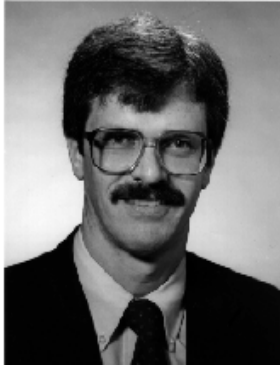




## A Note From Dr. Rosenberger



This is our second Newsletter and we hope this brings you some of the news and information about the department. The Fall semester has been busy and exciting. We have an especially good group of new graduate students this Fall, in part due to the availability of fellowship funds which helped make our offers more competitive. We graduated our first undergraduates in statistics

in the Spring ceremonies, **Michael Orth** and **Stephen Dripps**. Our memorial lectureships have provided funds to bring special guests on campus. The Krishnaiah and Khatri Lectureships brought **Ulf Grenander** and **David Mumford**, of Brown University, as speakers at a Special "Vision Day" on October 25. The second Clifford C. Clogg Memorial Lecturer in Statistics and Sociology was **Donald Rubin** of Harvard University, friend and confidant of **Cliff Clogg**, who gave a public lecture in October and spoke to both the sociology and statistics' departments during noontime seminars. The department has completed its second year of summer research experiences for undergraduates, which brought seven students to campus in the summer to work with faculty members, along with their graduate students, on a number of projects. Research funding has brought increased support and opportunities for our students to be engaged in significant research projects. Noteworthy is joint funding with the Methodology Center on the methodology required to analyze trends in addiction and drug abuse. The faculty are also involved in a number of other collaborative projects which provide support for students. Read on to hear the other exciting developments in the last year. We do hope to hear from more of you and invite you to respond with the form on the back page or send me an email -- it's always good to hear from old friends and former students. We will include your news and comments in future issues of the Newsletter. I have been telling our undergraduates that the network of Penn State graduates virtually insures them a choice of jobs when they are finished, unless they would rather continue with graduate school. Also check out our web site ([www.stat.psu.edu](http://www.stat.psu.edu)), and pass on suggestions you may have.



Fall 1997 Department Photo

## Special Honors

Dr. **Gutti J. Babu**, professor of statistics, has been named a Fellow of the American Statistical Association, a singular honor within the association that recognizes an individual's outstanding professional contribution and leadership in statistical science. Dr. Babu was recognized for his outstanding contribution to statistical science, his work on asymptomatic theory, and for his promotion of interdisciplinary activities.

Dr. Babu has also been elected to the rank of AAAS Fellow. Each year the Council elects members whose "efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished." He was honored for research on asymptomatic theory, resampling methods, probabilistic number theory, and statistical methods for astronomy and for promoting interdisciplinary activities.

Dr. **Bruce Lindsay**, distinguished professor of statistics, was the co-winner of the 1997 George W. Snedecor Prize for best paper in biometrics in the preceding 2 year period. The award is presented for a noteworthy contribution to biometry. The paper was titled "A Semiparametric Mixture Approach to Case-control Studies with Errors in Covariables." *Journal of the American Statistical Association*, 91, 722-732.

Dr. Lindsay was appointed Program Secretary for the IMS for 1997-2000 and Program Chair for the Annual IMS Meeting in Dallas, TX in 1998.

Dr. **Calyampudi R. Rao**, Holder of the Eberly Family Chair in Statistics and director of the Center for Multivariate Analysis, has been awarded an honorary doctorate of mathematics degree by the University of Waterloo, Canada.

Dr. Rao was recognized for his pioneering contributions in the fields of statistical inference and combinatorics, both of which are major areas of specialization at the University of Waterloo. He received the degree at the Spring Convocation ceremonies for the faculty of mathematics on May 31, 1997.

The Distinguished Achievement Medal of the American Statistical Association Section on Statistics and the Environment was awarded to Dr. Rao in recognition of his outstanding contributions to the development of methods, issues, concepts and applications of environmental statistics for 1997.

Dr. Rao was also honored by the National Institution for Quality and Reliability, Chennai Branch, India, for his pioneering effort and outstanding contribution to the advancement and promotion of Quality Movement in India over the past four decades.

