# STAT NEWS

September 2008 Volume 13


## Message from the Department Head

Here it is, yet another Fall semester. The first frost has come, heralding the end of the summer crops, as the 2008-9 school year gains speed. And it is time again for the Newsletter, your annual "Holiday card" from the Department, where we bring you up to date on the Department's many activities over the last year.

You will see that we have a fat issue this year. Inside you will find lots of news about the faculty members. We have one addition, **Trent Gaugler**, and one departure, **Thomas Hettmansperger**, as you will see on page 3. We also have a year long visitor who might be familiar to some of you, **Ayan Basu**, who graduated in 1991 with a Ph.D. (page 12).

INSIDE *this issue*



The many individual achievements of our faculty are chronicled on page 4 to 8. In addition, on page 11 you will find a new item, a listing of all of the active faculty grants. We think this gives a nice snapshot of the kinds of research activity that are underway in the Department.

On pages 9 and 10 you can find news about various departmental activities. I think many of our graduates will be interested in the conference we held in May in honor of **Tom Hettmansperger**'s many years of service to our department.

On page 13, we have a set of items about and for our dear Alumni. We hope this will remind you to send your news in to us. We appreciate hearing about the progress of our "children." You can also find out there about the Annual Dinner with Alums held at the JSM in August. Finally, on page 15, you can find a listing of our newest alumni, and where some of them headed after graduation.

Our degree programs continue to bubble along. We admitted 17 new students into the M.S./Ph.D. program this Fall. Once again, they come from around the world, with the nations of Brazil, China, Korea, Romania, Sri Lanka and U.S. represented. We also had 9 admissions into the MAS program over the past year. Finally, the number of undergraduate majors keeps marching upwards. Over the last year we handed out 13 Bachelor's degrees.

One new feature of the undergraduate program is an actuarial-statistics option. We think of it as the "middle way" between the actuarial-mathematics option of the Math Department and the actuarial-science major in the School of Business. It has the potential to significantly increase the number of statistics majors. You can find out more from our website. More student news, as well as personal notes, can be found on pages 14, 16, and 17.

Finally, I have finished up my second year as Department Head and have started into the last year of my agreement. It seems like a good time to say "Thank You" to everybody who has helped me along in this job—and the list is endless. Here's to keeping the good spirit of the Department alive and well far into the future!


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# From the Director of Outreach in the Department of Statistics

In our last STATNEWS article we announced the beginning of the graduate Certificate in Applied Statistics. Over the past year we have conferred certificates to 12 students who have completed the required 12 credits of applied statistics courses from the online program. To date more than 400 persons have applied for admission to the program (more than triple the number a year ago) and although we don't expect nearly all of them to complete the program, it does signify the strong interest in the curriculum we are offering. Enrollments in our online courses during the 2006/07 academic year were 106, which more than tripled to 350 during the 2007/08 academic year including summer. We anticipate that as more courses come online these numbers will continue to grow albeit perhaps at a slower rate.

The variety of circumstances of the persons taking courses through this program ranges from teachers at community colleges to engineers in small businesses. Most are employed full time, are mid career, and although they might prefer to take courses full time to obtain another degree, their life commitments and family or job obligations prevent them from it. Having these courses available online has been a welcome opportunity for them. Additional information may be found at http://www.worldcampus.psu.edu/ under Certificates.

As we reported last year, we received Graduate Council approval to offer a professional Master of Applied Statistics (MAS) in the Fall of 2001. Since then we have had an average of 15 students per year enroll in the program, with most finishing the program within two years. To date about 75 students have graduated from the resident program, roughly two thirds coming to Penn State specifically to earn this degree, and the other third taking the MAS as a second degree along with a Ph.D. in another field.

The program was approved from the start for delivery through both traditional classroom resident instruction at University Park, and also through the World Campus via on-line mode of distance education. The goal from the outset was to create a professional program available to scientists, engineers, and other technical members of the workforce who wish to add to their set of skills in the area of statistical methods for the design and analysis of experiments and surveys.

The success of the new Graduate Certificate in Applied Statistics, which is taught entirely online, has reinforced our plans to offer the entire Master of Applied Statistics through online learning with the World Campus in addition to our residence MAS program. The credits already earned through the online certificate program can be applied toward the Master of Applied Statistics degree for students who subsequently are admitted into the MAS program.

The courses currently being offered online through the on-line Certificate program include Stat 500, 501, 502, 503, 504, 507, and 509. By next summer we hope to also have Stat 506 Sampling Theory and Methods, 510 Applied Time Series Analysis, 557 Data Mining and 580-581 Statistical Consulting Practicum in the development process, and plans are in place to create online versions of the probability and mathematical statistics theory sequence, Stat 414-415. When these courses are all under development we plan to announce the online version of the MAS program through the World Campus. Stay tuned…

Details about the resident MAS program and the online Certificate Program are available at http://www.stat.psu.edu/grad/ and course descriptions are also available from this web site. If anyone has questions about our online programs or would like more information about teaching opportunities at the graduate or undergraduate level, please contact Professor James L. Rosenberger, Director of Outreach in the Department of Statistics.

- James L. Rosenberger (Phone: 814 865-1340; email: jlr@stat.psu.edu)

# FACULTY NEWS

## New Faculty

**Trent Gaugler** received a B.S. in Mathematics from Bucknell University, graduating *Magna Cum Laude* in 2003 and he received his Ph.D. in Statistics (with Biostatistics Option) from Penn State University in 2008. Trent has joined the Department as Research Associate/Assistant Professor of Statistics. His appointment is divided between the Statistical Consulting Center and the Department of Statistics with duties including teaching and collaborative research activities.

Trent's main research interests lie in survival analysis, resampling methods, linear models, nonparametric statistics and Neyman-Scott asymptotics. His Ph.D. research involved a new fully nonparametric model for the 2-way crossed mixed effects design, where asymptotic distributions for the test statistics were derived under the Neyman-Scott framework. His current research focuses on extending these results to other linear models, including the random effects model, nested models, and models that are capable of handling repeated measures or missing/censored data.

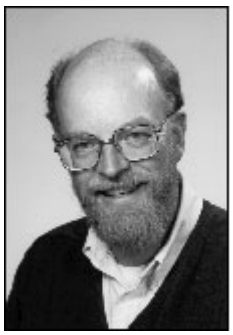
The main goal of his research is to develop linear models that are robust to the classical framework, where assumptions of normality, homoscedasticity, and uncorrelated effects, as well as the convention of balanced designs, are necessary. He also develops these models under the unconventional large p, small n (Neyman-Scott) framework, which is of interest in a variety of fields, including Bioinformatics.

Much of his research has led to asymptotic distributions that do not have closed forms, which leads to a natural interest in resampling methods.

Specifically, Trent is currently interested in bootstrapping U-statistics, while his earlier research focused on bootstrap and permutation tests for parameters of survival time distributions.

## Retirement

### Hettmansperger Retires after 41 Years of Service



**Thomas Hettmansperger**, professor emeritus of statistics at Penn State, has retired after 41 years of service to the University. His research involves the development and assessment of efficient and robust statistical methods for solving problems using the linear model, which includes analysis of variance and multiple regression and is the basis of most statistical analyses. Hettmansperger has focused most of his research effort on nonparametric rank tests and estimates.

