

DEPARTMENT *of* STATISTICS

NEWS

Multidisciplinary Research in Statistics at Ohio State

The discipline of statistics creates methodology to advance empirical research. Statistics involves the analysis of data that has been collected using all manners of techniques and devises intelligent methods of data collection (experimental design). Members of the Ohio State Department of Statistics are heavily involved with both activities. Much of this work is directly motivated by the changing needs of researchers in a wide variety of scientific and engineering endeavors.

Life Sciences

**Bone Mass Modeling and Osteoporosis:**

Dr. Velimir Matkovic, Physical Medicine and Prem Goel have been involved in work to derive a basic understanding of the causes of osteoporosis, a disease that often incapacitates

post-menopausal Caucasian women. A double-blind clinical trial, funded by the National Institutes of Health (NIH) and some pharmaceutical companies, is studying long-term effects of calcium supplements on bone growth parameters of young females in the range of 10 to 19 years of age.

Surgery: Joseph Verducci is working with members of the Department of Surgery on several projects. Scott Melvin and his co-investigators are comparing minimally invasive heart surgery with open heart surgery for high-risk patients; Chris Kaeding is identifying risk factors for delayed recovery from ACL surgery; and Chuck Cook is studying the effects of various viral infections

that extend patient stays in the Intensive Care Unit.

General Clinical Research Center (GCRC): H. N. Nagaraja

makes a variety of statistical contributions to GCRC-sponsored projects. As part of this effort, he serves as the statistician to a group

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Research Experience for Undergraduates Program in Biostatistics



The Department of Statistics and the Biostatistics Program in the School of Public Health hosted a National Science Foundation-sponsored Research Experience for Undergraduates (REU) Program in Biostatistics during summer 2001. Ten undergraduates (see box) were selected from more than 40 applicants to participate in the program. Each participant was assigned a project that required the application of statistical methods to real problems. Subjects for these projects included the following:

- Study of specific cytogenetic (chromosome) abnormalities as prognostic indicators of adult acute leukemia;
- Histopathological biomarkers or angiogenesis (blood vessel formation) and its roll in the progression of prostate cancer;
- Factors involved in constructing and evaluating safety devices for intelligent vehicles;
- Dietary compounds, for example, isothiocyanates in vegetables and polyphenolics in tea and fruits, that inhibit or prevent lung and esophageal cancer in animals;
- Comparisons of survival rates for patients receiving both kidney and pancreas transplants when done separately versus when done simultaneously;
- Gene expression analysis using DNA microarray data;
- Analysis of sample survey results obtained via the Internet versus those obtained by a standard telephone interview;
- Health risk behaviors of youth as monitored by the Youth Risk Behavior Survey over the period of time from 1993 to 1999; and
- Longitudinal study of pulmonary variables for HIV-positive subjects.

Participants took intensive courses in applied statistics appropriate for their projects during six weeks of the program. Throughout the entire eight weeks of the program each participant met with faculty mentors concerning the subject matter issues related to their specific project. In addition, participants met with statis-

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Doug Wolfe

Where Have all the Hours Gone?

By Doug Wolfe

What began on July 1, 2000, as a sleepy introduction to being chair of the Department of Statistics soon became a racing train full of interesting people, important projects, numerous (even some important) deadlines, fresh challenges, and, of course, continuing commitments that did not seem to realize that I had taken a new position! But all of a sudden I wasn't just riding on the train, it was my duty to keep it focused on some flickering light at the end of the tunnel. Luckily for me, with all of these new "opportunities" came a faculty and staff second to none in their willingness to help whenever and however they were asked. I have almost made it through the first year at this new position with a renewed appreciation for all the good people who make up our Department of Statistics. My thanks to everyone for their hard work this year — but, of course, I will now EXPECT it next year as well!

Let me touch on a few of the important things that occurred in the department during this past year.