This fall, Dr. **Joseph Schafer**, assistant professor of statistics, was awarded a Senior Research Fellowship and has taken leave from Penn State to conduct research in Washington DC (1997 American Statistical Association/National Science Foundation/Bureau of Labor Statistics (ASA/NSF/BLS) Senior Research Fellow). This program provides support to researchers in statistics, economics, behavioral science, and related disciplines to investigate scientific problems relevant to the economic measurement programs at BLS. During this time, Dr. Schafer is working to develop improved systems of missing-data imputation in complex economic surveys.

## Statistical Centers

### Statistical Consulting Center

The Statistical Consulting Center is a team of faculty, staff, graduate, and undergraduate students in the Department of Statistics with expertise in statistical methodology and applications.

During 1996-1997, statistical advice was provided to approximately 200 Penn State research faculty and staff, Ph.D. students, Master's students and others. These clients came from a variety of academic units at various

stages of their research studies and sought advice on a diverse set of topics.

The SCC provides short-term statistical consulting, primarily through Statistics 580, the Statistical Consulting Practicum. The process of consulting in this practicum is fairly structured and supervised. Once a short-term consulting problem is finished, a feedback form is sent out to the client. In 1996-1997, 14 graduate students in statistics took Stat 580, and provided consulting advice to 110 clients.

The SCC has continued to improve the process for managing the growing number of long-term funded projects. These improvements are essential because the SCC remains committed to involving students in research in a team environment.

### Center for Statistical Ecology & Environmental Statistics

The Center for Statistical Ecology and Environmental Statistics was invited to participate in the International Conference of the Forum for Interdisciplinary Mathematics held in Portland, Maine in July, 1997. The program which was given by present and former student interns and research associates of the Center was a highlight of the conference and was enthusiastically received. Those participating were Dr. **G.P. Patil**, **M.V. Ratnaparkhi**, **Amarjot Kaur**, **Charles Taillie**, **Wayne Myers**, **Danila Filippini**, and **Glen Johnson**.

### Center for Likelihood Studies

During this past year, under the supervision of Dr. **Bruce Lindsay**, distinguished professor of statistics and director of the Center for Likelihood Studies, **Annie Qu**, Ph.D. student, and **Sarah Austrin-Willis** from Wake Forest University worked on the project "Hierarchical Linear Models", presenting at the MAA in Atlanta this past summer. Sarah was a student in the REU Program.

Ph.D. student, **Ramani Pilla** was invited to give a talk at the New Researcher's Conference, Laramie, Wyoming in July, 1997. She also gave talks at the IMS/WNAR meetings, Park City, Utah, and at the Joint Statistical Meeting in Anaheim, California this past summer.

## Colloquium

Under the direction of Dr. **Steve Thompson**, assistant professor of statistics (Spring 1997) and Dr. **Zhen Luo**, associate professor of statistics (Fall 1997) the department once again enjoyed excellent speakers for our colloquium series throughout the year. Those presenting from outside Penn State included **Donald Hedeker**, University of Illinois at Chicago, **James Olsen**, North Dakota State University,

**Lynn Eberly**, Cornell University, **Murthy Chivukula**, Indian Statistical Institute, **Chris Volinsky**, University of Washington, **Tom Ryan**, Case Western Reserve University, **Dongchu Sun**, University of Missouri-Columbia, **Jianhua Huang**, University of California-Berkeley, **Xihong Lin**, University of Michigan, **Manfred Denker**, University of Goettingen, **Jiming Jiang**, Case Western University, **Reja Velu**, University of Wisconsin-Madison, **Jessica Utts**, University of California-Davis, **Abram Kagan**, University of Maryland, **Gary Churchill**, Cornell University, **Ingrid Van Keilegom**, University of Limburgs, **Richard Waterman**, Wharton School of Business, **Arndt von Haeseler**, University of Munich, **S.K. Pal**, Indian Statistical Institute, **David Kemp** and **Freda Kemp**, University of St. Andrews, Scotland, **Cornelius Gutenbrunner**, University of Marburg, Germany, **Don Rubin**, Harvard University, **James Harner**, University of West Virginia, **Nitis Mukhopadhyay**, University of Connecticut, **David Mumford** and **Ulf Grenander**, Brown University, **Andries Lenstra**, University of Amsterdam.

