# **Department of Statistics**

# **NEWS**



# **Purdue University**

## **Summer 1998**

#### Calendar of Coming Events

The 1998 Joint Statistical Meetings will be held August 8-13, 1998, in Dallas, Texas. This year's Purdue dinner will be at 6:30 p.m. on Monday, August 10, 1998 at The Pomodoro in the Porch Room.

The Annual Department of Statistics picnic will be held Sunday, September 20, 1998 at Ross Hills, West Lafayette, Indiana.

The 1998 Holiday Party will be held at the Trails, West Lafayette, Indiana on Saturday, December 12.

# A Message from the Department Head



Dear Alums and Friends,

We have just finished hosting the Sixth Purdue International Symposium on Statistics and the pleasure of hearing about and discussing exciting research is still with us. Over the course of the

seven days, national and international research scholars met here at Purdue continuing a tradition that began in 1970. The original founder of the symposium, Shanti Gupta led the coordination and planning with his committee and Purdue Staff. Norma Lucas was instrumental in the effort and Teena Seele shone as official photographer. George McCabe spearheaded the local effort for the nutrition and statistics workshop which included a press conference for speaker Cathy Woteki, who is Undersecretary for food safety for the U.S. Department of Agriculture. Jim Berger, a former Purdue faculty member (1974-1998) directed the "Interfaces" workshop that examined the interaction between classical and Bayesian methodology. (Jim joined the faculty at Duke University in January of this year and we wish him well and miss him.) Shanti and I were the local directors for the decision theory conference which

included a humorous poem by the banquet speaker, Larry Brown, University of Pennsylvania. (It will be included in the next issue for your entertainment.) Purdue faculty member, Rebecca Doerge, directed the genetics and statistics workshop which brought together statisticians and geneticists from departments of agronomy, biology, molecular biology and forestry among others, as well as bio-tech industry researchers. One of the statistical genetics speakers was a new faculty member, Katy Simonsen, who joined us this summer.

The department has recently established a master's degree with emphasis in computational finance as part of a campus-wide computational finance program that encompasses the School of Management, as well as the Departments of Computer Science, Mathematics, Physics and Statistics. Principal faculty members involved are Tony Cai and Philip Protter.

If you are planning to attend the Joint Statistical Meetings in Dallas, Texas, in August you will definitely see David Moore. He is the current President of the American Statistical Association and he will join us at the Purdue dinner on Monday, August 10. We hope to see you there.

Best regards to you,

Mary Ellen Bock

# Sixth Purdue International Symposium on Statistics

The Sixth Purdue International Symposium on Statistics was held on June 17-23, 1998, at Purdue University in West Lafayette, Indiana, USA. The cochairs were Shanti S. Gupta and Mary Ellen Bock.

The symposium began with simultaneous workshops "Interfaces Between Major Statistical Paradigms" and "Nutrition and Statistics" on June 17-19. The

conference "Statistical Decision Theory and Related Topics" was held June 19-21 and included invited and contributed paper sessions. The workshop "Statistical Genetics: An Interdisciplinary Future" was held on June 21-23 consisting of invited and contributed talks as well as poster sessions.

See "Sixth Purdue International Symposium on Statistics", page 4

## Sign Up for the Purdue Dinner at the Joint Statistical Meetings

If you are interested in attending the Purdue dinner at the Joint Statistical Meetings, please email Norma Lucas at nlucas@stat.purdue.edu. We look forward to hearing from you.



Anaheim dinner participants, L-R: R. Berger, R. Wolpert and K. Ikstad

The 1998 Joint Statistical Meetings will be held August 8-13, 1998, in Dallas, Texas. This year's Purdue dinner will be at 6:30 p.m. on Monday, August 10, 1998, at The Pomodoro in the Porch Room. The dinner will be as follows:

- A. Foccaccia will be passed during the Cocktail time
- B. Antipasto (Choice of)
  Calamari ai Carciofi (sauteed calamari with fresh artichokes, tomatoes & herbs served with grilled crostini)

Insalata Pomodoro (mixed Italian greens with slivers of parmesan, tomatoes and an olive oil balsamic vinaigrette)

#### C. Primo

Penne del Convento (tubular pasta sauteed with extra virgin olive oil, black pepper, lemon zest & walnuts, finished with parmesan)

- D. Secondo (Choice of)
  - Galleto all Diavola (broiled Cornish Game hen with aromatic herbs)
  - Scaloppina del Palio (medallions of veal sauteed with bell peppers, arugola and balsamic vinegar)

- 3. Salmone al Basilico (marinated & grilled Norwegian salmon in a light basil sauce)
- 4. Piatto Vegetale (mixed grilled vegetables drizzled with balsamic vinaigrette)

\*\*The above is served with their signature bread, Bruschetta.

#### E. Dolce

Tirami Su (lady fingers soaked in espresso, rum & kahlua, topped with a mascarpone cream sauce)

A Cash Bar will provide beverages.

The cost of the menu will be as follows:

- 1. The food cost is \$39.00 per person.
- 2. Tax will be charged at 8.25% on food and merchandise only.
- 3. Alcohol will be charged for on a consumption basis.
- 4. Gratuity will be charged at 20%.
- 5. All non-alcoholic beverages will be charged for on a consumption basis.
- 6. Separate checks will be presented.

The 1997 Joint Statistical Meetings were held August 10-14, 1997, in Anaheim California. A Purdue dinner was held at The White House, Anaheim, California, Tuesday, August 12, 1997. Some of our alums who participated were: Roger Berger, George Casella, Jason Hsu, TaChen Liang, Saurabh Mukhopadhyay, S. Panchapakesan and Brani Vidakovic. \*\*



A group shot at the Purdue dinner.