Coming out of the chute running in July, a number of faculty in the department combined efforts with interested colleagues from the Department of Mathematics, as well as biological and medical scientists from across campus, to forge a major submission to the National Science Foundation for the establishment of an NSF-sponsored Mathematical Biosciences Institute here at Ohio State. If the proposal is funded, we will join a very prestigious handful of NSF-funded national institutes in the mathematical sciences. At the moment, we are waiting to hear from the review panel regarding a possible site visit for the proposal. The National Science Foundation is expected to announce the award(s) this autumn.

This has also been an active year with respect to department personnel. First, we welcomed Roger Woodard to fill a newly created position of educational program specialist

and auxiliary assistant professor. In this role, Roger has been actively involved in both supervision of our graduate teaching associates and coordination of our undergraduate statistics courses. His presence has already had a strong positive influence on the department's operations in both arenas. In addition, Mark Irwin moved into another newly created department position as a statistical computing scientist. In this role, Mark serves as a technical support person for research projects throughout the department. He also teaches short courses on current topics in computational statistics for both the graduate students and faculty in the department. His activities in the first year of this new position have been substantial and he has provided important contributions to the research efforts of the department. The department also welcomes back an alumnus, Deb Rumsey, as director of the Mathematics and Statistics Learning Center. Although her position reports directly to the dean of the College of Mathematical and Physical Sciences, Deb teaches one course each year for the department and is actively involved in a number of educational initiatives with department faculty. Finally, Bill Notz will be returning full time to the department from his time as associate dean of the College of Mathematical and Physical Sciences. Bill and Tom Santner have assumed the positions of co-directors of the Statistical Consulting Service for this coming academic year. We are appreciative of Bill's excellent contributions as associate dean, but we are also very pleased to have him back full time in the department. (Well, at least close to full time in the department, as we also congratulate Bill on accepting a term as editor for *Technometrics!*)

Then the hiring activity really began! Much of autumn and winter quarters were spent processing files and interviewing applicants for three assistant professor positions we wanted to fill. We were looking specifically for new faculty in the areas of statistical genetics and spatial statistics. I am pleased to say that Peter Craigmile from the University of Washington will be joining our faculty as an assistant professor beginning with Autumn Quarter 2001. In addition, Soledad Fernandez from Iowa State University will join the faculty for at least two years as a visiting assistant professor beginning this autumn quarter as well. Finally, we are also pleased to hire Ernest Fokoue as a new assistant professor with duties that involve teaching statistics courses on the Newark Campus. This has been an active and successful year of recruitment and we are all looking forward to welcoming these outstanding young colleagues to our faculty this fall. You can learn more about our new assistant professors in the *Faculty News* article elsewhere in this newsletter.

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(top) Graduate students (from left), Roxana Alexandridis, Ofelia Marin, and Martina Pavlicova enjoy refreshments following the Rustagi Special lecture. (below) Rustagi lecturer Thomas Kailath, Stanford University, exchanges quips with Professor Noel Cressie (right) at the reception.

Employment opportunities for our graduates with either doctoral or master's degrees continue to be excellent. The list of this year's graduates from our program can be found on the back cover of this newsletter. However, the combination of a good economy and a decreasing number of qualified American undergraduates who are interested in pursuing graduate work have made the recruitment process for the very best graduate student applicants more and more difficult. As a result, we have been actively seeking additional corporate support to help attract the top undergraduates to pursue their graduate work in statistics or biostatistics here at Ohio State. Fortunately, we have had such funding for both the Lubrizol Corporate Fellowship and the Quintiles Corporate Fellowship over the past several years and their fine support will be continuing. However, I am pleased to announce that three new corporate sponsors have agreed to provide five-year commitments to our Corporate Fellowship program. We have offered the first of the new Battelle Memorial Institute Corporate Fellowship to a Ph.D. student

who is beginning his graduate work this summer quarter. In addition, we have a five-year commitment for a Procter and Gamble Corporate Fellowship for an incoming student who is pursuing a Ph.D. in Biostatistics and a five-year commitment for a Wyeth-Ayerst Corporate Fellowship for an incoming student in one of our master's programs. The first of these latter two corporate fellowships will be offered to new applicants for the 2002–2003 academic year. We wish to publicly thank all of these corporate sponsors for their generous support of our graduate programs in statistics and biostatistics.