The following speakers were from Penn State: **Vernon Chinchilli**, **Bruce Lindsay**, **Bing Li**, **Eric Ghysels**, **Keith Ord**, **Thomas Hettmansperger**.

## Faculty Talks

Dr. **G. P. Patil**, distinguished professor of mathematical statistics, was an invited speaker at the 51st Session of the International Statistical Institute held in Istanbul in August, 1997. He spoke on contemporary challenges and recent advances in environmental sampling.

Dr. **Thomas Hettmansperger**, professor of statistics, presented two invited papers at the Workshop on Nonparametrics, University of Bern, Switzerland in August, 1997. They were "R-Estimates, M-Estimates, and Minimum Distance" and "Kruskal-Wallis, Kendall's Tau, and Efron Dice."

He presented an invited paper at the Third International Conference on L-1 Norms in Neuchatel, Switzerland in August, 1997, entitled "On Rank in the Affine Invariant Case."

Dr. **C. R. Rao**, Holder of the Eberly Family Chair in Statistics, addressed the University of Hyderabad on "Statistics, Statisticians and Public Policy". He called for making statistics the key technology in fighting hunger and deprivation afflicting society, and in shaping a new world through peace.

Dr. **Bruce Lindsay**, distinguished professor of statistics, gave invited talks at the University of Victoria, University of British Columbia, Simon Fraser, Stanford University and the University of California - Berkeley.

He also presented talks at the Workshop on Likelihood & Asymptology, C.R.M. at Banff, the Iowa State Department of Statistics 50th Anniversary and the Franco-Belgium Statistics Meeting in Louvain, Belgium.

Dr. **Susan Murphy**, associate professor of statistics, gave an invited talk at Rutgers University statistics department in January, 1977. The talk was titled, "Estimation of Standard Errors." Dr. Murphy was invited to speak at the statistics department at the University of Michigan in February 1997. Her talk was titled, "Profile Likelihood Inference for Semiparametric Models." She also gave an invited seminar at Chalmers Technology University and the University of Gothenburg in March, 1997 titled "Profile Likelihood Inference for Semiparametric Models." In April 1997, Dr. Murphy gave talks at the University of Stockholm Mathematics Statistics Department, titled "Profile Likelihood Inference" and "MLE in the Proportional Odds Model." She gave an invited seminar, "Profile Likelihood Inference" in October 1997 and has been invited to give a seminar at Harvard University Department of Biostatistics on "Profile Likelihood Inference" in December 1997.

Dr. Murphy was invited to present an IMS Special Invited Lecture at the Joint Statistical meetings of ASA, IMS, ENAR, and WNAR in Dallas, TX in August, 1998. She has been invited to speak at the Interfaces Between Statistical Paradigms Workshop, Sixth Purdue Symposium on Statistics, Indiana in June, 1998.

## Grant News

Dr. **G. Jogesh Babu**, professor of statistics, was selected for participation in the National Research Council's Twinning Program for 1997-1999. He will be provided with a grant in the amount of \$13,600 to support his travel to Lithuania and hosting his colleague, Dr. **Eugenijus Manstavicius**.

The Center for Statistical Ecology and Environmental Statistics received a research grant in a recent EPA research grants competition with Dr. **G. P. Patil** as the principal investigator and Dr. **William Stiteler** of Syracuse Research Corporation as the co-principal investigator. Dr. Stiteler is a former student of the Department of Statistics and did his doctoral thesis in spatial environmental statistics in 1972 with Dr. Patil. The title of the grant: "Statistical Issues Relating to the Implementation of the Benchmark Dose Method" is from January 1, 1997 - December 31, 1999, with funding of \$300,000.

The department received funds from the National Science Foundation Research Experience for Undergraduates (REU) program for seven qualified undergraduates during the summer of 1997. This program is designed to bring together a select group of students who want an opportunity to participate in statistical research at a major research facility.