# Joint Statistical Meetings and Purdue Dinner (cont.)

# Professor Shanti S. Gupta Honored at Special Dinner in Anaheim



A special dinner was hosted in honor of Professor Shanti S. Gupta on August 19, 1997 at the Hungry Hunter in Anaheim, California, during the annual meetings of statistical societies. At this dinner, Professor Gupta was

presented with copies of "Advances in Statistical Decision Theory and Applications". This research monograph was released in July 1997 in honor of Professor Gupta in recognition of his pioneering contributions to the area of ranking and selection, and his services to the statistical profession in general. The book, edited by S. Panchapakesan and N. Balakrishnan and published by Birkauser, contains contributions by his Ph.D. students, Purdue colleagues, and other distinguished professional colleagues. His wife, Dr. Marianne Gupta, and his daughter, Maya, were on hand to honor him along with many of the book's contributors. \*

# Purdue in the American Statistical Association



As many of you know, Professor David Moore is the 1998 President of the American Statistical Association (ASA). He has been on the road on behalf of ASA this spring, giving 25 talks in 17 cities from coast to coast. Mary Ellen Bock has begun a three-year term as a Vice President of ASA, and

George McCabe is chair of the Statistical Consulting Section.



Sixth Purdue International Symposium on Statistics (continued from page 2)

Members of the "Interfaces Between Major Statistical Paradigms" Workshop Program Committee were J. O. Berger (Duke U.), L. Brown (U of Pennsylvania), and N. Reid (U. of Toronto). The "Nutrition and Statistics" Workshop Program Committee consisted of G. Beaton (Emeritus, U. of Toronto), R. Carroll (Texas A&M U.), G. McCabe (Purdue U.) and C. Weaver (Purdue U.). The Program Committee of the "Statistical Decision Theory and Related Topics" included M. E. Bock (Purdue U.), P. Bickel (U. of California, Berkeley), S. Gupta (Purdue U.), I. Johnstone (Stanford U.), G. McDonald (GM Research) and K. Roeder (Carnegie-Mellon U.). The "Statistical Genetics: An Interdisciplinary Future" Workshop Program Committee included R. Doerge (Purdue U.), R. Sederoff (North Carolina State U.), E. Thompson (U. of Washington) and B. Weir (North Carolina State U.).

To see the program, visit our web site at http://www.stat.purdue.edu/dept/symposium.html. &

## 1997-98 Traveling Speakers

Below are a representative sample of the speakers who traveled to Purdue University.

Wesley Johnson, University of California at Davis, "Dual Screening", September 11, 1997.

Gary McDonald, General Motors Research Labs, "Shaping Statistics for Success in the 21st Century: The Needs of Industry", September 22, 1997.

Mehmet Sahinoglu, Visiting Purdue University from Dokuz Eylul University, Turkey, "A Bayesian Stopping Rule for Software Reliability", September 25, 1997.

**Vijay Nair**, University of Michigan, "On the Structure of Estimators in Factorial Experiments", October 2, 1997.

Zhengyan Lin, Visiting Purdue University from Hangzhou University, People's Republic of China, "Increment Theory", October 9, 1997.

Marianthi Markatou, Columbia University, "Weighted Likelihood Estimating Equations: An Overview and New Directions", October 16, 1997.

**Linda M. Haines**, Visiting Purdue University from the University of Natal Pietermaritzburg, South Africa,

"A Class of Equivalent Problems in Statistics and Operations Research", October 23, 1997.

Tom Miyakawa, Eli Lilly and Company, "Transitioning from University Student to "Real World" Professional", October 27, 1997.

Morris L. Eaton, University of Minnesota, "Evaluating Posterior Distributions Via Markov Chain Arguments", October 30, 1997.



**Jennifer Karas**, Shell Oil Company, "Statistics at Shell Oil Company", November 3, 1997.

**David J. McClaskey**, Eastman Chemical Company, "Using Quality Management to Improve Academic Performance", November 6, 1997.

**Robert Bell**, The Rand Corporation, "Application of Record Linkage Methods to Analyses of

Sex & Drugs & Rock-a-Bye Baby", November 11, 1997.

Janis Hardwick, University of Michigan, "Flexible Algorithms for Creating and Designing Adaptive Designs", November 13, 1997.

Walter Philipp, University of Illinois Urbana-Champaign, "Limit Theorems for Mixing Sequences", November 20, 1997.

**J. K. Ghosh**, Visiting Purdue University from the Indian Statistical Institute, "Bayesian Density Estimation", December 2,1997.

Marcel F. Neuts, The University of Arizona, "Quasi-Birth-and-Death Processes and Queueing Models", December 4, 1997.

**Peter Thompson**, Visiting Wabash College, "Binomials with Noninteger n", January 15, 1998.

Walter Ambrosius, Indiana University Purdue University Indianapolis, "Quality Control in Longitudinal Clinical Trials", January 20, 1998.

Emmanuel Lazaridis, Indiana University Purdue University Indianapolis, "Identification and Analysis of Longitudinal Patterns Using Bayesian Latent Class Models", January 27, 1998.

**German Pliego**, Visiting Purdue University, "Flexible Shewhart

# 1997-98 Traveling Speakers (cont.)

Control Charts", January 29, 1998.

Friedrich Liese, Visiting Purdue University from University of Rostock, "Exponential Rates for the Error Probabilities in Selection Procedures", February 5, 1998.

Anthony Edmonds, TAP Holdings, Inc., "The Statistician's Role in Clinical Trials and Drug Development", February 10, 1998.

Mohan Delampady, Visiting Purdue University from Indian Statistical Institute, "Robust Bayesian Outlier Detection", February 12, 1998.

Mike Morrow, Eastman Chemical Company, "Product Development, Enabling, Consulting: Statistical Work in Industry", February 13, 1998.