Nonparametric methods do not require distributional assumptions, such as normality for the sampled population. He has published two books in this area: "Statistical Inference Based on Ranks" (1984) and "Robust Nonparametric Statistical Methods" (1998) with a colleague, Joe McKean from Western Michigan University.

Another area of interest for Hettmansperger is mixture models, which are applicable when a population under study is actually a mixture of subpopulations. His collaboration with Hoben Thomas, a colleague in the Penn State Department of Psychology, has led to novel ways of thinking about cognitive development in children. In addition, Hettmansperger's research achievements include new ways to extend the idea of ranks to higher-dimensional data. His research in nonparametrics and mixture models has been supported continuously by the Office of Naval Research and the National Science Foundation.

A hallmark of Hettmansperger's career is his dedication to undergraduate and graduate education. He taught courses in the theory and application of nonparametrics and robustness, mathematical statistics, and linear models. Over the years, he has supervised the research of 26 Ph.D. students. For his excellence in teaching, the Eberly College of Science honored him with the 1986 C. I. Noll Award for Teaching.

Hettmanperger is a Fellow of the American Statistical Association and the Institute of Mathematical Statistics, and he is an elected member of the International Statistical Institute. In 2004, he received the Noether Senior Scholar Award from the American Statistical Association for his work on nonparametric statistics. He has held visiting appointments at the University of California at Berkeley; Princeton University; the University of Washington; the University of Bern in Switzerland; the National University of Singapore; the Universities of Oulu, Tampere, and Jyvaskysla in Finland; and, in Australia, Latrobe University, the University of Melbourne, the Australian National University, the University of South Australia, the University of Tasmania, and the University of New South Wales.

Hettmansperger was an assistant professor in the Department of Statistics at Penn State from 1967 to 1972 and an associate professor from 1972 to 1978. He was named professor in 1978. From 1988 to 1990 he served as head of the statistics department. Hettmansperger earned a bachelor's degree at Indiana University in 1961 and master's and and Ph.D degrees at the University of Iowa in 1965 and 1967, respectively.

# Faculty Highlights

## Runze Li Promoted to Full Professor

**Runze Li**, promoted to Associate Professor with tenure in 2005, was promoted to Full Professor as of July 1, 2008.

## Bing Li Elected Fellow of Institute of Mathematical Statistics

**Bing Li**, professor of statistics at Penn State, has been elected a fellow of the Institute of Mathematical Statistics (IMS). Created in 1933, the IMS is a member organization that fosters the development and dissemination of the theory and applications of statistics and probability. The IMS has 4,500 active members throughout the world, but only around five percent have earned the status of fellowship. Fellows are elected based on demonstrated distinction in statistics or probability research, and by publication of independent work of merit.

Li's research interests include dimension reduction, quasi-likelihood and estimating equations, semiparametric estimation and inference, asymptotic theories and methods, and analysis of longitudinal or clustered datasets. These techniques are used to analyze datasets of large volume and complex structure for statistical inference, prediction, and classification. Applications of Li's research include regression graphics, bioinformatics, and machine learning.

Li has published more than 30 papers in leading scientific journals and presented more than 50 invited talks at universities and scientific conferences. He serves as associate editor of *Annals of Statistics* and *Statistica Sinicia*, and has been an associate editor for the Journal of *Statistical Planning and Inference*. He also is a member of the board of directors of the International Chinese Statistical Association.

Li joined the faculty of the Penn State statistics department in 1992. He served as a visiting professor at the University of California, Los Angeles during the fall of 1999, a visiting professor at the National University of Singapore in 2001, and a visiting professor at the University of Hong Kong in 2004.

He received his doctoral degree in statistics from the University of Chicago in 1992, his master's degree in statistics from the University of British Columbia in 1989, and his master's degree in systems sciences and bachelor's degree in automatic control from the Beijing Institute of Technology in 1986 and 1982, respectively. Li received the Lorraine Schwartz Prize in Statistics and Probability from the University of British Columbia in 1989 and a McCormick Fellowship from the University of Chicago, 1989-1992.

## Harkness Awarded Carver Medal

**William Harkness**, professor emeritus of statistics at Penn State, received the 2007 Carver Medal from the Institute of Mathematical Statistics (IMS) "for his years of distinguished service as Program Secretary and on various committees of the IMS." The presentation of the medal took place July 30, 2007 at the IMS Annual Meeting in Salt Lake City.

The Carver Medal was created in 2002 in honor of Harry C. Carver, founding editor of the Annals of Mathematical Statistics and one of the founders of the IMS. Instituted in 1933, the IMS is a member organization that fosters the development and dissemination of the theory and applications of statistics and probability. It has 4,500 active members throughout the world.

Harkness has been a statistics professor at Penn State for 48 years, and has dedicated much of the last 17 years to improving statistical education at the University and beyond. He served as a co-principal investigator on a $200,000 grant from the Pew Foundation's Learning and Technology Program, sponsored by the Center for Academic Transformation, to redesign Penn State's Introduction to Statistics course. He also was a co-principal investigator on a National Science Foundation grant to transform biological and engineering statistics at Penn State. Harkness has collaborated extensively with researchers in instructional design on pedagogical issues in statistical education and curriculum and instruction, and in August 2004, he gave both the keynote and closing addresses at the annual conference "Beyond the Formulas," which is devoted to teaching statistics.

Harkness joined the Penn State mathematics department in 1959. He became a member of the faculty of the statistics department at its inception in 1968 and served as department head from 1969 to 1987. He has continued to teach elementary statistics since becoming professor emeritus in 2002. Among his many awards and honors, Harkness has received the Sloan-C Award for Excellence in Online Cost Effectiveness, the Schreyer Institute for Innovation in Learning Award for best Departmental Educational Project in Reforming Courses, and the Eberly College of Science Distinguished Service Award. He received his doctoral degree in statistics and his master's and bachelor's degrees in mathematics from Michigan State University in 1959, 1956, and 1955, respectively.

**ECoS Science Journal, 2008**

## Harkness Named Emeritus-Faculty Teaching Scholar

Professor **William Harkness** has been named as a Provost's Emeritus-Faculty Teaching Scholar for Fall 2008. This award includes funds for his teaching initiatives. This is the fourth year that Professor Harkness has received this award.

## Akritas to Serve as Editor of the Journal of Nonparametric Statistics

In November 2007, **Michael Akritas** accepted the offer to serve as Editor of the *Journal of Nonparametric Statistics*. The journal will now be run by four editors, the other three being Dimitris Politis, Javier Rojo and Suojin Wang, with Suojin serving also as Executive Editor.

## C.R. Rao Honored in India and Receives Honorary Doctoral Degrees

The University of Hyderabad, India, recently held a ceremony celebrating the placement of the foundation stone for the C.R. Rao Advanced Institute of Mathematics, Statistics, and Computer Science, named in honor of **Calyampudi R. Rao**, Emeritus Holder of the Eberly Family Chair in Statistics and director of the Center for Multivariate Analysis at Penn State. At the ceremony, Rao received messages of goodwill and congratulations from the president of India, the president of the United States, the prime minister of India, and the president of the International Indian Statistical Association.

