irvine, "Improved Statistical Inference From DNA Microarray Data Using Analysis of Variance and a Bayesian Statistical Framework", November 7, 2000.

Pamela Ohman, University of Florida, "Adapting the EM Algorithm for Estimating Equations", November 9, 2000.

Graziana Taramino, Dupont, "Gene Expression Profiling of Rice Defense Mechanism by Microarray Technology", November 14, 2000.

Christian Dahl, Purdue University, "Testing for Neglected Nonlinearity in Regression Models: A Collection of New Tests Based on Random Fields", November 16, 2000.

Raymond J. Carroll, Texas A&M University, "Nonparametric Regression in Longitudinal Models: Locality of Kernel and Spline Methods", November 30, 2000.

Robert Lund, University of Georgia, "Periodic Time Series and United States Temperature Trends", December 4, 2000. Dr. Lund gave another talk on "Geometric Convergence Rates of Renewal Sequences and Markov Chains", March 1, 2001.

A. Bagchi, University of Twente, Encshede, The Netherlands, "Estimation of Stochastic Volatility in the Hull-White Model with Application to Option Pricing", December 5, 2000.

Jun Xie, University of California,

2000-01 Traveling Speakers (cont.)

Los Angeles, "A Bayesian Insertion/Deletion Robust Algorithm for Protein Motif Searching via Entropy Filtering", January 16, 2001.

Samy Tindel, Universite of Paris 13, France, and Purdue University, "Onsager Machlup Functional for Stochastic Evolution Equations", January 25, 2001.

Wolfgang Polasek, University of Basel and Purdue University, "Portfolio Construction with Multivariate Time Series Forecasts", January 31, 2001.

Ming-Hui Chen, Worcester Polytechnic Institute, "Conjugate Priors for Generalized Linear Models", February 13, 2001.

Malgorzata Bogdan, Wroclaw University of Technology, Poland and Purdue University, "Data Driven Smooth Tests of Goodness-of-Fit", February 15, 2001.

Vladimir Pozdnyakov, Univer-

sity of Pennsylvania, "A Bound on LIBOR Futures Prices for HJM Yield Curve Models", February 21, 2001.

Raquel Prado, Universidad Simon Bolivar, Venezuela, "Bayesian Time-Varying Autoregressions: Models and Applications", February 26, 2001.

James McNulty, Chicago Mercantile Exchange, "Derivatives Used in Corporate Finance", March 1, 2001.

Moulinath Banerjee, University of Washington, "Likelihood Ratio Inference for Monotone Functions in a Class of Non-Regular Problems", March 5, 2001.

Sandrine Dudoit, Stanford University, "Statistical Methods for Identifying Differentially Expressed Genes in Microarray Experiments", March 8, 2000

David Heath, Carnegie Mellon

University, "Risk Management with Coherent Measures of Risk", March 28, 2001.

Randall C. Wright, Western Reserve Life Assurance Co. of Ohio, "Connections Between Computational Finance and Actuarial Science", April 4, 2001.

Kathy Prewitt, Texas A&M University, Nonparametric Function Estimation Using Local Polynomial Regression", April 5, 2001.

Alan D. Lopez, World Health Organization (WHO), Geneva, "The Global Burden of Disease", April 20, 2001.

Peter Carr, Bank of America Securities, "On the Nature of Options", April 13, 2001.

Morris L. Eaton, University of Minnesota, "Predictive Distributions in the Multivariate Normal Case", April 27, 2001.



Visiting the Department Beginning Fall 2000

Joan Brenneman has been working as a Limited Term Lecturer in the Statistics Department since Fall 2000. She has a masters in statistics from Montana State University in Bozeman, Montana. Joan and her family moved to Lafayette last summer. Her area of interest is sampling.

Visiting the Department in Spring 2001



Malgorzata Bogdan

Malgorzata Bogdan is a Visiting Assistant Professor from Wroclaw University of Technology, Poland. She is currently working on Statistical Genetics (linkage studies).



Robert Lund

Robert Lund was a Visiting Professor from The University of Georgia for Spring 2001. His current research interests include time series, statistics in climatology, and Markov chains. He is an Associate Editor for *Journal of the American Statistical Association* and *Applied Stochastic Models in Business and Industry*.



Wolfgang Polasek

Wolfgang Polasek was a Visiting Professor from the University of Basel for the Spring 2001 semester. His current interests are computational methods in time series analysis and financial econometrics. His current work is on multivariate volatility forecasting by VAR-VARCH models for quantitative portfolio management. In 2001, he coedited in a special issues on financial models in the journal of *Applied Stochastic Models in Business and Industry* with the title "Inference and prediction on financial risk management". In October 2001, he organized a special "European Course on Advanced Statistics" (ECAS) in Lugano, Switzerland, on Bayesian Statistics and Financial Econometrics.

