

A Note From The Head

Bruce Lindsay, who is chairing the search



I'm back! After two years at the National Science Foundation, as program director for the Statistics Program in the Division of Mathematical Sciences, I've returned to the headship of the Statistics Department at Penn State. I want to take this opportunity to thank Distinguished Professor **Bruce Lindsay** who willingly and capably ran the department for the past

two years. As you will note elsewhere in this newsletter, the past year has been a successful year for hiring with four new assistant professors joining our department in the Fall.

We continue to publish this Newsletter to keep you informed of the activities in the department, and to invite you to keep us informed of your current activities and employment (by email to kmd@stat.psu.edu). Again this Spring, on Friday March 16, 2001, we are hosting the Alumni weekend, and inviting former students and prospective students to visit the department. We again have a schedule of talks and an opportunity for recruiting by returning alumni. This event has been very successful during the past two years, and we look forward to many of you attending again this year. **Kathryn Roeder**, professor of statistics at Carnegie Mellon University, is our keynote speaker. You will recall her as a 1998 graduate of **Bruce Lindsay**, formerly at Yale University, and COPSS presidential award winner in 1997.

I report with some sadness, Eberly Professor **C.R. Rao**, has announced his intention to retire after this academic year. He has celebrated his 80th birthday at a number of conferences organized in his honor this year. We can't believe he will really end his continued output of scholarly work, and prodigious collaborations with many coauthors around the world, and hope he will maintain his presence and office for many more years after his retirement. However, we will be searching for a scholar of international reputation to fill the Eberly Family Chair of Statistics, beginning this Spring. If you would like to nominate someone, please send a letter of nomination to me or

The department has received several grants in the recent past to provide assistance in transforming our courses. Professor **Bill Harkness** has guided the transformation of our largest undergraduate course, Stat 200, with \$200,000 support from the Pew Foundation.

This past year the department has proposed a new professional masters degree program, and in December the Eberly College of Science received a \$420,000 grant from the Sloan Foundation to develop this and two other professional degree programs to help meet the urgent need for trained professionals in the workforce. The Master of Applied Statistics, will be a non thesis degree program, composed of applied statistics courses, many of which we have taught very successfully as service courses for graduate students in other disciplines. The program will be offered as a 1-2 year residence program, and as an on-line program through the World Campus continuing and distance education program. The first course to go on-line is Stat 500 Applied Statistics, which is scheduled to be offered this Spring, with additional courses to follow shortly thereafter. More information on the world campus programs and this course can be seen at www.outreach.psu.edu.

The **Clifford C. Clogg** Memorial Lecture will be given this year by Professor **Christopher Winship**, of the Department of Sociology at Harvard University. He will speak on March 27, 2001 on the topic of "Does Going to School Make You Smarter? The Estimation of Causal Effects with Longitudinal Data". Please join us if you can, for this evening public lecture, and an opportunity to recall the contributions of the late Professor **Cliff Clogg** at the interface of Statistics and Sociology.

New Faculty & Staff

Naomi Altman, associate professor of statistics received her Ph.D. from Stanford University in 1988. Her research interests are nonparametric smoothing, model selection, longitudinal and spatial data, functional data analysis.

Stephen Rathbun, associate professor of statistics received his Ph.D. from Iowa State University in 1990. His research interests are geostatistical data, and spatial point patterns.

Robin L.S. Hill joined our staff on April 2, 2001 as our Windows/Nt/PC support person. She comes to us from U. Penn's Population Studies Center where she handled computer support in a similar environment.

James Lockwood joined our department on October 2, 2001 as the new Manager of Network and Information Systems. James comes from sunny California where he was employed at a start-up company called Quick Dog. In that position he was responsible for system administration, information technology and statistical data and clustering. We extend a warm welcome to all of them!

Alumni Workshop

The Fourth Annual Alumni Workshop will be held on Friday, February 8, 2002. This is a great opportunity for past, present and future members of the department to get together for a day of collegiality, conviviality, and statistics.

Mark Becker, Dean and Professor of Biostatistics, School of Public Health, University of Minnesota, will be the keynote speaker. Mark received his Ph.D. from our department in 1985. His research on statistical methodology has appeared in leading journals of biometrics, medical statistics, sociology, and statistics, and he has co-authored publications in journals of accident analysis and prevention, dentistry, epidemiology, health services research, medicine, nursing, nutrition, and occupational health.