Established in 2004, the mission of the institute is to disseminate advances made in mathematical sciences by conducting workshops, international and national conferences, and short courses on newly emerging areas of science and technology; to guide doctoral students; and to provide consultation services to researchers in other disciplines, as well as to government and industrial organizations. The institute also will be home to a museum illustrating the history of statistics and probability and their uses in research, industry, and society.

Rao also recently received honorary doctoral degrees from the University of Rhode Island in the United States and the University of Madras in India—the thirty-first and thirty-second such honors he has received from universities in eighteen countries on six continents. The awards recognize Rao for his pioneering work and its applications, and for having influenced not only statisticians but also scientists worldwide in a number of diverse fields. The University of Rhode Island award also recognizes his

ongoing efforts to promote the use of statistics in national security, industry, business, and policy in Third World countries. The citation for the University of Madras award honors him "for his intuitive gaze into the order, rhythm, and sequence of dancing numbers; for his formulations of multivariate methodology and their applications; and for his steadfast work in the growth of health, communication, computer technology, and energy in India."

One of the world's top five statisticians and a legendary name in statistics, Rao is recognized internationally as a pioneer who laid the foundation of modern statistics, with multifaceted distinctions as a mathematician, researcher, scientist, and teacher. He is recognized by his peers as ranking among the most influential statisticians of all time www.math.utep.edu/Faculty/mleung/probabilityandstatistics/chronology.htm.

His contributions to mathematics and to the theory and application of statistics during the last six decades have become part of graduate and postgraduate courses in statistics, econometrics, electrical engineering, and many other disciplines at most universities throughout the world. Rao's research in multivariate analysis, for example, is useful in economic planning, weather prediction, medical diagnosis, tracking the movements of spy planes, and monitoring the course of spacecraft. Technical terms bearing his name appear in all standard textbooks on statistics, including such terms as the Cramer-Rao Inequality, Rao-Blackwellization, Fisher-Rao Theorem, Rao Distance, Rao's Orthogonal Arrays, and Rao's Score test. A book he wrote in 1965, *Linear Statistical Inference and Its Applications*, is one of the most-often-cited books in science.

Among his numerous previous awards, Rao was honored in 2003 with the first Mahalanobis International Award in Statistics from the International Statistical Institute and the Srinivasa Ramanujan Medal by the Indian National Science Academy. In 2002 Rao was honored by President George W. Bush with the National Medal of Science, the highest award given to an American scientist for lifetime achievement in fields of scientific research.

He has been honored by the government of India with the Padma Vibhushan award in 2001—the country's second-highest civilian honor—for outstanding contributions to science, engineering, and statistics; with being selected in 2000 as the namesake for a National Award to be presented to India's outstanding young statisticians; and with the highest honor bestowed by the University of Visva-Bharati, the 2002 Desikottama award, in recognition of his "enormous contributions in the field of statistics and its applications."

Rao is a member of the National Academy of Sciences and the American Academy of Arts and Science in the United States, a Fellow of the Royal Society in the United Kingdom, and a member of the Indian National Science Academy, the Lithuanian Academy of Sciences, and the Third World Academy of Sciences.

He has authored or co-authored 14 books—some of which have been translated into several languages—and more than 300 research papers published in scientific journals. He has supervised the doctoral research of approximately 50 students who have trained another 300 doctoral students themselves. Most of his former students now are employed in universities and other research organizations worldwide, many becoming research leaders in their areas of specialization.

Rao earned his Ph.D. and Sc.D. degrees in 1948 at Cambridge University in England. He came to the United States in 1978 after serving as director of the Indian Statistical Institute, where he had held various research and administrative positions since 1944. In 1982 he established the Center for Multivariate Analysis at the University of Pittsburgh, where he continues as adjunct professor. Rao joined the Penn State faculty in 1988 as professor and Holder of the Eberly Chair in Statistics.

**ECoS Science Journal, 2008**

*(L to R: Dr. Rao, K. Ponmadi, Minister for Higher Education, S.S. Barnala, Chancellor of Madras University (presenting Dr. Rao with diploma), and Dr. Ramachandran, Vice Chancellor.*

The above photo was taken at convocation where Dr. Rao received an honorary doctorate degree, which is his 32nd of the honorary degrees he received from universities in 18 countries, spanning 6 continents. The University of Madras, at its 150th year Annual convocation held on 12th November 2007, awarded Honorary Doctorate (Doctor of Science, D.Sc.,) to Prof C.R.Rao with the following citation:
**By reason of his eminence and attainments*
***For his intuitive gaze into the order, rhythm and sequence of dancing numbers*
****For his formulations of multivariate methodology and their applications and*
*****For his steadfast work in the growth of health, communication, computer technology and energy in India.*

## Lin Receives Two Distinguished-Scholar Awards

*From mid May to the end of August, 2008*, **Dennis Lin** will be a Mercator Visiting Professor at Justus-Liebig University Giessen (Germany).

The Mercator Visiting Professorship Programme is awarded by the Deutsche Forschungsgemeinschaft (German Research Foundation, equivalent to National Science Foundation in USA). Lin is one of the 29 awardees in Year 2008. Details can be found at *http://www.dfg.de/en/research_funding/scientific_contacts/mercator/index.html*

*From late August to the end of 2008*, Dennis Lin will be a Chang-Jiang Scholar at Remin University of China. The Chang-Jiang Scholars Program, awarded by the Department of Education China Government, is regarded as the highest academic award. Lin is one of the 96 awardees in year 2008, and is the only one in Statistics area. Details can be found at the website *http://www.changjiang.edu.cn/*

## Lindsay Elected IMS Council Member

### IMS Election Results

The five newly-elected Council Members are:
*Peter Hall*, Professor, Department of Mathematics and Statistics, University of Melbourne; and the University of California, Davis;
**Bruce G. Lindsay**, Willaman Professor and Department Head, Department of Statistics, The Pennsylvania State University;
*Michael Newton*, Professor, Departments of Statistics and of Biostatistics and Medical Informatics, University of Wisconsin, Madison; *Jane-Ling Wang*, Professor, Department of Statistics, University of California at Davis; and *Bin Yu*, Professor, Department of Statistics and Department of Electrical Engineering & Computer Science, University of California at Berkeley.

These six take up their positions at the IMS Annual Meeting in Singapore

**IMS Bulletin, 37(1), 1, 2008.**

## Paper by Ghosh Selected Best Biometrics Paper for 2007

**Debashis Ghosh's** paper with co-authors Dawei Liu from Brown University and Xihong Lin from Harvard, 'Semiparametric regression for multi-dimensional genomic pathway data: Least square kernel machines and linear mixed models,' has been selected as the best *Biometrics* paper for 2007. The paper appeared in volume 63 of the journal, pages 1079-1088. The work was presented as an invited Biometrics 'showcase' session organized by the Biometrics Co-Editors at the International Biometric Conference (IBC) held July 2008 in Dublin, Ireland.

## Jia Li One of the Researchers Detecting Fake Art from Originals

As museums continue to digitize their art collections, it becomes increasingly easier for paintings to be forged. Two Penn State researchers are part of an international team working on a digital system to help detect original works from counterfeit ones.