Visiting the Department in Spring 2001



Jaya Satagopan

Jaya M. Satagopan was a Visiting Assistant Professor from Memorial Sloan-Kettering Cancer Center, New York. Her current research interests include optimal experimental designs (under constraints), Bayesian model selection, mixture models and applications to statistical genetics. Jaya had a very satisfying and extremely enjoyable stay at Purdue, and she would like to thank both the faculty and the students for making this a very pleasant experience.

In addition to teaching (STAT 503) and beginning some collaborative research projects here, Jaya also had the opportunity to improve her juggling skills with the Purdue University Juggling Club, and got started on unicycling with the help of other club members.



Samy Tindel

Samy Tindel was a Visiting Assistant Professor from the University of Paris 13, Paris, France. He has been an Assistant Professor at Paris 13 since 1997. Samy's current research includes stochastic PDEs, particle systems, fractional Brownian motion and stochastic calculus of variations. He visited Purdue University in order to work with Professor Frederi Viens.



Mei Wang

Mei Wang (Ph.D. 1990, University of Michigan) had been a Research Specialist and Director at a Chicago-based market research company before taking a Visiting Associate Professor position in our department the academic year 2000-2001. She taught Categorical Data Analysis (STAT 598S) and Statistics: Concepts and Controversies (STAT 113). Mei's research interests are in statistical models and data analysis of large data sets. She will join the Statistics Department at the University of Chicago in the fall.

Joining the Department in August 2001

Assistant Professor of Statistics

Seongjoo Song - Dr. Song comes to Purdue as Assistant Professor of Statistics. She received her Ph.D. from the University of Chicago in June 2001. Her research interest are in statistical applications to finance, asymptotics, stochastic processes and calculus and numerical techniques for large data sets.

Assistant Professor of Statistics

Jun Xie - Dr. Xie received her Ph.D. from the University of California, Los Angeles in June 2000. Her current research projects include multivariate methods on microarray data analysis (with Professor Peter M. Bentler), Markov chain Monte Carlo models on motif searching for multiple sequences (with Professor Ker-Chau Li), hierarchial models for longitudinal data with dependence. She has been involved with UCLA's statistical consulting center (with Professors Jan de Leeuw and Richard A. Berk).

Visiting Faculty

Krzysztof Bogdan - Visiting Assistant Professor of Statistics, Wroclaw University of Technology Malgorzata Bogdan - Visiting Assistant Professor of Statistics, Wroclaw University of Technology Friedrich Liese- Visiting Professor of Statistics, University of Rostock Srdjan Stojanovic - Visiting Professor of Mathematics and Statistics, University of Cincinnati

Department News

Computational Finance

by Professor Frederi Viens
Professor of Mathematics and Statistics



Assistant Professor Frederi Viens of Statistics and Mathematics, has restructured the web page and updated changes in the Statistics components of the Computational Finance program. He led the weekly Computational Finance (CF) seminar in Spring 2001 (and

will do it again next year). A variety of invited speakers from mathematics, statistics, finance, engineering, and actuarial backgrounds, from academia as well as industry, included **David**

Heath, Dilip Madan, Randall Wright, Peter Carr, Steve Kou, and Ioannis Karatzas. A group of 30 people, students and faculty, traveled to the Chicago Mercantile Exchange (CME) in the context of the CF seminar, where they heard the CEO, James McNulty, give a talk entitled "Derivatives Use in Corporate Finance". They spoke with a number of other top executives at CME, and with senior independent floor traders, and witnessed the trading floors in full swing. The trip was used also as a social event: many of the attendees spent the afternoon shopping and visiting the Art Institute of Chicago, and got together in the evening to enjoy dinner at a local Thai restaurant, before driving back to Lafayette. The CME is the world's largest commodities futures market, and has a reputation for developing innovative financial derivative products.

Bioinformatics Seminar Series

by Rebecca Doerge
Associate Professor of Statistics and Agronomy



Each Fall the Department of Statistics hosts the seminar series on Bioinformatics, chaired by **Professor Rebecca Doerge**. This year we concentrated on the statistical issues involved in gene expression data produced from microarray experiments (www.stat.purdue.edu). Outside experts in the areas of molecular genetics, genomics, statistics, and chemistry were invited to speak to our diverse audience. The overwhelming response to this subject, by scientists from four schools and at least 15 departments, encouraged us to continue the seminar series through the Spring semester. The format of the Spring seminar was kept the same, but the speakers came from

within the Purdue community and usually took two seminars to demonstrate their experiments, work with statisticians and present their results. We are excited about the level of interest in Bioinformatics at Purdue, and look forward to another semester of intriguing and energetic seminars.

Statistical Consulting Service (SCS)

http://www.stat.purdue.edu/consulting/website/

Statisticians in the Statistical Consulting Service (SCS) play a critical role in research throughout the university. Graduate student **Andrès U. Vargas** came to the SCS in 1998 for help with his research on nonverbal creativity. His work focused on students with Attention Deficit/Hyperactivity Disorder (AD/HD) from different cultural and linguistic backgrounds. Statistical consultant **Rebecca Ambler**, who was a statistics graduate student, and **Professor Tom Kuczek** met with Andrès and his major professor, **Sydney Zentall**. They helped design a study which was implemented in a few elementary schools in Portland, Oregon.