**Lei Li**, University of California, Berkeley, "A Statistical Model for DNA Base-Calling", February 16, 1998.

**Ioannis Kontoyiannis**, Stanford University, "Asymptotics of Waiting Times Between Stationary Processes and their Applications", February 18, 1998.

**Dan Nettleton**, University of Nebraska-Lincoln, "Thoughts on Permutation Testing and Order Restricted Inference in the Mapping of Quantitative Trait Loci", February 24, 1998. Yi Lin, University of Pennsylvania, "Tensor Product Space ANOVA Models", February 25, 1998.

**Nidhan Choudhuri**, Michigan State University, "Bayesian Bootstrap for Mean", March 5, 1998.

Holger Dette, Ruhr-Universitat Bochum, "Checking Model Assumptions in Nonparametric Regression Models", March 17, 1998.

Julia Varshavsky, Eli Lilly and Company, "Hidden Markov Models and Their Use in Protein Modeling", March 24, 1998.

James Arvesen, Data Analysis Systems, Inc., "How to Get a Patent with Regression Analysis", March 31, 1998.

Cliff Spiegelman, Texas A&M University, "Multivariate Receptor Modeling from a Statistical Science Viewpoint", April 2, 1998.

Robert E. Kass, Carnegie Mellon University, "Worrying About the Variances of Random Effects in Hierarchical Models", April 7, 1998 and also "Some Thoughts on Bayes Factors", April 8, 1998.

Michael Newton, University of Wisconsin-Madison, "On Some

Genetic Applications of Nonparametric Likelihood", April 9, 1998.

**Sujuan Gao**, Indiana University School of Medicine, "Estimating the Incidence of Dementia From Longiudinal Two-Phase Sampling", April 14, 1998.

Mehmet Sahinoglu, Visiting Purdue University from Dokuz Eylul University-Ismir, Turkey, "On the Efficiency of a Compound Poisson Stopping Rule for Miixed Strategy Testing with Laboratory Results" and "Noninformative/Informative Measures of Quantity to Compare Predictive Accuracy of Methods in Software Reliability", April 20, 1998.

**Katy Simonsen,** North Carolina State University, "Searching for Disease Genes Using Correlated Markers: A Monte-Carlo Approach to Multiple Testing", April 21, 1998.

George Casella, Cornell University, "Random Cows, Random Corn, and Random Effects", April 23, 1998 and "Data-driven Gibbs Sampling", April 24, 1998.

George P. H. Styan, McGill University, "Some Comments on Some Selected Matrix Inequalities and Equalities, with Some Statistical Applications", April 30, 1998. \*

# **New and Visiting Faculty Members**

## **Visiting Faculty**



Mohan
Delampady
was a Visiting
Associate
Professor
from the
Indian Statisti-

cal Institute, Bangalore, India. His research interests include robust Bayesian hypothesis testing and nonparametric estimation in Bayesian inference. He is a Co-Editor of the statistics journal *Sankhya*, *Series A* and a member of the editorial board of the science education journal, *Resonance*, published by the Indian Academy of Sciences. Prior to joining the Indian Statistical Institute, he was at the University of British Columbia, Vancouver, Canada, during 1986-1991.



Cindelyn
Eberts is a
Visiting Associate
Professor who
previously taught
statistics and
human factors in

the Industrial Engineering Department at Purdue and at the University of Southern California.

She has worked as a human factors product design consultant for AT&T in Indianapolis, Indiana, and as a statistical consultant for Family Services Inc. in Lafayette, Indiana. While teaching in Industrial Engineering she won the Pritsker Outstanding Under-

graduate Teaching Award. Her research interests include design of products, quantification of aesthetics and statistical education approaches based on psychological learning theories.



Linda Haines was a Visiting Associate Professor from the Department of Statistics and Biometry at the

University of Natal, Pietermaritzburg, South Africa. Her degrees include a Ph.D. in Chemistry. Her research interests focus on optimal design and nonlinear models. More recently, she has become involved in the statistics which underpin various decision making tools.



Zhengyan Lin, was a Visiting Scholar from Hangzhou University in People's Republic of China. His

research interests in probability include limit theorems (CLT, WLLN, SLLN, LIL, increment results) on independent and dependent (martingale, mixing sequences, stationary sequences, Markov chain, positive and negative associated sequences) random variables and their convergence rates, weak and strong invariance principles, path behavior of Gaussian processes,

as well as large sample theory in statistics.



Friedrich
Liese was a
Visiting Professor from the
University of
Rostock in
Germany where

he is a Full Professor. Dr. Liese's research interests include the statistics of stochastic processes, especially contiguity and entire separation. Another field of interest is M-estimators in regression models where he seeks to find necessary and sufficient conditions for the consistency of all approximate M-estimators. He has a special interest in asymptotic properties of selection procedures where the case of fixed parameter configurations is studied by methods from large deviations. Dr. Liese investigates semiparametric selection models with methods of the LAN theory of Le Cam. Recent results concern selection rules for restricted data.



Mei-Mei Zen was a Visiting Scholar from National Cheng-Kung University, Republic of

China, where she is Associate Professor. Her research interests include design and wavelets. \*

## **Department News**

# Job Search Network by Rebecca Doerge

The Department of Statistics job search network established within the department by Professor Rebecca Doerge, Job Search Coordinator, has been expanded to include an "Internship" site as well as a "Postdoctoral Fellowship" site. The job search net-

work connects people searching for jobs in statistics with potential employers. National and international employment opportunities in industry, government, and academics are listed weekly. Current students and past graduates of the Department are invited to connect to the departmental job search information line via the www site: http://www.stat.purdue.edu/jobs/.