James Z. Wang, associate professor of information sciences and technology, **Jia Li**, associate professor of statistics, and their colleagues published their work in the July issue of *IEEE Signal Processing*.

The team's findings are based on 101 high-resolution grayscale scans of van Gogh paintings provided by the Van Gogh and Kröller-Müller Museums in the Netherlands. Wang and Li broke each scan down into sections measuring 512 by 512 pixels, or about 2.5 by 2.5 inches in canvas size, and analyzed them based on patterns and geometric characteristics of the brush strokes.

From the 101 scans received from the museums, art historians identified 23 as unquestionably authentic van Gogh works. These were used by the computer system as a training database for van Gogh's brushstroke styles.

Statistical models were created to capture the unique style, or "handwriting," that became the artist's signature in 23 of the scans. The other 78 -- either works of van Gogh, works of van Gogh's peers or paintings that had at one time been attributed to him but later found to be unauthentic -- were compared against the generated models to test the algorithms.

Wang and Li, along with computer science and engineering doctoral student Weina Ge, compiled those findings into an online system that allows any painting to be compared against existing data to help determine its authenticity.

The painting analysis project results were first presented at a workshop at the Van Gogh Museum in May 2007. Other authors of the paper, "Image Processing for Artist Identification: Computerized Analysis for Vincent van Gogh's Painting Brushstrokes" include: C. Richard Johnson Jr., Cornell University; Ella Hendriks, Van Gogh Museum; Igor J. Berezhnoy, Phillips Research Europe; Eugene Brevdo, Shannon M. Hughes and Ingrid Daubechies, Princeton University; and Eric Postma, Maastricht University.

Although the research in this field is just starting, Wang said he is confident about its future. "I believe it is very important to study arts and cultural heritages. Through tackling these tough problems, we can advance the core technologies at the same time," he said. "I anticipate computer scientists, art historians and mathematicians to collaborate more in the future."

The project was recently featured on the PBS TV show NOVA: ScienceNow, where they identified a forged van Gogh among a group of six paintings. The National Science Foundation supported this work.

For more information on the digital painting analysis project, visit http://www.digitalpaintinganalysis.org online

**Jenna Spinelle**
Penn State Live, July 9, 2008

# Sabbatical Leaves

*Two faculty members, David Hunter and Jia Li, were on sabbatical leave during the 2007/2008 academic year. Arkady Tempelman was on leave for Fall 2007 semester. Each has provided a brief write-up of their activities:*

**David Hunter** spent the 2007-8 school year on sabbatical at the University of Orléans, France, supported by an organization called "le Studium" that brings researchers to the Centre region of France (that's really what it's called!) for one to two years to work on specific projects with researchers there. He collaborated with Didier Chauveau on nonparametric mixture models. He also learned to speak French passably well, though not nearly as well as Molly and Betsy (ages 9 and 6), who delighted in correcting their parents' ignorant grammar mistakes and pathetic pronunciation.

**Jia Li** worked as a visiting faculty at Google, Pittsburgh, for her sabbatical in Fall 2007 and Spring 2008. She carried out several projects in the company, including forecasting Web page views and very large scale clustering for text matching. Her research results are expected to play important roles in Google's advertisement and product search systems. A part of her work on page view prediction will appear in a paper recently accepted by *Journal of Machine Learning Research.*

**Arkady Tempelman** visited Russia, Lithuania and Israel during his Fall 2007 sabbatical leave. In Moscow (Russia), he presented seminar talks at the Moscow State University and at the Institute of Problems of Information Transmission of the Russian Academy of Science and he worked on two papers with Prof. Boris Gurevich (MSU). In Vilnius (Lithuania), he gave a seminar talk at the Institute of Mathematics and Informatics of the Lithuanian Academy of Science and discussed some mathematical problems with Prof. Donatas Surgailis. In Israel, he visited the Ben-Gurion University in Beer-Sheva and the Tel-Aviv University, lectured at both Universities and worked on a paper with Prof. Michael Lin (The Ben-Gurion University). He also had very interesting discussions with Professors Jonathan Aaronson (Tel-Aviv University) and Benjamin Weiss (The Hebrew University, Jerusalem). During his stay in Israel, he was supported by the Ben-Gurion University.

# Selected Faculty Activities

## Penn State Summer School in Statistics for Astronomers *University Park, June 2008*

**Jogesh Babu**, *Professor of Statistics and Director of Center for Astrostatistics*

This was the fourth annual Penn State Summer School in Statistics for Astronomers. The Summer School is a 6-day course in statistical inference designed to provide physical scientists, and graduate students, with a strong conceptual foundation in modern statistics and to develop a repertoire of well-established techniques applicable to observational astronomy and physics. Classroom instruction is interspersed with hands-on analysis of astronomical data using the public-domain R software package. This year, fifty-one participants attended the summer school. Of the fifty-one participants, seventeen were from Europe (Max-Plank & ESO in Germany, Greece, Sweden, UK, Italy, Netherlands, Spain and Belgium), and two from South America. The other participants were from the peer institutions and national labs in the U.S. including the Center for Astrophysics, Harvard, Smithsonian, Cornell, Princeton, UCLA, STScI, Fermilab, University of Wisconsin-Madison, Johns Hopkins, and University of Chicago.

The summer school instructors consisted of: **Jogesh Babu**, **Mosuk Chow**, **John Fricks**, **Murali Haran**, **Bruce Lindsay**, **Thomas Hettmansperger**, **Jia Li**, and **James Rosenberger** (Penn State statistics faculty), Eric Feigelson (Penn State astronomy faculty), Giuseppe Longo (Universita degli Studi di Napoli Federico II astronomy faculty), Thomas Loredo (Cornell University astronomy faculty), **Derek Young** (Bechtel Bettis, Inc. statistician), **Chris Groendyke** and **Scott Roths** (Penn State statistics graduate students).

## Indian Institute of Astrophysics-Penn State Summer School *Kavalur, India, July 2008*

**Jogesh Babu**, *Professor of Statistics and Director of Center for Astrostatistics*

Based on the Penn State summer school, **G. J. Babu** organized the second Indian Institute of Astrophysics-Penn State Summer School (July 9-16, 2008) at Vainu Bappu Observatory located near the village of Kavalur in the Javadi Hills, about 175 km south-east of Bangalore, India. The 2007 summer school and this year's summer school were very successful serving the needs of Indian astronomers and astronomers from South Asian countries. The summer school was coordinated by Prajval Shastri, Sabyasachi Chatterjee (Indian Institute of Astrophysics faculty) and Jogesh Babu (Penn State statistics faculty).

## News from the Center for Statistical Ecology and Environmental Statistics

**G. P. Patil,** *Distinguished Professor of Mathematical Statistics Emeritus and Director of the Center*

**G. P. Patil** was appointed during the year to the US Environmental Protection Agency Expert Panel on Ecological Indicators Relevant to EPA Report on the Environment. Professor Patil has also been invited to the United Nations Environment Program (UNEP) Experts Consultation Panel on Composite Indices for Environment. The first meeting is scheduled at the UNEP Headquarters, Nairobi, Kenya.