This year's students, pictured below, were: **Melissa Agocs, Sarah Austrin-Willis, Neil Cordell, Jennifer Hamer, Jennifer Frank, Matt Maurer, and Janene Valcenbach.**



## Faculty News

Dr. **Susan Murphy**, associate professor of statistics, was named associate editor, *Biometrics*, from February 1997 - February 2000.

She was also elected to the Steering Committee for the IMS 1997 western regional meeting, Taipei, Taiwan, in July 1997.

Dr. Murphy will be the organizer of the invited session on Semiparametric Models at the 22nd European Meeting of Statisticians and 7th Vilnius Conference in August, 1998.

Dr. Murphy was an invited visiting professor for research of the Mathematics Department of Chalmers University of Technology, Sweden, in March and April, 1997.

Dr. **G. P. Patil**, distinguished professor of mathematical statistics and director of the Center for Statistical Ecology and Environmental Statistics, was invited to be the master of ceremonies at the Joint Statistical Meetings in Anaheim, CA, for the Awards Ceremony of the Distinguished Achievement Medals for Statistics and the Environment. He was also invited to participate in the Marvin Zelen statistical science leadership award dinner and retreat at Harvard University, where **Frederick Mosteller** received the award and Sir **David Cox** was the chief guest. Recently, for the celebration of 50 years of the International Biometric Society, Dr. Patil was invited to prepare a featured article on statistical ecology, environmental statistics, and risk assessment for the special golden jubilee volume edited by **Peter Armitage** and **Herbert David**.

The first printing of assistant professor of statistics, **Joseph Schafer's** long awaited monograph, "Analysis of Incomplete Multivariate Data," was completed during the summer of 1997 in London. This 460-page book, which is part of the Chapman & Hall series "Monographs on Statistics and Applied Probability," has already received considerable attention in the U.S. and abroad. It presents a unified, Bayesian approach to the analysis of incomplete multivariate data, covering datasets in which the variables are continuous, categorical, or both. For more information, contact **Richard Frankel**, Chapman & Hall, 115 Fifth Avenue, New York, NY 10003, (212) 254-3232.

On February 18-19, Dr. Schafer presented a 2-day course "Gibbs sampling for analysis of survey data" at College Park, MD. The course, which was sponsored by the Joint Program in Survey Methodology at the University of Maryland, featured material from Joe's new book and other related topics. In May, he taught another short course at the Penn State Conference Center as part of the Summer Institute on Longitudinal Methods, sponsored by the Methodology Center at the College of Health and Human Development. Future short courses have been scheduled for next year at the University of Southampton, England (May) and at the Joint Statistical Meetings in Dallas (August).

Dr. **Thomas Hettmansperger**, professor of statistics, finished and delivered to the publisher (**Edward Arnold** of England) a text manuscript co-authored with **Joe McKean** of Western Michigan titled "Robust Nonparametric Statistical Methods." This should be published next year.

Dr. **C.R. Rao**, Holder of the Eberly Family Chair in Statistics, had his book, "Statistics and Truth," re-published this past year. The book deals with the philosophical and methodological aspects of information technology, collection and analysis of data to provide insight into a problem, whether it is scientific research, policy making by government or decision making in our daily lives.

Dr. **G. P. Patil**, distinguished professor of mathematical statistics, was invited to serve on the peer review panel of the U.S. EPA's \$5M research grant competition for environmental indicators. He has been invited for peer review of supplemental surveys guidance for safe drinking water regulation development.

## Welcome New Students

The department welcomes the following new students who were admitted into our graduate program this fall: **Hrisanthi Adamopoulos, Jie Bai, Hwan Chung, Isidro Cruz-Medina, Ruth Anne Davi, Hakan Demirtas, Gregory Elmer, Kelly Fox, Cynthia Gargano, Matthew Herbison, Ying Huang, Sami Huovilaninen, Jianhua**

**Jin, Mike Kwanisai, Carla Sciuolo, Michele Shaffer, Tracy Spangler, Brent Williams, Ke Yang, Xiao Zhou.**

## Awards

Congratulations to the following students who received departmental travel award funds: **Scott Beattie, Recai Yucel, Suzanne Dubnicka, John O’Gorman, Bonnie Gosh-Dastidar, Jean Recta, and Ramani Pilla.** They all traveled to a national meeting and presented a paper.