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. \*



## Statistical Consulting and Purdue University's Technical Assistance Program (TAP) by Regina Becker

In early 1996, the Department of Statistics initiated a formal relationship with Purdue's Technical Assistance Program (TAP). Through TAP, faculty and students have the opportunity to support Indiana business, industry and governmental units in their applications of statistical techniques. The demand for such help has grown as more and more industries are adopting ISO 9000 and QS 9000 quality systems.

The ISO 9000 standard recommends the use of statistical techniques in industry to monitor critical processes and analyze production problems. The QS 9000 standard, which is the automotive group version of ISO 9000, mandates the use of statistical techniques as a means of continuous improvement by all automotive suppliers. It requires knowledge and appropriate use of control charts, design of experiments, capability studies

and other statistical methods that are more sophisticated than those usually used in assembly plants.

Many Indiana industries have requested help from Purdue's Technical Assistance Program. This program was established in 1986 to support Indiana's large and very important industrial sector. Since that time, TAP has assisted over 2100 Indiana companies with assessments of new technologies, product development, process improvement, industrial management, and technical information. It has also assisted with ISO 9000 and QS 9000 planning and facilitation.

The Department of Statistics is involved in a wide variety of TAP projects. Once a company contacts TAP for help, David McKinnis, the Associate Director of TAP, refers the client to the appropriate department. Faculty members Tom Kuczek and

George McCabe have worked on TAP projects along with Regina Becker, a staff member, and graduate students John Hayes, James O'Malley, Renee Jones, Markus Bachmann, OJ Kwon and Brian Munneke. A successful project begins with a plant visit to see the problem and understand the physical constraints, and to examine current production procedures.

Recently, Regina Becker and graduate student Renee Jones worked on a project with Caterpillar in Lafayette, Indiana. The Caterpillar large engine division of Lafayette produces engines for electric power generation, transportation, marine power, and many other applications. The company asked TAP for assistance in reducing the variation in a hole drilling process on a large casting. The TAP project focused on the setup procedures, and an experiment was designed

## **Department News (cont.)**

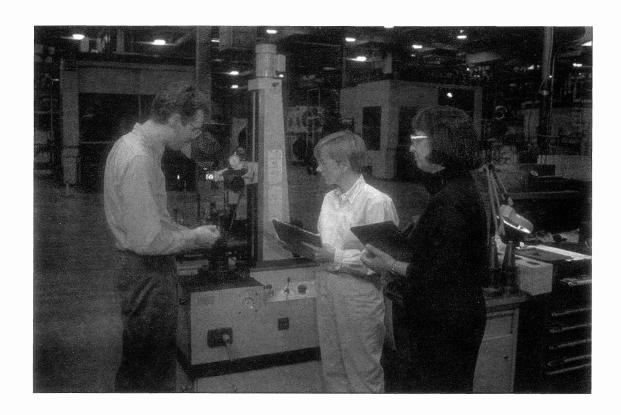
determine the reproducibility and reliability of the gage used to set the tool diameter. The specific causes of variation were identified and new training methods have been implemented, resulting in significantly reduced process variation.

The department has assisted more than 25 projects covering a wide variety of applications:

- develop sampling plans for short run SPC
- improve the process control system for an automotive interior panel assembly
- identify the cause of variation in a crimping process

- minimize the use of destructive testing in final inspection
- determine sample sizes for in-process inspections
- assist a state agency in analyzing and interpreting survey data

The department's commitment to service through TAP has given many students an opportunity to learn more about production processes. Graduate students who have worked on TAP projects have been very enthusiastic about applying their knowledge to practical situations. ❖



Vince Sitterding, Caterpillar quality engineer, Renee Jones, Statistics graduate student, and Regina Becker, Statistics Department staff, inspect a tool set gage.

# **Department News (cont.)**

## Computing Facilities by Doug Crabill

We have undergone significant computing infrastructure improvements over the last year. Our old network wiring and hubs have been completely eliminated, as were all the slow serial lines and ASCII terminals used in some graduate student offices. They've been replaced by new wiring and hubs as part of the Purdue Telecom Project. This has provided a much cleaner and more stable network environment. All ASCII terminals have been replaced with color X Terminals, allowing graduate students to access and use a much larger set of software from their offices. Our new Windows NT lab has been working out so well we have upgraded all of our secretary Windows 95 PC's to Windows NT. Our new IBM 39H server has been performing well, and the operating systems on our other servers have been upgraded to a newer operating system used on the 39H. Our system, application, and local software underwent a complete reorganization and upgrade in the process. We have added a new 9GB hard drive to our UNIX systems to accommodate increased demand for disk space and to allow us to retire a few older, smaller hard drives. Our department is now part of the campus-wide account system which means most people will have just a single account name on all computers on campus. And finally, additional laptops were purchased for instructional use.

#### **New Arrivals**

Once again, the stork has visited the Statistics Department and Alumni several times in the past year. Jenny Zang was born July 16, 1997 to Mr. and Mrs. Chuanbo Zang. John and Katie Hayes are the proud parents of Makayla Rose who was born August 4, 1997. Kelden Vincent Abate was born October 6, 1997, to Marcey and Vince Abate. Phoebe Cai was born January 11, 1998, to Professor Tony Cai and his wife Yun. Emily Lin was born

February 16, 1998, and her parents are Hua Wang and Xun Lin. Tyler Gabrielle was born March 19, 1998, to Kim and Greg Ball. Congratulations to all!!

## New Faces in the Statistics Department



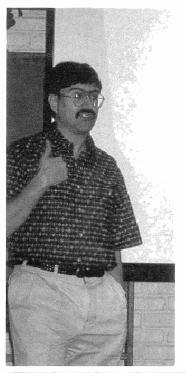
Annie Cheever joined the Statistics Department November 24, 1997. She is our new Information Processing Systems Operator III, receptionist and Textbook Deputy.