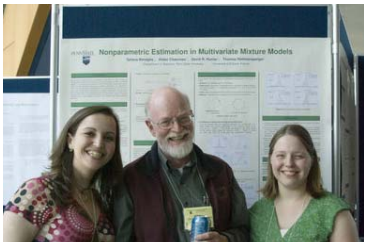
Professor Patil delivered a Plenary Lecture at the Platinum Jubilee Celebration International Conference of the Indian Statistical Institute, Kolkata, India, devoted to Biodiversity Issues and Concerns on 'Digital Governance and Hotspot GeoInformatics of Biodiversity Measurement, Comparison, and Management in the Age of Indicators and Information Technology.' Professor Patil was invited to deliver a keynote Inaugural Lecture at the International Health GIS Conference held in Bangkok, Thailand at the Asian Institute of Technology; was Director of the Satellite Workshop on Digital Governance and Hotspot GeoInformatics for the International Conference on Theory and Practice of Electronic Governance held at the United Nations University in Macao, China; held workshops in India and in Indonesia attended by distinguished international experts; and was invited to serve on the Panel for Building a Sustainable International Digital Government Research Community at the Annual Conference for Digital Government Research of the Digital Government Society of North America held in Montreal, Canada.

**Student Interns and Research Students.** The graduate research interns in Digital Governance and Hotspot GeoInformatics have been: Jessica Newlin of Civil and Environmental Engineering, Tse-Chuan Yang of Rural Sociology and Kristen Brubaker of Forest Resources.

## Nonparametric Statistics and Mixture Models: Past, Present and Future

University Park, PA
May 23-24, 2008

The Department of Statistics celebrated its fortieth anniversary in May 2008. Celebrating the occasion, a conference was held on the topics of mixture models and nonparametric statistics. Professors, postdoctoral scholars, and graduate students in statistics or biostatistics at universities or government laboratories attended the two-day conference. The Conference also highlighted one of the Department's faculty members, **Thomas P. Hettmansperger**. Since Tom was retiring in June 2008, the Conference highlighted Tom's academic and administrative contributions made to the Department, the University and the U.S. and international statistical communities.




(L to R) Tatiana Benaglia (current Ph.D. graduate student), T. P. Hettmansperger and Tracy Wrobel (current Ph.D. graduate student)

Regarding the development of statistics over the past 100 years, it is noteworthy that the fields of nonparametric statistics and mixture models have found applications in areas far removed from their initial impetuses and have motivated theoretical developments and constructs quite distinct from those originally perceived by the initiators of these two subjects. The conference highlighted the myriad applications and theoretical principles that have risen to the forefront of these fields during the twentieth century and up to the present. The conference participants explored indicators of future developments, thereby providing research problems for graduate students, postdoctoral associates, and junior faculty interested in research in these areas. The combination of statistical theory, methods, applications, and problems explored during the conference culminated in a wide range of scientific research opportunities in today's golden age of information analysis through statistical methods.

*Daniel Larson*, Dean, Eberly College of Science, presented the Opening Remarks. The Conference had four plenary speakers: *Bruce Brown*, National University of Singapore; *Regina Liu*, Rutgers University; *Joe McKean*, Western Michigan University; and *Hannu Oja*, Tampere School of Public Health.

Thomas P. Hettmansperger speaking at conference banquet.

In addition to the talks by the plenary speakers, there were seventeen other invited or contributed talks on the program. Somnath Datta, U of Louisville; Suzanne Dubnicka, Kansas State U; Sneh Gulati, Florida International U; Marc Hallin, Université Libre de Bruxelles; Jürg Hüsler, Universität Bern; Bruce Lindsay, PSU; Ping Ma, U of Illinois; John Marden, U of Illinois; Marianthi Markatou, Columbia U; Mary Meyer, Colorado State U; Ömer Özturk, Ohio State U; Davy Paindaveine, Université Libre de Bruxelles; Annie Qu, Oregon State U; Ronald Randles, U of Florida; Simon Sheather, Texas A&M U; Hoben Thomas, PSU; and Haiyan Wang, Kansas State U.

A reception and banquet were held on Friday evening at the Atherton Hotel in State College where friends and colleagues of Tom Hettmansperger shared some of their special moments with the banquet attendees. (*Photos courtesy of **Tatiana Banaglia**, current Ph.D. graduate student*)

Three members of the Organizing Committee responsible for the success of the Conference are pictured below: **Donald Richards**, Professor of Statistics and Associate Department Head; **Ryan Elmore** (Ph.D. 2003 Department of Statistics, currently at Colorado State University); and **David Hunter**, Associate Professor of Statistics.

Donald Richards

Ryan Elmore

David Hunter

# Research Grants

Active as of September 1, 2008

**National Science Foundation**

**Michael Akritas**
--Fully Nonparametric Models for Random Effects, Order Thresholding, Bootstrap Testing, and Applications
**Gutti J. Babu**
--MSPA-AST: Advancing Statistical Methodology in Massive Astronomical Surveys
--Astrostatistics: Advancing Statistical Methodology for Astronomy
**John Fricks**
--Diffusion and Kinetics in Processive Molecular Motors
**Murali Haran**
--Scientific computing research environments for the mathematical sciences (SCREMS)
**Thomas Hettmansperger**
--Nonparametric Mixture Models
**Bing Li**
--Collaborative Research: Model-Based and Model-Free Dimension Reduction with Applications to Bioinformatics
--Collaborative Research: A Paradigm for Dimensional Reduction with Respect to a General Functional
**Jia Li**
--Multivariate Statistical Analysis and Image Classification with Applications
**Runzi Li**
--CAREER: Model Selection for Semiparametric Regression Models in High Dimensional
**Bruce Lindsay**
--Collaborative Research: Statistical Methods and Algorithms for Genomic Data
--High Dimensional Mixture Models
**G. P. Patil**
--Project Geoinformatic Surveillance: Hotspot Detection and Prioritization Across Geographic Regions and Networks for Digital Government in the 21st Century
**Donald Richards**
--Multivariate Statistical Analysis and Image Classification with Applications
**James Rosenberger**
--Adaptive Sampling Designs in Network and Spatial Settings
**Aleksandra Slavkovic**
--Statistical Disclosure Limitation Methods for Tabular Data

**National Institutes of Health**

**Debashis Ghosh**
--Statistical Methods for the Analysis of Functional Genomic Data
--Novel Statistical Methods for Human Gene Mapping
**David Hunter**
--Novel Statistical Models for Synthesizing Social Networks and Epidemic Dynamics
**Runze Li**
--Dynamical Systems and Related Engineering Approaches to Improving Behavioral Interventions
--New Statistical Models for Intensive Longitudinal Data
--Semi-varying Coefficient Models for Intensive Longitudinal Data
**Joe Schafer**
--Improved Methods for Missing Data, Causal Inference and Latent-Transition Analysis in Drug Abuse Prevention and Treatment
**Yu Zhang**
--Bayesian Methods for Epistasis Association Mapping

# Visitors

**Ayanendranath Basu** from the Indian Statistical Institute, Kolkata, India, arrived in August and will be visiting the Department until May 2009. He will be teaching in Fall and Spring semesters and will also be collaborating on a research project with Professor **Bruce Lindsay**.