Alumni of the department will be invited to give short presentations about their current research and/or professional careers, whether in academia or in industry. By providing exposure to statistical careers, these talks will be of value to current and prospective students in making their own school and career decisions. Masters and Ph.D. students in our department will also be given the opportunity to present short talks on their ongoing research providing prospective students with an introduction to the research of our department.

Alumni will display recruiting information and privately interview interested students throughout the Workshop. Alumni and current students are expected to mutually benefit from participation in the Workshop.

The Workshop is made possible through the combined efforts of students, faculty and staff of the department.

Andrea Piccinin and **KB Boomer** are responsible for overall organization, SAC represents the students, and Professor **Steve Thompson** represents the prospective students. Please do not hesitate to contact them about your questions or suggestions.

Curriculum Changes

Students who took Statistics 200 (Elementary Statistics) this Fall didn't have to worry about falling asleep during lectures. The course has been restructured to eliminate lectures and add class time in computer labs. With the old format, the class met a total of five times per week. Now with the new format, students taking the course will only meet three times per week, once as a large group and twice in smaller groups.

In their large group meetings, students take a Readiness Assessment Test on the assigned reading individually. Then they take the same test again in small groups. The tests are scored immediately and returned to students who are then given the chance to appeal the grade. The answering of the multiple choice questions is also different than traditional tests. Students answer each question three times to indicate their level of certainty.

In computer lab meetings, statistics students complete various activities that involve collecting data on the Web. They can also use the Web if they prefer not to do as much reading. They can go to CyberStats on the Web for a visual version of the material. One of the goals of the redesign was for a greater emphasis on statistical literacy in the course, which is required for more than 60 majors and is taken by more than 2,000 students each year.

The goal is to get students to understand that statistics happen all around them. The biggest problem was that attendance in the large lectures was less than satisfactory. With the restructuring of the course, there will be a lot of hands-on work with concepts that involve solving statistical problems. Also, the department has hired 10 undergraduate interns to work in the computer labs monitoring group work, diagnosing problems and assisting.

Dr. **William Harkness** carried out a pilot program of the redesigned course last spring and found that as the course progressed, students ultimately benefited from it and felt it was a good experience. The course adjustments were made possible by a \$200,000 grant awarded by the Pew Learning and Technology Program at the Center for Academic Transformation. The department of statistics, educational technology services and the Schreyer Institute for Innovation in Learning were involved in the process.

Special Honors

Dr. **G.P. Patil**, distinguished professor of mathematical statistics and director of the Center for Statistical Ecology and Environmental Statistics, has been invited to serve on the Special Science Advisory Panel on "The Human Environment Index: A Tool for Measuring the Human Impact on the Environment" of the United Nations Environment Program with panel Chair Mario Molina, Nobel Laureate,

and a member of the U.S. President's Committee on Advisors on Science and Technology.

Dr. **G.P. Patil** was invited to serve on the Special Panel of the United Nations Industrial Development Organization at the International Center for Science and Technology in Trieste, Italy during September 20-22, 2000 to advise on the Proposed International Research and Training Program on Landscape Patterns Analysis for Sustainable Environment and Development.

Dr. **Calyampudi Rao**, Holder of the Eberly Family Chair in Statistics and director of the Center for Multivariate Analysis, was awarded an Honorary D.Sc. by Kent State University. The Mayor of Kent proclaimed May 13, 2000 as **C.R. Rao Day** and presented him with a key to the city.

An international conference of Statistics: Reflections on the Past and Visions for the Future was held at the University of Texas, San Antonio on March 16-19, 2000, in honor of Dr. **C.R. Rao** on the occasion of his 80th birthday.

Dr. **C.R. Rao** received the U.S. Army Wilks Medal in October, 2000.

Visitors

During the past year the Statistics Department has had a few visitors from other universities who have come to Penn State to do research or teach some of our statistics classes.

Dr. **Ayanendranath Basu**, associate professor of statistics is visiting our department from the Indian Statistical Institute from August 2000 through May 2001.

Dr. **Srabashi Basu**, instructor of statistics, also of the Indian Statistical Institute, has joined her husband Ayan for the Spring semester.

Dr. **Zehua Chen**, professor of statistics, is visiting the Statistics Department from the National University of Singapore from July 1, 2000 through December 31, 2000. He has been working with Dr. Gogesh Babu.

We thank them for their interest in our department.