**Peggy Whelan** was a temporary member of the clerical staff in Spring, 1998. She assisted Norma Lucas.

## **Department News (cont.)**

## "Statistics Day" With Division of Biostatistics, IU Med School



Dr. B. Katz, Director, IU School of Medicine, Biostatistics Division, Indianapolis, Indiana

The Department of Statistics sponsored "Statistics Day" on Thursday, April 23, with members of the Indianapolis-based Division of Biostatistics, Indiana University School of Medicine led by Director, Dr. Barry Katz. The guest of honor was Professor George Casella, Biometrics Unit, Cornell University, at a luncheon in the Wabash Room of the Purdue Memorial Union. After lunch, short presentations on current research in the biostatistics and statistical genetics area were given by members of the Biostatistics Division: Sujuan Gao, Susan Minick, Wanzhu Tu and Xiao-Hua Zhou along with Bruce Craig and Katy Simonsen of Purdue. \*



Dr. Zhou, IU School of Medicine, Biostatistics Divison Indianapolis, Indiana



Susan Minick, IU School of Medicine, Biostatistics Division, Indianapolis, Indiana



Luncheon at the Purdue Memorial Union.

See "Department News", page 21

### **Memorial Lectures**

#### Prem S. Puri Memorial Lecture



Marcel Neuts

The Second Prem S. Puri Memorial Lecture was held on Thursday, December 4, 1997. Dr. Marcel F. Neuts, Professor Emeritus, The University of Arizona gave the talk "Quasi-Birth-and-Death Processes and Queueing Models". The lectures were founded in memory of Dr. Prem S. Puri who joined the Purdue faculty in 1966 becoming full Professor in 1974.

### Myra Samuels Memorial Lecture



George Casella

The 1998 Myra Samuels Memorial Lecture was presented on Thursday, April 23 by Dr. George Casella, Professor of Biometrics at Cornell University gave the address "Random Cows, Random Corn, and Random Effects". 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. \*

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### Student News

### V. L. Anderson Scholarship

This 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.



The recipient of the 1998 V. L. Anderson Scholarship is **Mr. Timothy Hurst**. He is from Hobart, Indiana and entered Purdue in the Fall of 1995. He expects to graduate in December 1999 with a major in Mathematics and Statistics and a minor in Computer Science. Tim doesn't have a major professor, but considers Prof. A. DasGupta as a valuable mentor. He hopes to use his skills in the sports field of statistics.

#### Glen E. Baxter Award

The Glen E. Baxter Memorial Fund was established in 1983 by family and friends of Professor Baxter. 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 1998 recipient of the Glen E. Baxter Award is **Peter Uldis Duselis**. Peter is an undergraduate student in the School of Science, following the Honors curricula in both Mathematics and Physics. His

name has appeared regularly on the Dean's list, and he has been the recipient of other significant academic honors. Peter possesses a considerable variety of computer-related skills, in programming as well as in areas of applications and operating systems. He has served the Physics Department as an Undergraduate Teaching Assistant and as a member of the team that operates that department's linear accelerator.

#### 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 Co-Winners for the 1998 I. W. Burr award are Markus Bachmann and Xun Lin.

# Student News (cont.)



Markus Bachmann is from Wehr, Germany. He received Diplom in Mathematics, University of Bonn, 1993. He entered Purdue University in August, 1993 and received an M.S. in Applied Statistics, Purdue University, 1997. Markus expects to receive his Ph.D. in August 1998, under the direction of Prof.

Tom Sellke. His area of research is in probability. Markus is a member of AMS and the IMS.



Xun Lin is from China and received a B.S. in Statistics at Fudan University in 1992. He came to Purdue in August, 1994 and received an M.S. in Statistics, 1996. Xun expects to receive his Ph.D. in August or December, 1998, under the direction of Prof. Shanti S.

Gupta. His research area is ranking and selection of statistical models. He is a member of ASA.

# 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 Applied M.S. rather than a pre-Ph.D. program. The criteria for selection are the qualities required of a working 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 1998 L. J. Cote M. S. Excellence in Statistics award was **Shinjini Menon.** Shinjini is from West Bengal, India. She received her B.S. in Electronics Engineering, Inst. of Technology, Banaras Hindu University, 1991,

M.S. in Electrical Engineering, Purdue University, 1993 and an M.S. degree in Applied Statistics in December, 1997. Prof. Tom Kuczek was her major professor. Shinjini is currently working at Corning Inc. as a Statistical Engineer in their research and development division.

# Outstanding Classroom Teaching by a Teaching Assistant

Teaching Assistants contribute substantially to the teaching mission of the Department of Statistics.

# Student News (cont.)



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 1998 recipient is **Bhramar Mukherjee**. Ms. Mukherjee was recognized for her excellent performance in STAT 311 in the Fall 1997 semester.

### School of Science Outstanding Senior In Statistics



The 1998 recipient of this award is **Scott Sheefel** from Fort Wayne, Indiana, majoring in Actuarial Science. He is a member of Phi Beta Kappa and received the Actuarial Alumni Award in 1996 and a Lincoln National Life

Scholarship in 1997. He is a member of the Purdue Actuary Club, Purdue Society of Professional Engineers, Purdue Student Government Senator from Wiley Residence Hall and Intramural sports. Scott has a job with Lincoln National Corporation in

Fort Wayne. He plans to continue taking the actuarial exams to reach the Fellow level in the Society of Actuaries.

## 1996 Leonard J. Savage Award



The 1996 recipient of the Leonard J. Savage award was **Dr. N. D. Shyamalkumar** whose dissertation "Contributions to Bayesian Nonparametrics and Bayesian Robustness" was directed by Prof. J. O. Berger. Shyamal received his Ph.D. in 1996

from the department.