Recent graduate **Shu-Chuan Chen** was back on campus in the summer (8/1/08—9/8/08) to work with Professor **Bruce Lindsay** on clustering algorithms. The joint research is part of a National Science Foundation funded grant on new statistical methods for genomic sequence data."

**Principal Ndlovu** from the University of KwaZulu-Natal, Pietermaritzburg, South Africa, visited the Department and was a Senior Lecturer of Statistics for six months during January through July 2008. He also collaborated on a research project with **J. L. Rosenberger.**

Dr. **B. B. Periera** from Brazil visited the Center for Multivariate Analysis for one month to finish the paper on clustering of gamma ray bursts which was sent for publication. He is also collaborating with Dr. **Rao** in writing a book on Neural Networks for Data Mining.

**David Welch** joined the statistics department in late 2007 as a postdoctoral researcher. His acronym-related research interests include Markov chain Monte Carlo (MCMC) and approximate Bayesian computation (ABC), and he is working with a group at Penn State's Center for Infectious Disease Dynamics (the CIDD at PSU) on methods for estimating networks using genetic and social data. He hails from New Zealand, where he completed his PhD in 2006 at the University of Aukland. Before coming to Penn State, he worked in the Department of Epidemiology and Public Health at Imperial College, London. Not a particular fan of harsh Pennsylvania winters, he can often be seen riding around town on his folding bicycle.

**Yu Zhou**, a PhD student from East China Normal University, is spending two years at Penn State to conduct research on dimension reduction under the supervision of Professor **Bing Li**. Yu Zhou has been making good progress on the asymptotic analysis and bias correction of the dimension reduction estimators.

Visitors to the **Center for Statistical Ecology and Environmental Statistics** include:

President **N.G. Bendale** and Principal **A.G. Rao** of Khandesh College Education Society visited during September 2007 to discuss the planning and organization of the innovative district level Watershed Surveillance and Research Institute at M.J. College, Jalgaon, Maharashtra State, India.

Professors **Sanjay Pawde** and **Rajesh Koli**, Working Group Leaders of Geospatial Hotspot Detection and Prioritization Software Development at JalaSRI, Jalgaon, India are visiting the Center for this academic year 2008-2009 for software development for the NSF Project in progress on Digital Governance and Hotspot GeoInformatics for Monitoring, Etiology, Early Warning, and Sustainable Management.

Dr. **Sharad Joshi**, Professor of Computer Science, Slippery Rock University of Pennsylvania and himself a former Ph.D. from the Department, is visiting for this academic year on his sabbatical leave to conduct research on methodology and lead the software development for hotspot detection and prioritization. During the past year, he was a weekly miniseminar visitor at the Center.

Mr. **Raj Zambre**, CEO/CTO, Erallo Technologies, Boston, MA, USA spent two weeks at the Center during February 2008. He has been collaborating with the Director of the Center on case studies involving improved sensors, smart sensors, and appropriate sensors in the field in ecology, environment, and water resources investigations with a view to strengthen decision support system framework.

Dr. **Rainer Brueggemann**, formerly Senior Scientist of Leibnitz Freshwater Research Institute, Berlin, Germany, and longtime distinguished leader in European Union for Partial Order, Ranking and Prioritization, is visiting the Center during September 2008 and will revisit for two months toward the end of the academic year and in the forthcoming summer to collaborate on methodology, Software, and Monograph Development.

Professor **Ashvin Gosain**, Director of the Computation Center and Professor of Civil and Environmental Engineering at the Indian Institute of Technology, New Delhi, India, visited for two weeks during July 2008. He is an acknowledged National and International Leader on SWAT Modeling for Geospatial Water Resources Assessment and Management.

*(Visitors continued on page 16)*

# ALUMNI NEWS

## Annual Dinner with Alums at Joint Statistical Meetings

Denver, Colorado (August 2008)
**Andreas Artemiou**, Current Ph.D. Graduate Student

The Joint Statistical Meeting took place in Denver, Colorado with statisticians attending from all over the globe to talk about their work, socialize and exchange ideas. The Department of Statistics at Penn State was well represented by current faculty and students as well as many of the Department's alumni. An annual event is a dinner planned and organized by the Department of Statistics bringing together students, professors and alumni. This year, the dinner took place on Tuesday, August, 5th at P.F. Chang's Chinese Restaurant in Denver. Some alumni attending this year's dinner are pictured at right (L to R: Lewis Shoemaker (Ph.D. 1980), Dennis Friday (Ph.D. 1976), and Sirius Fuller (M.A.S. 2006)

The dinner was attended by about 25 people. This annual event has many important aspects. You can meet old friends who graduated from the Department and you haven't seen for a long time now; you can discuss their new jobs with them and how they feel about their jobs; you can meet alumni of earlier years whom you have never before met; and, of course, you can relax and take a break from the many meetings and talks of the conference and have some fun with people with whom the only thing you share, is the Department of Statistics at Penn State! This is definitely an event that people are happy to attend. Please join us in Washington, DC in 2009! (*Photo courtesy of **Andreas Artemiou**, current Ph.D. graduate student*)

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**Marianthi Markatou** (*Ph.D., 1988*), professor of clinical Biostatistics, has been selected for membership in the International Statistical Institute (ISI). The ISI is composed of more than 2,000 individual elected members who are internationally recognized as definitive leaders in the field of statistics. Members are elected by virtue of their distinguished contributions to the development or application of statistical methods, the administration of statistical services, or the development and improvement of statistical education. Established in 1885, the International Statistical Institute (ISI) is one of the oldest scientific associations operating in the modern world.

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**John A. Bauman** (*M. A., 1982)* was one of nine new members appointed to the Council of Fellows at Penn Sate Erie, the Behrend College, by Penn State President Graham Spanier. The Council of Fellows is composed of community and business leaders who advise the college's administrators on issues related to economic development and regional need.

John A. Bauman is president of The Victor Group, an Erie-based manufacturer with three subsidiaries: Fralo Industries, which manufactures precision sheet metal enclosures; First Machining & Manufacturing, which specializes in precision CNC turning and milling; and First Quality, provider of parts inspection services. He is a Penn State Behrend mathematics alumnus and earned a master's degree in statistics in 1982.

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**Michael LaValley** (*Ph.D., 1993*) was promoted to Full Professor in the Biostatistics Department of Boston University.

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**Annie Qu** (*Ph.D. 1998*) has moved from Oregon State to a position as tenured associate professor at University of Illinois at Urbana-Champaign.

**Please send us information** that we can publish in future newsletters. For example, include your current job and any information that you feel would be of interest to other alumni or those associated with the Department of Statistics. When sending the information, please indicate your permission to have the information printed in Stat News.

Please send to Barbara Freed b2a@stat.psu.edu.

# STUDENT NEWS

## Congratulations to...

## Awards

***Kristen Horn*** who received the **Outstanding MAS Student Award for the Class of 2008.** As per the Chair of the MAS Outstanding Student Award Selection Committee, "Kristen had a 4.0 GPA and excellent performance in all aspects."