Statistical Centers

Center for Statistical Ecology & Environmental Statistics

Dr. **Koji Kurihara**, Okayama University, Japan, has completed his one-year visit to the Center in May 2000. He participated in the research project on echelon analysis, joint with the Center for Remote Sensing at the University,

leading to an invited co-authored research publication in *Community Ecology* on "Echelon analysis of the relationship between populations and land cover pattern based on remote sensing data."

Ms. **Caterina Pisani**, University of Florence, Italy is a visiting research scholar at the Center under the auspices of the Italian National Research Council with interests in sampling designs and statistical methods for environmental and ecological assessments with observational economy.

Graduate research assistant, **Senin Banga**, has completed his Ph.D. with his dissertation on "risk analysis of benchmark dose for continuous response and sensitivity to model specification," and has accepted a position as a mathematical statistician with Minitab, Inc., of State College.

Colloquium

Under the direction of Dr. **Francesca Chiaromonte**, assistant professor of statistics (Spring 2000) and Drs. **David Hunter** and **Jouni Kuha**, assistant professors of statistics (Fall 2000) the department once again enjoyed excellent speakers for our colloquium series throughout the year. Those presenting from outside Penn State included **Marco Dall'Aglio**, University of Pescara, Italy and Georgia Institute of Technology, **Federico Stefanini**, University of Florence, Italy, **Beatrix Jones**, University of Washington, **Michael Elliott**, University of Michigan, **Jianqing Fan**, UCLA and University of North Carolina, **Tianxi Cai**, Harvard University, **Jaeyong Lee**, National Institute of Statistical Sciences, **Jun Zhu**, Iowa State University, **Dennis Cook**, University of Minnesota, **Tonya King**, Hershey Medical Center, **Ruzong Fan**, Hershey Medical Center, **Eustathios Papanoditis**, University of Cyprus and UCSD, **Daniel Walsh**, University of Washington, **Jia Li**, Xerox Palo Alto Research Center, **Rand Wilcox**, University of Southern California, **Shaw-Hwa Lo**, Columbia University, **Athanasios Kottas**, University of Connecticut, **Runze Li**, University of North Carolina, **David Donoho**, Stanford University, **Prakash Patil**, University of Birmingham, UK, **Wenceslao Gonzalez Manteiga**, University of Santiago de Compostela, **Francesco Bartolucci**, University of Perugia, Italy, **Basilio de Braganca Pereira**, Universidade Federal do Rio de Janeiro, **Minge Xie**, Rutgers University, **Mark Handcock**, University of Washington, **Ayanendranath Basu**, Indian Statistical Institute, **Peter McCullagh**, University of Chicago, **Guenter Walther**, Stanford University, **Ronald Randles**, University of Florida, **Grace Wahba**, University of Wisconsin, **Edward Wegman**, George Mason University, **Xiaoming Huo**, Georgia Tech, **Kenny Ye**, SUNY at Stony Brook.

Speakers from Penn State included **William Harkness**, **Michael Akritas**, **Robert Schoen**, **Souder Kumara** and **Asok Ray**.

Faculty Talks

Dr. **G. P. Patil**, distinguished professor of mathematical statistics and director of the Center for Statistical Ecology and Environmental Statistics, gave the inaugural keynote address to the annual meeting of the National Statistical Society, Slovenia, during September 24-26, 2000. He spoke on "Multiscale advanced raster map analysis for sustainable use of the planet using remote sensing data."

Dr. **Calyampudi R. Rao**, Eberly Professor and director of the Center for Multivariate Analysis presented an invited talk at the International Workshop on Goodness-of-fit Tests and Validity of Models on May 29-31, 2000, Paris, France, titled "Karl Pearson's chi-square test: The dawn of statistical inference."

He presented an invited talk at the International Conference of Statistics in the 21st Century, University of Maine, Orono, USA, June 29-July 1, 2000, titled "Statistics: Reflections on the past and visions for the future."

Dr. Rao spoke at Texas A&M University on April 22, 2000, on "Statistics: A technology for the millennium."

On April 20, 2000, Dr. Rao spoke at Pennington Biomedical Research Center at Louisiana State University on "Biostatistics: Current developments and future directions of research."

Faculty News

Dr. **G. P. Patil**, distinguished professor of mathematical statistics and director of the Center for Statistical Ecology and Environmental Statistics was invited to serve on the peer review panel for the STAR Grants competition on Futures Research in Sustainability and Regional Scale Assessments of the U.S. Environmental Protection Agency, Washington, DC during September 28-30, 2000.

Dr. **Thomas P. Hettmansperger**, professor of statistics is on sabbatical this year and he visited the University of Tampere and the University of Jyväskylä (both in Finland) Fall semester. He plans to visit the University of South Australia Spring semester.