The Savage Thesis Awards were initiated in 1977 to identify and reward outstanding young Bayesian researchers. The award is sponsored by the International Society for Bayesian Analysis (ISBA), and the American Statistical Association's Section on Bayesian Statistical Science (SBSS) and the NBERNSF Seminar on Bayesian Inference in Econometrics and Statistics (SBIES).



# **Student News (cont.)**

### **New 1997-98 Graduate Students**

The second annual new graduate student pizza party was held on August 17, 1997. This was a chance for the new students to get to know each other and some of the faculty. It was also an opportunity to give them a head start on learning about the department before their first official week on campus. A reception was also held in the Mathematics Library on August 22, 1997, where the new students were introduced to faculty and staff.



L-R: Row 1: Michael Black, James O'Malley, Kiseop Lee, Jianjun Li; Row 2: Mei Ling Ong, Sio-San Sheeta Ho, Rebecca Ambler, Jessica Lasky, Jayson Wilbur; Row 3: Tonya Call, Greg Ball, Eric Chicken, Matt Suhr and Tim Robinson.



Ira Wijesooriya joined the department in the Spring 1998 semester.

## **Recent Graduates**

# August and December Graduates 1997

#### **Doctorate**

Chengyu (Steven) Sun: Modeling of Fatigue Crack Propagation
Process: Generalized Linear Mixed Model Approach (McCabe)





#### Masters

John Hayes Shinjini Menon Haibin Shu

May 1998 Masters Graduates



L-R: Veronika Kourcheva, Kara Goranson, Hanaa Girgis and Gregory Porter (not pictured).

# News from the Graduate Student Organization (GSO)

The Graduate Student Organization (GSO) in Statistics has had another active year. The GSO council for this academic year (1997-98) consisted of Kara Goranson, Jingyuan Wang, Jayson Wilbur, and Jessica Lasky. The challenge for GSO this year was to maintain the enthusiasm that had been revitalized in organizing student activities, both academic and social.

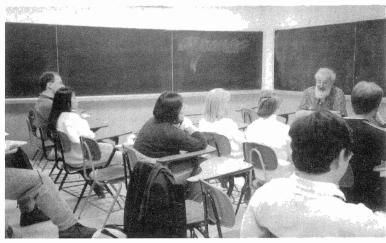
A monthly attraction continued to be

were two main purposes of these meetings. One was to give various students an opportunity to practice their statistical communication skills. The second purpose was to expose students to the research of fellow classmates. A typical meeting involved two student speakers and was followed by pizza (a staple of the graduate student diet). Occasionally, a professor would speak on his or her research. The students were fortunate to have Professor Doerge give her job hunt strategy talk again this year. GSO had the additional fortune of being able to arrange a time for visiting colloquium speakers to specifically address

the graduate students. One such case occurred when Professor Marcel Neuts visited Purdue this past December. The highlight of the GSO meetings was the opportunity to invite Professor Robert Kass as a special guest of fellow graduate student, Nitai

Mukhopadhyay.

Apart from sponsoring these monthly talks, GSO is also concerned with representing student interests in the department. This responsibility began the surveying of student opinion on various departmental policy. From this initial survey, a technical report has grown from this summarizing not only the current educational process of Purdue University's statistical education but also of the top 17 statistics departments in the country. This report will also be submitted to *The American Statistician* and was



Professor M. Neuts talking with a few of the statistics graduate students.

authored by two students currently in the statistics department at Purdue, Michael Black and Leah Flury.

The responsibilities of the GSO are not all academic and there have been many social events this year. The main event of the fall was the Fall Fun Float Day hosted by Professor Rebecca Doerge. Along with touring the Doerge homestead, the main attraction



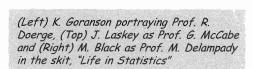
Prof. T. Kuczek preparing to demonstrate the finer points of kayaking.

## News from the GSO (cont.)

was Professor Tom Kuczek's kayak demonstration. All were very impressed by his skill. The students displayed their creative talents by entertaining faculty and staff with their skit of "life in the statistics department" which was showcased at the annual holiday party. Then there was, of course, the big ski trip to Ski World in Nashville, Indiana.

Many of us were skiers of little to no experience and found Indiana to be a very safe place to learn to ski! Al-





though the unusually warm weather provided minimal snow, both faculty and students had a much needed winter break. There were also various informal "meetings" at area drinking establishments through the year. The Second Annual Spring Faculty and Staff Appreciation Picnic was held April 25,

1998. Throughout this year, the graduate students have enthusiastically taken part in the various aspects of departmental life. ❖



# 1998 Distinguished Alumni Award



Dr. George
Casella received
the 1998 School
of Science Distinguished Alumni
Award on April
24, 1998. These
awards were
established in
1990 to recognize
outstanding
achievement in
professional and
related fields of
endeavor for

alumni of the School of Science. Dr. Casella is Professor of Biometrics at Cornell University and holds the Liberty Hyde Bailey Professorship of

Biological Statistics in the College of Agriculture and Life Sciences. He received his M.S. and Ph.D. degrees from Purdue University in mathematics and statistics. He has made major contributions to theoretical statistics in the areas of decision theory and statistical confidence and more recently in environmental statistics. Dr. Casella is among the youngest ever elected as Fellow of the Institute of Mathematical Statistics (IMS) and of the American Statistical Association (ASA). He is currently Theory and Methods Editor of the Journal of the American Statistical Association (JASA). He has authored two textbooks, "Statistical Inference" with R. L. Berger and "Variance Components" with S. R. Searle and C. E. McCulloch. He is currently working on a revision of "Theory of Point Estimation" with Erich Lehmann. &

## **Alumni News**

Marcel Baumgartner (M.S., 1995) is a Statistician at the Nestle Research Center in Lausanne, Switzerland, which is the main research and develoment site for Nestle's worldwide network. He is one of six statisticians in an Applied Mathematics group in the department of "Food Science and Engineering". There are four Ph.D.'s and two M.S., who do consulting work for fellow researchers. Their daily work involves the use and analysis of statistical designs of experiments as well as exploratory data analysis, clinical trials and validation of new analytical methods, and modeling. They collaborate intensively with colleagues in Sensory Analysis, whose aim is to describe objectively their products, using a trained panel of tasters. These data are by nature multivariate and methods like ANOVA and PCA are very helpful. They also train colleagues in basic statistics and find the book "Introduction to the Practice of Statistics" by Prof. David Moore and Prof. George McCabe of Purdue University very helpful in setting up the courses.