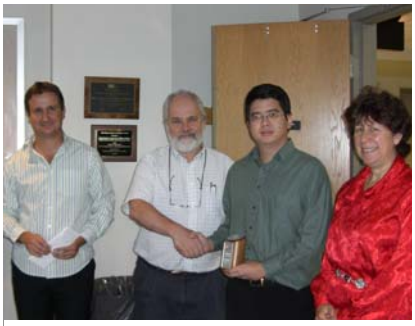
***Andreas Artemiou*** and ***Shu-Min Liao*** who each received the **William L. Harkness Graduate Teaching Award** in recognition of outstanding teaching and for "excellent presentation and preparation for class" during the 2007-2008 academic year.

Undergraduate minor, ***Lubov Zeifman*** who was awarded the **2008 Phi Beta Kappa Honors Thesis Prize.** Lubov wrote her honors thesis in Statistics on the topic of the analysis of fMRI data. The Phi Beta Kappa awards were established in recognition of the extraordinary quality of senior theses and the financial burden assumed by students in their completion, and to encourage students to continue their education and inquiry in liberal studies. Lubov's undergraduate major was psychology, but appropriately enough she will be entering a Ph.D. program in Statistics to continue her study of quantitative methods to study the brain.

Ph.D. student, ***Sham Bhat*** who won an **Outstanding Poster** award at the biannual Case Studies of Bayesian Statistics Workshop at Carnegie Mellon University in October 2007. The poster was titled 'Estimating the risk of a crop epidemic from coincident spatiotemporal processes,' and was joint work with **Murali Haran**, assistant professor of Statistics, and *Julio Molineros* and *Erick Dewolf* in the Department of Plant Pathology.

***Tatiana Benaglia*** who was awarded a 2008 JSM Student Paper Award from the Section on Nonparametric Statistics of the American Statistical Association. Ron Randles, 2008 Chair of the Section on Nonparametric Statistics, ASA, informed Tatiana of her award indicating that the Award Committee reported that Tatiana's research and presentation were excellent.

***Jeffrey Yong Ming Woo***, a doctoral graduate student in statistics, who was the recipient of the 2007 GlaxoSmithKline (GSK) Scholar Award. The GSK Award is a $1,000 scholarship grant given by the Biomedical Data Sciences (BDS) Department at GlaxoSmithKline Pharmaceuticals primarily to assist statistics departments in their recruitment of outstanding graduate students. Woo has a BS in Statistics from U. Michigan. As well as performing extremely well in his coursework, Woo participated in U. Michigan's undergraduate research opportunity for 2 semesters, working on models for social networks. He also did honors research on how people make judgments about various situations. He found time to be a grader and tutor for undergraduate mathematics courses. Prior to this, Woo also served in the Singapore Armed Forces for 2 years, assuming some leadership roles. Woo is fluent in both Mandarin and English. Borislav Froloshki, GSK award liaison, presented the award to Woo.



(L to R) Borislav Froloshki (GSK award liaison), Bruce Lindsay, Jeff Woo, and Naomi Altman

The GSK scholarship grant is a one-time award to students chosen by academic department faculty of the Statistical Sciences Group of BDS. Penn State's Department of Statistics is one of ten statistics departments in the United States receiving such an award annually. The GSK Scholar Award has been given to PSU statistics graduate students since 2002. Past Penn State recipients of the GSK Scholar Award are: Benjamin Haas (2002), Trent Gaugler (2003), Christian Stopp (2004), Hsiao-Pin (Anderson) Liu (2005) and Gia Barboza (2006). GSK Scholar Award information provided by **Prof Naomi Altman,** Chair, Graduate Admissions Committee.

(*Photo courtesy of* ***Hsiao-Pin (Anderson) Liu*** *, current Ph.D. graduate student*)

# Recent Ph.D.'s & Current Affiliations

**Spring 2008**
***Guodong Hui***, Ph.D. started working as a Biostatistician with the Pharmanet Development Group, but is now a senior biostatistician at Harvard Clinical Research Organization. (*Advisor*: **Bruce Lindsay**)
***Yan (Maggie) Li***, Ph.D. is a senior statistician at Capital One Inc. (*Advisor:* **Runze Li**)

**Summer 2008**
***Daeyoung Kim***, Ph.D. is an Assistant Professor at the University of Massachusetts, Amherst, MA. (*Advisor*: **Bruce Lindsay**)
***Yu Wang***, Ph.D., current position unknown. (*Advisor*: **Bing Li**)
***Wei Zhang***, Ph.D. is a Biostatistician II with Quintiles, Inc. (*Advisor*: **Vernon Chinchilli**)

# Recent Masters' Degrees

**Fall 2007:**
MAS: *Yumei Cao*, *Fei Guo*, and *Jinchun Yu*
MS: *Byran J. Smucker*, *Natalia Tchetcherina*, and *Li Wang*

**Spring 2008:**
MAS: *Cha Li* and *Michael J. Wark*
MS: *Andreas A. Artemiou*, *Muhammad Atiyat*, *Christopher Groendyke*, and *Bo Kai*

***Summer 2008:***
MAS: *Tingqiao Chen*, *Weifang Chen*, *Kristen M. Horn*, *Huan Li*, *Zhigang Ma*, *Daniel F. McGraw*, *Heejin Park*, *Jea-Eun Ryu*, *Michael P. Waltz*, and *Qing Zhu*
MS: *Yuexiao Dong*, and *Yijia Feng*

# Recent Bachelors' Degrees

**Fall 2007**: *Soon Ji Jung*, and *Jeffrey P. Winkler*

**Spring 2008**: *Kelly M. Aubuchon*, *Dennis N. Basgil*, *Theresa J. Fanelli*, *Brittany M. Fischer*, *Norman J. Huang*, *Daniel A. Kapinos*, *William C. Moser*, *Kyung Baek Nam*, *Kyle J. Retallick* **(honors)**, *Theodore Villacorta* **(honors)** and *Jason R. Wooleyhan*

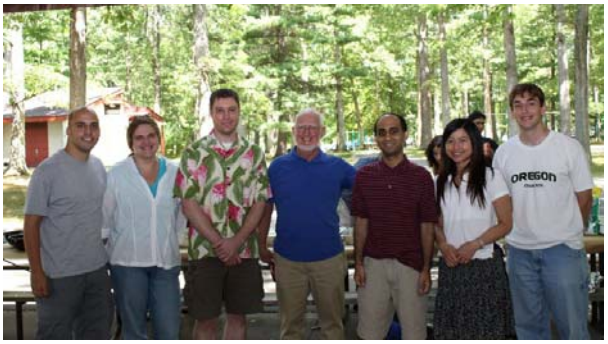
(*L to R*) Dennis Basgil, Brittany Fischer, Dr. Andrew Wiesner, and William Moser

(*L to R*) Jenn Parkes (Graduate Student Staff Assistant) and Brittany Fischer

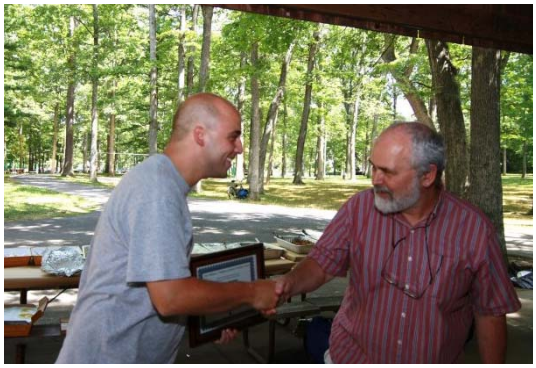
# Graduate Student Orientation

## Orientation week August 18—22, 2008

This year's Orientation activities included a departmental picnic at Sunset Park. The weather was beautiful and the food was great…and it appeared that everyone who attended had a good time. The picnic provided opportunities for new students to mingle with students, faculty, and staff of the Department in a relaxed atmosphere with beautiful surroundings.