Andrès died of cancer on October 16, 1999. After his death, several of Andrès' colleagues under the direction of Professor Zentall, completed his doctoral research and his dissertation. Statistical consultant **Jayson Wilbur**, who is a statistics graduate student, analyzed the data and helped interpret the results. Zentall was awarded a Ph.D. in education posthumously on May 12, 2001.

The *Purdue Exponent* quoted Vargas' wife Tara as saying "Andrès believed so much in education... it's just really meaningful to have that goal finished and have the circle complete. I think that the Ph.D. was probably the most important step in his life."

The SCS is honored to have played a small part in this effort.

Computing Facilities
by Doug Crabill
Computer Systems Administrator



Our Windows NT lab PC's have all been replaced by newer, faster PC's with large monitors. They've also had Windows 2000 installed in place of Windows NT. Four new laptops were purchased for general instructional use and have been put to good use in the classroom. Upgrades to computers in graduate student offices continue. There was the usual round of software upgrades including operating system upgrades and the addition of Mathematica 4.0. Our new digital camera will simplify the addition of images to our departmental web page or into other published documents. Our new webmaster, Leslie Arvin, began work late this spring and is working towards making improvements on our Statistics Department Web pages.

New Faces in the Statistics Department



Leslie Arvin joined the Department of Statistics in April, 2001, as the department's new webmaster. She earned a BS in Computer Science from Purdue University in 1988 and went on to work for Purdue's Agricultural Computer Network (ACN) as an Operating Systems Analyst.

Leslie became interested in the World Wide Web with its advent circa 1993 and helped develop pages and computer graphics interface (CGI) programs for ACN's first web server. She increased her involvement by installing and maintaining web servers in several county extension offices, and when ACN merged with two additional computer support departments in Agriculture to become Agriculture Information Systems around 1998, Leslie became the primary webmaster of the Agriculture department.

Currently Leslie is upgrading the web server software and developing web pages for the Computational Finance program.

New Faces in the Statistics Department (cont.)



Kristy Brewer joined the Statistics Department April 9, 2001. She is our new Secretary IV, receptionist and Textbook Deputy.

New Arrivals

Markus Bachmann and Meng Rong Lee are the proud parents of their new daughter, Christine, born on May 11, 2001. Rich and Naomi Benz have a new son, John Thomas, born on March 27, 2001. Renee Jones Hall and her husband, Tony, are the proud parents of Zackary Alexander Hall who was born November 6, 2000. Hongmei Jiang and her husband, Zeqiang Sun, have a new son, Abe. **Lixiang Liu** and his wife, Jingling Li, are proud of their new son, Kevin Joseph. Dimitris and Maria Politis have a new daughter, Magdelene, born December 10, 2000. Jing Su and Jianjun Li are very proud of their daughter, Jennifer, who was born on May 25, 2001. Olivia Frances Zimmerman was born March 22, 2001. Her parents are **Steve Zimmerman** and his wife, Becky.

Weddings

Zhen Jiang and Xiong Jiang were married in St. Louis on March 14, 2001. She is a current graduate student in our department. John and Heather Stevens were married on December 19, 2000. John is a current student in the department. Katie Simonsen and Doug Moore were married March 10, 2001. Katie is a current faculty member in the department.

Job Search Network

If you have job information that you would like to include in our web site, please e-mail the job announcement to stat-jobs @stat.purdue.edu.



Norma Lucas, celebrates 30 years at Purdue University and the Statistics Department. She is pictured here with Dr. Robert Ringel, Executive Vice President for Academic Affairs. **Congratulations Norma!!**

Of Special Note

Rebecca Doerge has been appointed a University Faculty Scholar for both the School of Science and the School of Agriculture. This award was established to recognize outstanding accomplishments by faculty midway through their academic career. It is a five-year award that includes discretionary funds to further her research program.

Katy Simonsen received the Teaching for Tomorrow Award. This award was established by the Classes of 1944 and 1945 to foster continued excellence of teaching and learning on our campus, and to facilitate the development of the teaching potential of the faculty.

"Stat Day"

March 23, 2001, was the fourth annual "Stat Day", which is an informal get-together with colleagues from the Division of Biostatistics and other departments at the Indiana University School of Medicine in Indianapolis. This year it was held at the Division of Biostatistics in Indianapolis. Lunch was provided and was followed by informal research presentations by Sin-Ho Jung and Xiao-Hua (Andrew) Zhou of the Division of Biostatistics, and Bruce Craig and Mei Wang from our department. Mei Wang was a visiting associate professor for the 2000-2001 academic year.