Marcel was married to Nathalie Spalinger in 1996 and thay have a son, Gaëtan, who was a year old in

April, 1998.

Sung Hee Choi (M.S., 1985) is an Assistant Professor in the Division of Information & Computer Science at Sun Moon University in Korea. He received an M.S. degree in Computer Science in 1988 from Pennsylvania State University and a Ph.D. degree in Computer Science from the University of Kentucky. His Ph.D. thesis advisor was Prof. Greg Wasilkowski and his major area of study was Information-Based Complexity, which is part of Computational Complexity. Sung Hee is also interested in the field of Numerical Analysis, Algorithm Design, Automata theory, and Compiler Design. He has published three papers: "Probabilistic Analysis of Simpson's Quadrature", "An Error of Simpson's Quadrature in the Average Case Setting" and "A Study on an Optimal Algorithm for the Integration Problem".

**Dipak Dey** (Ph.D., 1980) is Professor and Head of the Department of Statistics at the University of Connecticut, Storrs. He is a fellow of the American Statistical Association, elected member of the International Statistical Institute, associate editor of the Journal of American Statistical Association, Theory and Methods section and the editor of the Institute of Mathematical Statistics Bulletin. He has published many papers on Statistical Decision Theory, Bayesian Methods, Multivariate Analysis,

Econometrics, Environmetrics, Biometry, Reliability and Survival Analysis. He has just finished editing a book on "Practical Nonparametric and Semiparametric Bayesian Statistics", published by Springer-Verlag. Dr. Dey's, home page is http://www.stat.uconn.edu/~dey/.

John Gerwels (M.S. Math/Stat

1967) is currently President of Quality Improvement Consulting, Inc. (QIC). He is a consultant for business improvement and growth which features a management theory and methods for improvement. With 30 years professional experience in the fields of quality improvement and management, John has presented seminars, consulted and taught statistical methods for continual improvement in the United States, Europe, South America, South Africa, the Near East, the Pacific region, and Canada. He has taught at the undergraduate, graduate, and staff levels at major U.S. universities as well as internationally through George Washington University's Department of Continuing Education. John assisted the late Dr. W. Edwards Deming in more than 25 national seminars and presented seminars for the American Society for Quality Control (ASQC) and The Society of Professional Engineers. He has presented professional papers at the Ohio Quality Productivity Forum, The American Statistical Association

# **Alumni News (cont.)**

(ASA), The Chemical Division of ASQC, the National Association of Purchasing Agents, WATTEC, The University of Tennessee's Annual Quality Clinic, and the American Society of Quality Engineers (ASQE). He has published in Quality Progress, ASQC's monthly magazine. John also received a master's degree in Business Management from Duke University. You can learn more from John's web site at http://www.sigmaltd.com.

**H. Leon Harter** (Ph.D., 1949) is a consultant and writer who is self-employed and semi-retired.

He has revised his two volumes on order statistics and their use in estimation, first published in 1970 by the Government Printing Office, with new titles, co-author (N. Balakrishnan), and publisher (CRC Press). "CRC Handbook of Tables for the Use of Order Statistics in Estimation" was published in 1996, and "CRC Handbook of Tables for the Use of Range in Tests of Hypotheses" will appeared in November, 1997. Dr. Harter was married more than 53 years to Alice Lauretta (Madden) Harter who passed away May 26, 1997.

Martin Olsak (M.S., 1996) is a management consultant for Coopers & Lybrand, Czech Republic. He is currently working on a project of implementing a new IT accounting system PeopleSoft for one of the largest Czech retail companies. This is the first implementation of PeopleSoft in the Czech Republic.

He and his wife, Mary, are the proud parents of Klara who was born March 23, 1998.

We would like to include you in the next issue! Look for the Alumni Reply Form on page 23 and send us your news or send email to seele@stat.purdue.edu!

Department News (continued from page 11)

## Of Special Note

Anirban DasGupta has been appointed an Associate Editor of the Annals of Statistics and the International Statistical Review. He has been reappointed as Associated Editor of the Journal of Statistical Planning and Inference.

Anirban Dasgupta and Rebecca Doerge were two of

the School of Science top ten "Top Teachers of Undergraduate Majors". This is based on a poll of juniors and seniors conducted by the Science Student Council.

Philip Protter gave an invited course at the Scuola Matematica Interuniversitaria entitled "Corso Estivo di Matematica in Probability" in Perugia, Italy, July 27 to August 30, 1997.

W. J. Studden along with Professor Dr. H. Dette, Ruhr-Universitaet Bochum, Germany, have published their book, *The Theory of Canonical Moments with Applications in Statistics, Probability, and Analysis*, John Wiley & Sons.

See "Department News", page 27

# Gifts to the Department

### Special Thanks To Our Friends

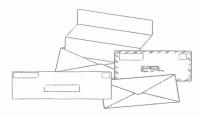
The Department of Statistics would like to give a heartfelt "Thank You" to the following donors for their generous contributions from Fall 1997 to Spring 1998. We apologize if we have omitted anyone or incorrectly spelled a name.