The 1997 Eberly College of Science Student Recognition Reception was held on October 3, 1997 at the Nittany Lion Inn. The following students from our department were recognized: **Gregory Elmer**, Wheeler P. Davey Memorial Scholarship and the August and Ruth Homeyer Graduate Fellowship, **Martin Felix-Medina**, Graduate Scholars Award, **Kelly Fox**, Graduate Scholars Award, **Demirtas Hakan**, Graduate Scholars Award, **Matthew Herbison**, Graduate Scholars Award, **Jerry Maples**, August and Ruth Homeyer Graduate Fellowship, **Asha Reeves**, Bayer Fellowship, **Brent Williams**, Wheeler P. Davey Memorial Scholarship and Vollmer-Kleckner Scholarship in Science.

**Ramani Pilla** received a Student Paper Award from the Statistical Computing Section of the American Statistical Association at the summer meeting in Anaheim, CA.

## Congratulations Students

### Doctorates

**Yunling Zuo** (Fall 1996) is working as a research associate in the Gerontology Center in the Health & Human Development Department at Penn State. Her thesis titled *Development of the Likelihood Ratio Test in the Cancer Risk Model: Limiting Distributions, Testing Theory* was conducted under the direction of Distinguished Professor of Statistics, Bruce Lindsay.

**Yong Lin** (Spring 1997) accepted a position with Clinical Trials Organization. His thesis titled *The Likelihood Ratio Test of Mixture Hypothesis and the Tube Volume Problem* was conducted under the direction of distinguished professor of statistics, Bruce Lindsay.

**Eric Pulkstenis** (Spring 1997) has taken a position as a statistician at C.L. McIntosh & Associates. His thesis titled *A Random Effects Model for the Analysis of Categorical Longitudinal Data Subject to Informative Dropout* was conducted under the direction of professor of biostatistics and statistics J. Richard Landis and Thomas R. Ten-Have.

**Eleanor Tipa** (Summer 1997) has taken a position at Epsilon Data Management. Her thesis titled *An Evaluation*

*of the Usefulness of Weights in the Presence of Nonignorable Dropout* was conducted under the direction of Associate Professor of Statistics Susan Murphy.

**Ramani Pilla** (Summer 1997) has accepted a Visiting Fellow position at the National Institute of Health (NIH). Her thesis titled *Improving the Rate of Convergence of EM in High-Dimensional Finite Mixtures* was conducted under the direction of Distinguished Professor of Statistics Bruce Lindsay.

**William Cooper** (Summer 1997) accepted a position at Health Process Management Inc.. His thesis titled *Inferential Techniques for Landmark Data* was conducted under the direction of David H. McKinley Professor of Business Administration and Professor of Statistics J. Keith Ord.

### Masters

**Rose Marie Brunner** (December 1996) accepted a position at Capitol One Financial in Richmond, VA.

**Michael Gabrovsek** (May 1997) is working at HRB Sytems in State College.

**Michelle Shemo** (May 1997) accepted a position at Minitab in State College.

## Alumni News

**Michael LaValley** (Ph.D. Penn State 1993) received an award for excellence in teaching from the Boston University School for Public Health for Fall 1996.

At the Joint Statistical Meetings in Anaheim, California, the Committee of Presidents of Statistical Societies (COPSS) named **Kathryn Roeder** (Ph.D., Penn State 1988), of Carnegie Mellon University’s Department of Statistics, as recipient of its President’s Award. Given to an outstanding statistician age 40 or under, the President’s Award is the most prestigious honor accorded jointly by the five COPSS statistical societies.

Ms. Roeder was recognized for her broad-ranging contributions to statistical methodology, and especially for her work on modeling heterogeneity in nature, ranging from clusters and booids in galaxies, to DNA fingerprinting, and to the heritability or impact of genes on a child’s IQ.