Memorial Lectures

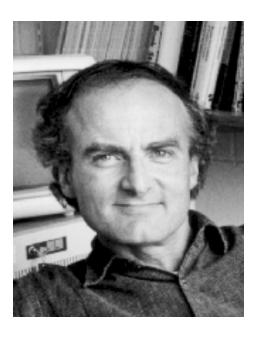
Myra Samuels Memorial Lecture



The 2001 Myra Samuels Memorial Lecture was presented on Thursday, April 12, 2000 by **Dr. Charles E. McCulloch**, Professor and Head, Department of Epidemiology and Biostatistics, University of California, San Francisco. The title of the address was "(Re)Modeling Biometrics". The lectures were founded in memory of Dr. Myra Samuels who worked for many years in the Statistics Department and was an Associate Professor in Veterinary Pathobiology at the time of her death. The Myra Samuels Biostatistics Fund provides support for these lectures.

Prem S. Puri Memorial Lecture

The 2001 Prem S. Puri Memorial Lecture was presented on Thursday, March 22, 2001 by alumnus **Dr. Sidney Resnick**, Director of the School of Operations Research and Industrial Engineering, Cornell University. The title of the address was "Infinite Source Poisson Models with Heavy Tailed Transmission Times: Probabilistic Modeling and Data Networks". The lectures were founded in memory of Dr. Prem S. Puri who joined the department in 1966.



I. W. Burr Award

This award was established in 1974 upon the retirement of the late Professor Irving W. Burr, an eminent statistician who taught at Purdue for nearly 35 years.



The student receiving this award should have completed or nearly completed the Ph.D. in statistics. The criteria for selection are: 1) Promise of contribution to the profession as evidenced by academic excellence in courses and exams and by the quality of the thesis research and 2) Excellence in teaching or consulting while the student is at Purdue.

The recipient of the 2001 I. W. Burr award is **Bhramar Mukherjee**. Bhramar was born in Calcutta, India. She received her M.S. in applied statistics and data analysis from the Indian Statistical Institute,

Calcutta in 1996. She received a Master's in Mathematical Statistics from Purdue in 1999. She expects to receive her Ph.D. this summer. She came to Purdue in 1996. Her research area is Optimal Design of Experiments. Her thesis is on Optimal designs for estimating the path of a stochastic process, under the direction of Professor W. J. Studden. Bhramar works with statisticians from Eli Lilly on modelling data from diabetes clinical trials.

V. L. Anderson Scholarship and School of Science Outstanding Achievement Award

The V. L. Anderson Scholarship is awarded to an undergraduate student who shows promise of contributing to statistics and its applications. The scholarship is in honor of Virgil Anderson who retired from the



Department of Statistics in December of 1986 after nearly 36 years.

Christopher N. Otterman is the recipient of the 2001 V. L. Anderson Scholarship. Christopher is currently an undergraduate and is majoring in Actuarial Science and Statistics. He entered Purdue in 1998 and is now a junior. He is working on fulfilling the requirements for his double major. He is a member of the Golden Key National Honor Society, and another honor society also. He expects to graduate at the end of next year in Actuarial Sciences and Statistics.

L. J. Cote M. S. Excellence in Statistics



This award is in honor of Louis J. Cote who retired from the Department of Statistics in June of 1991. The student receiving this award should be completing an M.S. in applied statistics. The criteria for selection are the qualities required of an applied statistician: 1) Technical skill as evidenced by course performance, faculty evaluation, and performance on the final M.S. Examination and 2) Skill in consulting and communication, normally evidenced by excellence in supervised consulting or secondarily in teaching.

The recipient of the 2001 L. J. Cote M. S. Excellence in Statistics award is **Dachuang Cao**. Dachuang was

born in China. She received a Master of Science majoring in mathematical statistics in Peking University, Beijing, China in 1999. She received the Bachelor of Mathematics in Central China Normal University, Wuhan, China in 1996. She entered Purdue in August 1999 and expects to receive the Master of Science in Applied Statistics in May 2001. Dachuang is a member of the American Statistical Association. She plans to continue her education and graduate with a Ph.D. from Purdue before 2004.

Outstanding Classroom Teaching by a Teaching Assistant



Teaching Assistants contribute substantially to the teaching mission of the Department of Statistics. The faculty of the department has established an annual award to recognize service to the department and to students through outstanding classroom teaching of Statistics by a Teaching Assistant.

The Spring 2001 recipient is **Kiseop Lee**. He was born in Seoul, South Korea. He has a B.S., Department of Mathematics, Seoul, Korea, 1995. In the middle of the masters course of the Department of Statistics in Seoul National University, he came to Purdue. He entered Purdue in 1997. His area of research is Financial Mathematics - hedging of

general contingent claims in an incomplete market, directed by Professor Philip Protter. Kiseop expects to graduate from Purdue in May 2002 with a Ph.D. in Statistics and an M.S. in Statistics with specialization in Computational Finance.

Glen E. Baxter Award



The Glen E. Baxter Memorial Fund was established in 1983 by family and friends of Professor Baxter shortly after the premature death of this gifted teacher-scholar. The annual proceeds from the fund are used to award scholarships to honor undergraduate students who have demonstrated excellence in mathematics. The recipients of the awards are selected by a committee of professors from the Departments of Mathematics and Statistics.