Virgil L Anderson Scholarship	Department of Statistics	Dr. Thonda S. Trippel and Dr. Thomas R. Trippel
Mr. James P. Greaton and Mrs.	Dr. Austin M. Barron	Mr. Steven Jay Weiner
Cynthia J. Greaton	Dr. Mary Ellen Bock	Dr. John M. Wetz
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Ms. Karen Snepp	Dr. T. J. Brown Jr.	
	Mrs. Lillian E. Cote and Dr. Louis	Matching Gifts
Shanti S. Gupta Fund	J. Cote	
	Dr. Rebecca W. Doerge	IBM International Foundation
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General Motors Fdn. Inc.	Dr. Thomas H. Starks	
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	Debra J. Strauch	

If you would like to give to any of these funds, contact Norma Lucas at (765) 494-3141. If you are interested in planned gift estate planning contact Pauline Shen at (765) 494-1752.

# 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 or fax it to 765-494-0558.



Name	Degree(s) and year(s)  Home Phone	
Residence		
City, State, Zip		
Position		
Business Address	Business Phone	
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City, State, Zip		
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#### Please include some information about yourself:

(unless you request otherwise, we will assume it may be mentioned in future Newsletters.)

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

# Alumni Reply Form (cont.)





# **Statistics Department Annual Picnic**

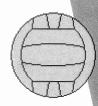


The Statistics Department Annual Picnic at Ross Hills, West Lafayette Indiana was held on September 6, 1997. The day was perfect for playing volleyball, baseball, juggling and especially barbecuing chicken. Once again, Bill Lucas (husband of Norma), our special chef, did a great job of cooking the delicious chicken. To the right, we catch "Mr. Bill" taking a well deserved break. \*

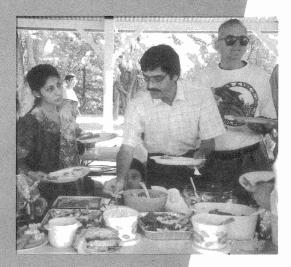








L-R: S. Delampady, M. Delampady (alumnus and visitor) and J. Deely waiting to sample some of the goodies.







L-R: J. Stover (Statistics) and S. Brown (Computer Science) take advantage of the day by practicing their juggling.

## 1997 Annual Holiday Party



The 1997 Annual Statistics Department Holiday Party was held December 3 at The Trails in West Lafayette, Indiana. After good food, the graduate students entertained with their annual skit, and there was dancing to the sounds of the D.J., "Mad Dog" (Mike Davis). \*

L-R: K. Goranson, Prof. S. Samuels, M. Black and R. Ambler singing what Prof. Samuels sings best in his STAT 113 class, the old Pepsi-Cola jingle.

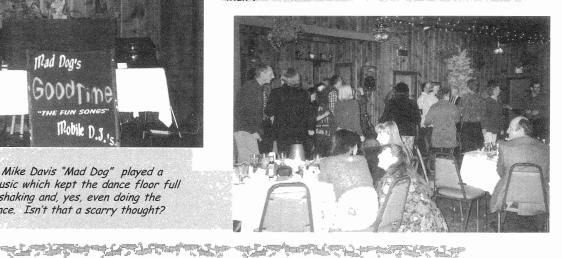




Mad Dogis

Above: D.J., Mike Davis "Mad Dog" played a variety of music which kept the dance floor full of twisting, shaking and, yes, even doing the "chicken" dance. Isn't that a scarry thought?

Above: The "Grand Finale" for the skit. All joined our talented students in singing a revised version of "ANOVA Man" which was sung to the tune of the Beatles' "Nowhere



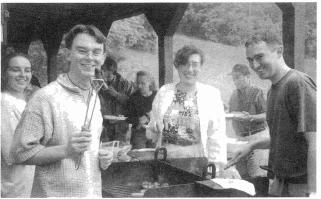
# **Faculty and Staff Appreciation Picnic**

This year's Faculty and Staff Appreciation Picnic was held at Happy Hollow Park, West Lafayette, Indiana on Saturday, April 25, 1998. This picnic is sponsored by the department's Graduate Student Organization (GSO). It began at noon and the rain was right on time! Even though Mother Nature

didn't cooperate, it didn't damper the spirit of the picnic die-hards as you can see by the pictures. The hot dogs and hamburgers were still cooked to perfection. Since it was cold, cooking the food seemed to be the place to be. It was a nice way to end the semester. \*\*



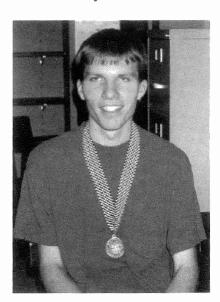
L-R: M. Bachmann, K. Koranson and L. Flury



L-R: M. and M. Black, H. Girgis and J. Wilbur

Department News (continued from page 21)

## Statistics Department Represented at the 13.1-Mile Indianapolis Mini-Marathon by Steve Samuels



Faculty members Bruce Craig and Steve Samuels and grad students Jessica Lasky and Greg Porter were among the 17,764 who ran the 13.1-mile Indianapolis Mini-Marathon on a rainy Friday, May 1. All four exceeded the goals they had set for themselves. Jessica, in her first race ever, finished 15 seconds per mile under her 10-minute-mile goal. Bruce and Steve exceeded their 2 hour goals by 11 and 7 minutes respectively. Greg was 3 and a half minutes under his hour and a half goal, averaging 6 minutes and 37 seconds per mile and finishing 353rd overall. His top 500 finish earned him the hefty medal pictured here. \*

Greg Porter wearing the medal he received for being one of the first 500 to finish.

The Statistics Department Newsletter is published annually for alumni and friends of the Statistics Department at Purdue University.

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

Editor: Teena Seele

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Issue 3 Summer 1998

Purdue University Department of Statistics 1399 Mathematical Sciences Bldg. West Lafayette, IN 47907-1399

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