Awards

Congratulations to the following students who received departmental travel award funds: **Haihong Li**, **Jerry Maples**. They both attended the meetings in Indianapolis, IN in August, 2000.

Congratulations Students

Doctorates

Maren Olsen (Fall 1999) accepted a position as a Biostatistician for Virginia Health Services Research and Development Field Program and Assistant Professor at Duke University. Her thesis titled *A Two-Part Random-Effects Model for Semicontinuous Longitudinal Data* was conducted under the direction of associate professor of statistics **Joseph Schafer**.

Richard McGrath (Spring 2000) accepted a position as an assistant professor at Bowling Green State University. His thesis, titled *Dispersion Effects in Unreplicated Fractional Factorials* was conducted under the direction of Professor **Dennis K.J. Lin**.

Mustafa Nadar (Spring 2000) accepted a position as an assistant professor at Gebze Yuksek Teknoloji Enstitüsü. His thesis titled *Multivariate Sign and Rank Methods Based on the Oja Criterion Function* was conducted under the direction of professor of statistics **Thomas Hettmansperger**.

Jennifer Pittman (Spring 2000) accepted a position as a Junior Fellow at the National Institute of Statistical Sciences. Her thesis titled *Adaptive Splines and Genetic Algorithms for Optimal Statistical Modeling* was conducted under the direction of Eberly Professor **C.R. Rao**.

Recai Yucel (Spring 2000) accepted a position as a post doctoral fellow at Harvard Medical School, Department of Healthcare Policy. His thesis titled *Computational Tools for Missing Values in Multivariate Longitudinal and Clustered Data* was conducted under the direction of associate professor of statistics **Joseph Schafer**.

Masters

Jianhua Jin (Fall 1999) accepted a position at the Johns Hopkins University School of Hygiene and Public Health, Baltimore, MD.

Michele Shaffer (Fall 1999) is pursuing her Ph.D. in statistics at Penn State.

Jennifer Frank (Spring 2000) accepted a position as a statistical quality assurance analyst at Minitab, Inc.

Bidisha Ghosh (Summer 2000) accepted a position as a survey sampling specialist at Mathematica Policy Research.

Shiwen Jiang (Summer 2000) accepted a position at W.R. Berkley Corporation Mid-Atlantic Group in Richmond, VA as an actuarial assistant.

Qui Li (Summer 2000) accepted a position at The Segal Company, New York, as an actuarial assistant.

Jiping Wang (Summer 2000) is pursuing his Ph.D. in statistics at Penn State.

Welcome New Students

The department welcomes the following new students who were admitted into our graduate program Fall 2000:

Andrew Basehoar, Francesca Callegari, Maria Chrysostomou, Megan Darnell, Tony Hua, Melinda Moyer, Ryan Vranay, Ying Wan, Shaoli Wang, Deanna Weidenhamer, Allison White, Xiaojiang Zhan, Luhua Zhao.

Clifford C. Clogg Lecture

The 2000-2001 Clifford C. Clogg lecture is scheduled for Tuesday, March 27, 2001, jointly sponsored by the Statistics and Sociology Departments at Penn State. The speaker will be Professor **Christopher Winship** of the Department of Sociology at Harvard University. The public lecture on Tuesday evening will be "Does Going to School Make You Smarter? The Estimation of Causal Effects with Longitudinal Data." This joint lecture series, endowed in memory of the late Professor **Clifford C. Clogg**, is held annually. In addition to the public lecture, Professor Winship will speak informally to the Sociology and Statistics departments at noon on Tuesday and Wednesday. Tuesday's talk is "New Methods for Causal Analysis: Implications for Sociological Research." On Wednesday, the topic is "A Bayesian Approach to Model Specification Uncertainty." Please try to join us for this lecture series.

Alumni News

The Fall Picnic was held on October 3, 2000 at Stone Valley Lodge and was a great success. The student/faculty volleyball game was an exciting event with the faculty actually winning (thanks to the great play by David Hunter), former University of Michigan varsity team member.

Please join us for the 2001 Fall Picnic on Sunday, September 30, 2001.

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.)

9 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

Statnews is published by the Penn State Department of Statistics,
326 Thomas Building, University Park, PA 16802.

Editorial Advisor: Dr. James Rosenberger
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This publication is available in alternative media on request.

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Produced by the Penn State Department of Statistics U.Ed. SCI 01-63

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