The 2001 recipients of the Glen E. Baxter Award are **Christopher Michael Ripley** and **Yee Ching Yeow**. Christopher and Yee Ching are both students in the School of Science, and

both have a baccalaureate degree in the mathematical sciences as an immediate degree objective. Christopher's academic program has a strong interdisciplinary character which serves to prepare him for graduate study in the field of Biomedical Engineering, an area in which it is his aim to conduct prosthesis research. Christopher has been the recipient of several honors/awards, including the Dean's Scholar Scholarship, the Computer Services Incorporated Scholarship, and the Association of Financial Technologies Scholarship.

Yee Ching is following the Honors curriculum, a program of study designed to prepare one for graduate work in the mathematical sciences. Yee Ching was a member of the second runner-up team in the 1996 National Mathematics Olympics and he is an Alton D. and Juanita S. Andrews Scholar.

Both of these young scholars have had their names appear regularly on the Dean's List, and, most recently, both Christopher and Yee Ching have been elected to Phi Beta Kappa.

Actuarial Science Awards

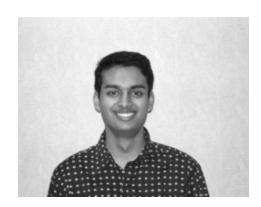
The Actuarial Science Awards are funded by the Lincoln Financial Group. The Lincoln Scholarship, Lincoln Actuarial Achievement Award and the Actuarial Alumni Award are awarded to outstanding Juniors, Sophomores and Freshmen, respectively, on the basis of academic performance, actuarial exams passed and extracurricular activities.



L-R: James Shaheen, Marcus Ewe, Professor Richard Penney and Jeanette Roell

Actuarial Science is an undergraduate program jointly administered by the Department of Statistics and the department of Mathematics. The Director is **Richard Penney**, Professor of Mathematics. The following students were awarded scholarships: **Jacqueline Allen** and **Jacqueline King**: Actuarial Alumni; **Lauren Coleman**: Lincoln Actuarial Achievement; **Marcus Ewe**: CIGNA Sophomore; **Jeffrey Johanningsmeier** and **Dwane Johnson**: CIGNA Exam Awards; **Sebastine Kleber** and **Jeanette Roell**: CIGNA Freshman; **Christopher Otterman**: Lincoln and **James Shaheen**: Trustmark.

School of Science Outstanding Senior Award



The 2001 winner of the School of Science Outstanding Achievement Award for Statistics is **Arkendra De**. Arkendra is from Carmel, Indiana. He has won the Biology Alumni Scholarship, School of Science Outstanding Achievement Award 1998 and 2000, V. L. Anderson Scholarship in Statistics, Glen Baxter Scholarship in Mathematics and Phi Beta Kappa. He has had internships at Indiana University, funded by NSF Exploration of Careers in Science; Johns Hopkins Bayview Medical Center and Cornell University, Department of Mathematics. Arkendra is in the Purdue Science Student Council, Science Ambassadors and the Asian American Association.

Teaching Assistantships and Fellowships for 2001-2002

The following new students for 2001-2002 have been awarded teaching assistantships and fellowships in the Department of Statistics.

Georgie Abraham, University of Wisconsin-Madison, Thomas Aliff, Purdue University, Peter Castelluccio, Indiana University, Riyan Cheng, Wuhan University-China, Tadd Colver, Brigham Young University-HI, Nilupa Gunaratna, Purdue University, Chun Han, Wuhan University-China, Kyle Hinsz, California State University-Sacramento, Bo Hu, Purdue University, Craig Johnson, University of Utah, Hyo Seung Lee, Purdue

University, Junyong Park, Seoul National University-S. Korea, Ramasubramanian Prasana Venkateswa, University of Mumbai-India, Patrick Ryan, Xavier University-Ohio, Balakrishna Singhania, Purdue University, Wen-Ching Tsai, National Taiwan University, Huiping Xu, Fudan University, Peng Zeng, Nankai University-China,

Recent Graduates

August 2000 Graduates



Doctorates

Wen-Chi Tsai (Anirban DasGupta) Some Contributions to Stochastic Geometry

Liqing Yan (Philip Protter) Convergence of the Euler Scheme for Stochastic Differential Equations with Irregular Coefficients

Masters Specialization in Applied Statistics

Dwight Beaudry Leming Qu

Masters

Specialization in Computational Finance

Xiaodong Lin

Masters

Specialization in Mathematical Statistics

Michael Black Hui Xie

December 2000 Graduates

Doctorates

Nitai Mukhopadhyay (J. K. Ghosh and James Berger) *Bayesian Model Selection for High Dimensional Models with Prediction Error Loss* and 0-1 Loss