*William L. Harkness with a few of the students who have been recipients of travel funds provided by the William L. Harkness Enhancement Fund. (L to R: Andreas Artemiou, Svitlana Tyekucheva, Chris Groendyke, Dr. Harkness, Sham Bhat, Huei-wen Teng, and Byron Smucker*



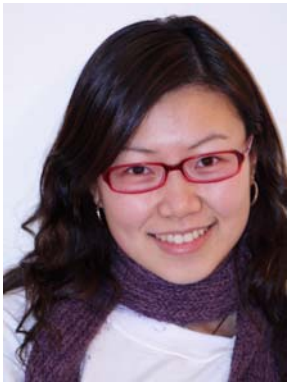
*Bruce Lindsay presenting William L. Harkness Teaching Award to Andreas Artemiou, one of this year's award recipients*

(*Photos courtesy of* ***Wei-han Chen****, current Ph.D. graduate student*)

*(VISITORS continued from p 12)* Ms. **Melinda Paul**, Publishing Editor, Springer Environmental Science Division visited with Professor Patil to discuss matters of interest related to the International Journal of Environmental and Ecological Statistics of which Dr. Patil has been the founding Editor-in-Chief since its inception in 1994.

# A Rewarding Internship

## Yijia Feng (Yvonne)



In summer 2008, I was working as an intern at Sanofi-aventis in Bridgewater, New Jersey. It is one of the world's top pharmaceutical companies. It is headquartered in Paris, France. Being at school for such a long time, this was actually my first time to be exposed to the industry. I was asked to work on some research topics about adaptive design under their guidance. Nowadays, adaptive design is a very hot topic in various applications in clinical trials. Our specific topic is about flexible sample size design in group sequential trials. With the allowance of changing the designated sample size, a clinical trial with one or more interim analyses can sometimes save a large amount of time and resources for the company. Besides that, I was involved in the early stage of a drug's statistical study planning. I have experienced not only the basic procedures of setting up a study plan, but also the communication with non-statisticians, e.g. clinicians, operations people, etc. At the end of my internship, I was required to give a presentation to summarize my work. This professional experience helped me to get an idea of the pharmaceutical industry, from which I might build up my career path. Other than work, I met lots of nice people there. We chatted and had lunch together everyday. From the daily conversations, I learned about the company and its culture, and made good friends with my colleagues as well. I felt fulfilled with such a great intern experience.

# PERSONAL CORNER

**Debashis Ghosh,** Associate Professor of Statistics, and his wife, Emily Harrington, Assistant Professor of English, announced the birth of their daughter, Mira Cecile Harrington Ghosh. Mira was born on June 5, 2008.

**Min Hee Kim**, Ph.D. candidate in Statistics, gave birth to a baby son, Yeonjoon Park born December 2007

**Min Kyung Kim**, Ph.D. candidate in Statistics, gave birth to a baby son, Brandon Lim born on April 1, 2007

**Makhtar Sarr** (Ph.D. 2006) announced the birth of his baby boy, Muhammad Sarr, born on August 18, 2008 in Abu Dhabi, United Arab Emirates

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**Christopher Stahl** (pictured left), Manager, Network and Information Systems, participated for the third year in 'On the Field PA Sporting Clays Tournament' with all proceeds benefitting the **Centre County Youth Service Bureau**

# DONATIONS TO THE STATISTICS DEPARTMENT

## July 1, 2007—June 30, 2008

Dr. Steven F. Arnold and Mrs. Rana McMurray Arnold
Dr. Scott D. Beattie
Dr. Brenda Gaydos
Ms. Erika M. Kummernuss and Mr. David E. Stoner
Dr. Scott E. Pammer and Ms. Cheryl L. Pammer
Dr. Scott R. Preston
Dr. Peiyong Qu and Mr. Christopher J. Vecoli
Mr. Michael J. Springer
Ms. Helen D. Tai and Mr. John F. McDevitt
Dr. Hensiong Tan

**Millennium Society Contributors**
Mrs. Yildiz H. Akin and Dr. William L. Harkness
Dr. Bruce G. Lindsay and Dr. Laura J. Simon


**Corporate Contributors**
Eli Lilly and Company Foundation
Johnson & Johnson
Johnson & Johnson Family of Co's

**Other Contributors**
Juniata College

When making contributions to the Department, you can designate how you would like your gift used!


During this year, donations helped support the following:

- Holiday Party
- Evening Reception for Nonparametrics Statistics & Mixture Models Conference (see pp. 9-10)
- Meals with Speakers in the Department's Colloquium Series
- Monthly Staff Luncheons with the Department Head (thanks to Bruce Lindsay and Laura Simon)

**Also…..**

- Travel grants to eleven graduate students and student awards to three graduate students (thanks to the William Harkness Enhancement Fund)
- Beginning Fall Semester 2008 Colloquium Coffee and Cookies (thanks to Debashis Ghosh)
- Support of students' attendance at various meetings (thanks to faculty)
- Buying into Lion XJ Computing Cluster (thanks to John Fricks, Murali Haran, Runze Li, Bruce Lindsay, Joseph Schafer, and Dean Daniel Larson)

# COMING ATTRACTIONS

*Events to appear in the next issue of StatNews*

***Krishnaiah and Khatri Lecture Series*** will take place on October 10, 2008. This year's Krishnaiah Visiting Scholar is Elizabeth Thompson (University of Washington) and the Khatri Visiting Scholar is Alan Walker (PSU). Other speakers will include Masutoshi Nei, Kataryna Makova, Yu Zhang, Peter Hudson, Beth Shapiro from PSU and Adam Siepel from Cornell University.

The ***2008 Clifford C. Clogg Memorial Lecture in Sociology and Statistics*** will be held on Monday, October 13, 2008. Stephen E. Fienberg, Maurice Falk University Professor of Statistics and Social Science will be the keynote speaker.

***The 2009 C.R. and Bhargavi Rao Prize for Outstanding Research in Statistics*** will be awarded by the Department of Statistics to a nominee selected by the members of the Rao Prize Committee. This award was established to honor and recognize outstanding and influential innovations in the theory and practice of mathematical statistics, international leadership in directing statistical research, and pioneering contributions by a recognized leader in the field of statistics.

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Editorial Advisor: **Dr. Bruce G. Lindsay**
Editor: **Barbara Freed**
Editorial Assistant: **Laurie Roan**

This publication is available in alternative media on request.



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