**Andy Pulkstenis** (Ph.D. Penn State 1995) has sent us information about his employer, Trilogy Consulting Company, a nationwide company with 400 consultants placed all over the country. Andy works out of the Kalamazoo area at a branch office called the Consultant Resource Center (CRC). Trilogy has a very strong

relationship with the SAS institute, and one of its primary areas of interest is SAS programming. There are numerous positions open at Trilogly and Andy would like to hear from anyone interested in employment opportunities all over the United States. He can be reached at (616) 344-1597.

**Shailaja Suryawanshi** (Ph.D. May 1996) and **Pramod Chivate** were married on August 17, 1997 in Edison, NJ. Best wishes to them.

The Department of Statistics annual fall picnic was held on September 14, 1997 at the Civil Engineering Lodge in Stone Valley. This year, the faculty/graduate student volleyball game was a hard fought battle. Only after the expert scoring of Dr. Mark Handcock did the faculty win this yea's competition.

Come and join us next year on October 4, 1998 at the Civil Engineering Lodge in Stone Valley for a day filled with good food, great competition, and games for children of all ages.

### Personnel Notice

This Fall we have two new work study students in the front office to assist the staff. They are **Jonathan Lens** and **Janelle Fleming**.

The computer support staff also has three new work study students. They are **Joe Bain**, **Christine Martin** and **Henry Man**.

### Academic Visitors

We would like to welcome **Tanja Bekhuis** and **Laura Simon** to the department. Tanja began as a temporary instructor of Stat 200 during Spring semester 1997 and she is teaching Stat 200 this Fall. She is located in Room 331C.

**Laura Simon** formerly of the Biostatistics Unit at Hershey Medical Center, is teaching Stat 100 and Stat 250 during both Fall and Spring semester. She is located in Room 328.

**Lars Pralle** of the University of Gottingen, Department of Medical Statistics is visiting Dr. **Michael Akritas** and teaching during the 1997-1998 academic year. The department welcomes him and his wife, Anke.

**Murthy Chivikula** of the Indian Statistical Institute in Calcutta, India is a continuing visitor in the Center for Multivariate Analysis.

During this past year, the Department of Statistics also enjoyed visits from the following: **Edgar Brunner**, **Edgar Guttenbrunner**, **Hyder Ali**, **M.B. Rao**, **D.H. Shandbag**, **Michael Lin** and **David** and **Freda Kemp**.

### Faculty Position Announcements

The Department of Statistics has advertised for two assistant professorships this Fall. A Ph.D. in Statistics with outstanding research ability is required. Applications are being considered at any rank for a scholar with national research reputation in statistical computational genetics or genomics. Applications are being considered from November 1, 1997 until positions are filled.

**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 *Statnews*.

Name \_\_\_\_\_ Degree(s) & year(s) \_\_\_\_\_

Residence Address \_\_\_\_\_ Home Phone \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Business Address \_\_\_\_\_ Business Phone \_\_\_\_\_

\_\_\_\_\_ Fax Number \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Internet/Electronic Mail Address \_\_\_\_\_

Position \_\_\_\_\_

**Information About Yourself:**

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

- I do not wish to have this information in Statnews or alumni directory.

**Employment Information:**

If you work for a company which may be interested in employing statisticians, either at the undergraduate or graduate level, please let us know. We will make this information available to our graduates.

**WE APPRECIATE YOUR SUPPORT**

In this time of decreasing support from the State of Pennsylvania and the extreme difficulty in obtaining enhancement funds, contributions to the department become increasingly more important in permitting us to pursue our departmental goals. I'm sure you are aware that if you make donations to the University you can direct them to whatever program you wish. If you would like to make a donation to the Department of Statistics, please direct it to our fund to enhance the department: Statistics Department Research Fund, Room 326 Thomas Building, University Park, PA 16802-2111

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**Editorial Advisor:** Dr. James L. Rosenberger

**Editor:** Kathleen DiFlaviana

**Editorial Assistant:** Laurie Roan

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