Masters Specialization in Computational Finance Changlage Park

Chonghak Park

May 2001 Graduates

Masters Specialization in Mathematical Statistics

Pritha Ghosh Ping Ma

Masters Specialization in Applied Statistics

Hongmei Jiang Izabela Soltys

Masters Specialization in Computational Finance

Ionut Florescu Adair Morse

Bachelors

Thomas Aliff
Jaclynn Bagaloff
Amrita Bagga
Arkendra De
Paresh Gopaldas
Dwane Johnson
John Montgomery



News from the GSO

By Aarti Sriram

As another year comes to an end, we take time to reflect in all that has transpired in our wonderful department. Part of this memorable year has involved the various activities that the Graduate Student Organization provided for the department. The year started with a poolside party to welcome new students to our department, graciously hosted by **Professor Steve and Joan Samuels**. As students wiled away the last few hours of summer, lounging by the poolside, getting acquainted with the new students, GSO committee members began planning events that would be part of the upcoming year.

The first GSO meeting, in September, added a new member to our committee. The committee did think of randomly appointing someone to the job, but figured that holding off pizza till someone volunteered would be a more democratic way. After some thought (and hunger), **John R. Stevens**, a first year PhD student, volunteered for the position, and joined the GSO committee in preparing events for our student body to enjoy. Every month, GSO had a pair of student and faculty speakers give half hour talks on a subject that they favored. *Papa John's* pizza followed for dinner.

In terms of speakers for the past year, GSO was fortunate enough to get great faculty speakers such as **Professors Tom Sellke**, **Bruce Craig**, **Rebecca Doerge**, **Frederi Viens**, **Robert Lund**, and **Dr. Chien-Feng Chen**, a senior statistician from Eli Lilly. Amongst student speakers were **Olga Korosteleva**, **Mik Black**, **Brian Munneke**, **Kiseop Lee**, **Jayson Wilbur** and **Bhramar Mukherjee**. The talks covered a spectrum of topics, from probability theorems, to how to prepare yourself for a job interview, to biostatistics, to mathematical finance and also time series. **Professor Doerge** provided a very informative talk on how to land a job, providing students with tips on how to get jobs in academia, industry, as well as

summer internships. In addition to this 'how to get a great job' talk, **Dr. Chen** spoke about recruitment at Lilly. The Ph.D. students, who presented, need to be commended on the talks they gave. This year we actually had students volunteer to give talks, rather than GSO having to prod a student to present a talk. The talks primarily related to a small aspect of the student's dissertation and were presented in a very understandable manner.

The next event supported by the GSO was the entertainment at the annual Holiday Party. This year, the party was held at *The Trails*. **Nels Grevstad**, **Mik Black** and **Brad Johnson** serenaded the crowd with some Irish bluegrass music. **Leming Qu** also wooed the group by singing a song in Chinese. The grand finale was a game of Charades; the game had the contestants acting out either characteristics of certain professors, or different statistical concepts. **Professor Deely** acted out the concept of Random Walk.

With that came to an end the fall term and students and faculty went on their respective vacations to come back fairly refreshed for a brand-new semester. In addition to the monthly talks two major events dawned on GSO's calendar. The first major event that GSO sponsored was the Spring Picnic. This yearly event was held at Happy Hollow Park, towards the end of April. Both students and faculty came to relax, get some sun, and enjoy a barbecue. Some faculty and students joined in a game of volleyball, while others sat around and chatted. Towards the end of the picnic, **Brad** (on the guitar) and Nels (on the banjo) once again serenaded us with a variety of different music. Our final task for the year was to invite a famous statistician as our outside guest speaker for the year. With a unanimous vote from the students, Professor Morris Eaton from the University of Minnesota was invited. Professor Eaton, a distinguished scholar in

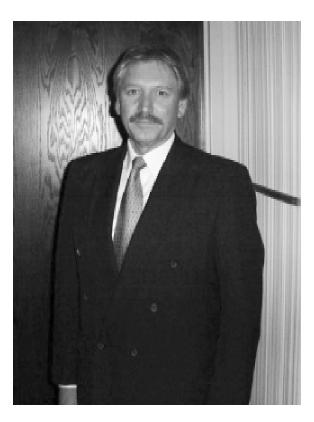
News from the GSO (Cont.)

multivariate statistics, gave a talk on "Predictive Distributions in the Multivariate Normal Case". The talk was well attended by both students and faculty. The final task of GSO was to elect a group of wonderful representatives to take over our job of ordering pizza and organizing talks for the next year. The three students who were elected were **Dachuang Cao**, **Nels Grevstad** and **Ryan Wiegand**. We wish them luck for the upcoming year. Finally, GSO would like to thank everyone for

coming to our events and making them successes. Good luck to all the graduating Masters and Ph.D. students, we wish you tons of luck for your future endeavors.

For the Department of Statistics GSO- Brad Johnson, Aarti Sriram, John R. Stevens, Chuancai Wang

2001 Distinguished Alumni Award



Dr. Alan Lopez received the 2001 School of Science Distinguished Alumni Award. These awards were established in 1990 to recognize outstanding achievement in professional and related fields of endeavor for alumni of the School of Science. He received his M.S. degree in Statistics from Purdue University in 1974.

Dr. Lopez is coordinator of the Epidemiology and Burden of Disease Unit of the World Health Organization (WHO) in Geneva, Switzerland. In this position he is responsible for directing and managing WHO's epidemiology and biostatistics activities within the Global Programme on Evidence for Health Policy. Since joining WHO in 1980, Dr. Lopez has served in a number of positions, including Acting Programme Manager for the Programme on Substance Abuse, preceded by two years as chief of the Prevention, Advocacy and Promotion Unit of that Programme. In 1992, he began work, in collaboration with Professor Christopher Murray of Harvard, on the Global Burden of Disease Study for the 1993 World Devel-

opment Report. This work included preparing global and regional estimates of incidence, prevalence, mortality, duration and severity for over 100 diseases and injuries and projecting these epidemiological estimates to 2020 as the major global evidence-based data set for priority setting in the health sector. His work has resulted in the preparation of five volumes in the Global Burden of Disease Series. Dr. Lopez is a member of the international Union for the Scientific Study of Population and the International Epidemiological Association, and serves on scientific review panels for a number of professional journals.

Alumni News

Girdhar Gopal Agarwal, (M.S. 1977; Ph.D. 1978) After leaving Purdue University in 1978, Dr. Agarwal became assistant professor at Miami University during the period from August 1978 to August 1979. He was offered an assistant professorship at the University of Pittsburgh in September 1979. For the period of September 1979 to September 1980, he went to India and was a Visiting Research Fellow at the Indian Statistical Institute. Calcutta. Dr. Agarwal has been at Lucknow University (his alma mater) from September 1980 to the present where he is an Associate Professor.

Dr. Agarwal was a Biostatistics Fellow at McMaster University, Hamilton, Canada, training in the International Clinical Epidemiology Program for the period of June 1994 to October 1995 where he received an M.S. Degree in Medical Statistics and Bio-Statistics.

His wife, Niripuma, is a Professor in Zoology at Lucknow University. They have one daughter, Vasuta (17 years).

James H. Albert, (M.S. 1977; Ph.D. 1979) Professor of Mathematics and Statistics at Bowling Green State University was named a Fellow of the American Statistical Association Tuesday, August 15, 2000. Dr. Albert was recognized for outstanding contributions to Bayesian analysis and statistical computing, for excellence in teaching and related textbook and software development, for innovative applications, and for service to the profession.

Richard E. Beckwith (Ph.D. 1959) retired Professor of Operations Research and Statistics, School of Business Administration, California State University, Sacramento, is donating his academic regalia to the Department of Statistics although he is keeping the hat for possible future use at Charles University in Prague, a city in which he and his wife maintain an alternate home.

Jerone Deverman (Ph.D.

1969) continues to do substantial consulting work with the local Health Care Horizons organization along with more and more traveling again as claims paying organizations are gearing up to meet provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), a federal initiative which Dr. Deverman affectionately labels as the Consultants' Full Employment Act of 1996. Dr. Deverman and his wife, Wona, who live in Albuquerque, New Mexico, celebrated their 40th wedding anniversary Labor

Day weekend and went to Santa Fe to do all the things tourists do and residents seldom ever do.

Robert A. Hultquist (M.S. 1952) received his Ph.D. fro

1953) received his Ph.D. from Oklahoma State University. Dr. Hultquist is now a Professor Emeritus with the Statistics Department at The Pennsylvania State University. Before his retirement, he did research and taught mathematical statistics for 44 years. Some semesters he teaches one class at The Pennsylvania State University. Dr. Hultquist's wife is a retired Mathematics teacher and they have 18 acres where they spend many hour in their gardens. Their grandchildren and church work also keep them busy.

OJ Kwon (BS 1995; M.S. Applied Statistics 1999) re-

cently joined Ernst and Young - Asia Pacific, one of the world's Big 5 consulting firms. He is currently working at the Seoul Office. After almost 10 years in the U.S. as a student at Purdue, an analyst at Kellogg and a management consultant at the American Mathematical Society, he is back home in Korea as a manager. OJ's father says that his investment in OJ finally paid off. His family is very happy to have OJ back in Korea.

Daniel Mihalko (Ph.D. 1977) is the department head of the new Department of Statistics at

Alumni News (cont.)

Western Michigan University. Dr. Mihalko received his Ph.D. under the direction of Professor David S. Moore.

Chonghak Park (M.S. Specialization in Computational finance, 2000) is currently working at SEI Investments as an Investment Analyst with their Asset Allocation Team.

Jeremy Partin (M.S. 1991) is a Senior Actuarial Analyst at the Actuarial Division at Arkansas Blue Cross Blue Shield where he has been since he graduated. Jeremy married Karen Hurst on April 1, 2000. He has a nine year old stepdaughter, Shaye. For the past four years, Jeremy has been Vice-President of Fatboy Racing,

Inc., which is a drag racing team that was formed with his brother. He has successfully campaigned a 1964 Ford Fairlane on the regional drag racing circuits.

William Stout (M.S. 1965; Ph.D. 1967) is currently the president-elect of the international Psychometrics Society. He is the Director of the Statistical Laboratory for Educational and Psychological Measurements of the Department of Statistics of the University of Illinois..

Rui Wang (M.S. 2000) is currently working in the Immunology section of the Adult AIDS Clinical Trials group at the Harvard School for Public Health.

Xuyan (Jason) Xu (M.S. 1996) will be joining American Express in New York, New York.

We would like to include you in our next newsletter! Fill out the Alumni Reply form or send an e-mail, fax or letter and tell us about yourself.

You Will Be Missed

Paul Irick, died December 11, 2000, at his home in Hampton, Virginia. He received an M.S. degree in education in 1945 and a Ph.D. in applied statistics in 1950, both from Purdue University. From 1950 to 1955 he was assistant professor and then associate professor of statistics at Purdue.

Oscar Kempthorne died in Maryland November 15, 2000.

Herbert Robbins, Professor Emeritus at Rutgers, passed away on February 12, 2001. He developed several widely used statistical techniques and wrote a popular book that inspired many students to enter the mathematics profession. In the field of statistics, Dr. Robbins developed techniques for improving predictions by drawing on additional related data.

Duk Chul Hahn passed away on April 15, 2001. She was the mother of Nancy Moore (Professor David Moore's wife).

Gifts to the Department

Special Thanks To Our Friends

The Department of Statistics would like to give a heartfelt "Thank You" to the following donors for their generous contributions from Fall 2000 to Spring 2001. We apologize if we have omitted anyone or incorrectly spelled a name.

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If you would like to give to any of these funds, or if you are interested in planned gift, estate planning contact Grady Jones at (765) 494-1987. �

Alumni Reply Form

Please complete and return this form for our alumni files. Include news (professional and/or personal) of your current activities, or suggestions for the next issue of newsletter. Mail it to Teena Seele, Department of Statistics, Purdue University, 1399 Mathematical Sciences Building, W. Lafayette, IN 47907–1399, e-mail it to seele@stat.purdue.edu or fax it to 765-494-0558.

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Please include some information about yourself:

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If you need more room, please continue on the reverse side.

Alumni Reply Form (cont.)

Fall 2000 New Student Pizza Party and Mixer



Doug Crabill, Computer Systems Administrator, speaks to the new students regarding the department's computers.

Before the beginning of fall classes, the department sponsors different activities for its new graduate students. The first is a pizza party one week before the start of classes where the new students meet each other as well as a few members of the faculty and staff. They are given information about the department and important things they will need to know. The pizza party was held Sunday, August 13, 2000.

The second activity is a reception in honor of the new students. This is usually held in the Mathematics Library where they are "officially" welcomed by the department faculty, students and staff. The reception was held Friday, August 18, 2000.

The third activity is a mixer. This year Professor Steve Samuels and his wife, Joan, hosted the party at their beautiful home. As you can see, it was a perfect day for sitting by the pool visiting or swimming. The mixer was held on Saturday, August 19, 2000.



Here you can see a few of the guests enjoying themselves in the late summer weather.

The 2000 Statistics Department Picnic



Bill Lucas

The 2000 Statistics Department Picnic at Fort Ouiatenon, West Lafayette, Indiana was held on Saturday, September 16. The picnic gives new students a chance to get to know the faculty and staff. Once again, our "chef", **Bill Lucas**, husband of **Norma Lucas**, was on hand to see that nobody went hungry. As you can see from the picture, he had a grill full of pork chops. It was a beautiful, fun, stress-free day filled with eating, relaxing and good conversation.



The food line was long but worth the wait. (L-R) D. Moore, R. Wiegand, D. Annis, C. Fraser and J. Stevens.



(L-R) Professor Katy Simonsen, Cheryl Crabill, wife of our Systems Administrator Doug Crabill, and Leslie Arvin, Webmaster

2000 Annual Holiday Party

The 2000 Statistics Department Holiday Party was held on Saturday, December 16, 2000, at The Trails in Lafayette. After dinner, the graduate students entertained everyone.



Left to Right: Mik Black, Nels Grevstad and Brad Johnson



Left to Right: Jayson Wilbur, his wife Stephanie and Dachuang Cao

Spring 2001 Staff Appreciation Picnic



Mik Black and Brad Johnson were the "chefs". They did a great job!

The 2000 Staff Appreciation Picnic was held on April 21, 2000, at Happy Hollow Park. The picnic was a nice way to relax before finals week.



Nels Grevstad and Brad Johnson were the after dinner entertainment.

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We welcome your comments and suggestions for future newsletters. Please send a fax to 765-494-0558, send e-mail to seele@stat.purdue.edu, call 765-494-5324 or write to

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