With the aid of these corporate fellowships and the special efforts of our new Graduate Studies Chair, Elizabeth Stasny, we are once again welcoming a very strong group of new graduate students to our master's and doctoral programs for this coming academic year. Fifteen students have started their graduate work this summer quarter and we expect another five students will join us in autumn quarter.

With an eye to the 2002–2003 recruitment class, the Department of Statistics and the Biostatistics Program in the School of Public Health successfully competed for National Science Foundation funding to support a Research Experience for Undergraduates (REU) Program in Biostatistics that is being hosted here in summer 2001. We have attracted ten outstanding undergraduate juniors from across the nation to participate in this program. More details on the REU program can be found in a separate article in this newsletter.

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Research Experience

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tics and biostatistics faculty, staff, and graduate research associates to discuss alternative ways of analyzing the data associated with their project. Each participant prepared a written report documenting the relevant scientific questions and the associated statistical solutions for their project and made a verbal presentation of their report to the other participants. A poster session was organized at which the program participants shared their summer experiences with the scientific community at Ohio State.

Participants in the summer 2001 REU in biostatistics:

Student	Undergraduate Institution
Jason Gershman	Rice University
Jodie Jansen	Luther College
Amy McGregor	Virginia Tech University
Anne-Michelle Noone	Boston University
Colin O'Rourke	University of New Mexico
Lynne Peoples	St. Olaf College
Tania Robbins	Purdue University
Jennifer Ryea	University of New Hampshire
Stacey Stillion	Ohio Northern University
Brandy Wieggers	University of Idaho

Multidisciplinary Research

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from the Division of Nephrology that is working on systemic lupus erythematosus. In another project, he is collaborating with a faculty member from the College of Nursing who is working on improving adherence of medication regimen in HIV patients. Nagaraja recently completed a re-analysis of an important historical data set on the effectiveness of surgery to treat Meniere's disease. This analysis resulted in the reversal of the primary conclusion of an earlier finding and is expected to change the clinical practice in the treatment of this disease. The experiment cannot be repeated because of current restrictions on the use of human subjects and thus the data have become invaluable.

Medical Imaging: Noel Cressie, Tom Santner, and graduate student Martina Pavlicova are initiating research on methodology for analyzing functional magnetic resonance images (fMRI). This work is in conjunction with members of the Department of Radiology. fMRI is a noninvasive modality for collecting a time sequence of images taken seconds apart on the same subject. The primary challenges of fMRI data are (1) its large volume, (2) its high spatial/temporal correlation, (3) its high noise levels, and (4) the statistical modeling of treatment and other effects on the (complex) image. Comparing either the brain maps of the same subject undergoing different experimental stimulation or different subjects with common or different treatments makes these problems especially challenging.

Statistical Genetics: Shili Lin has been collaborating with Drs. Lee Hebert, Brad Rovin, Dan Birmingham, and Chuck Yung Yu, all in the College of Medicine, on projects involving identifications of genetic and environmental risk factors for several auto-immune diseases, including systemic lupus erythematosus and congenital adrenal hyperplasia.

Fundamental Chemical approaches to Gene Expression: Mike Fligner and Joseph Verducci have been working with a local company, LeadScope Inc., to develop new statistical methodology that can be used to uncover chemical structures most closely associated with a biological response of interest. An example of the application of their methodology is the problem of identifying the next generation of chemotherapeutic agents against human cancer cell lines. In collaboration with their industrial partner Leadscope and the National Cancer Institute, they have been working on the problem of screening structural classes of compounds against several human cancer cells based on their cDNA microarray data.

Chemistry/Biochemistry: Joseph Verducci and Mike Fligner are working with Martin Caffrey, Chemistry, in identifying factors influencing the lipid content of cell membranes. Steven MacEachern and Roland Dunbrack, Fox Chase Cancer Center, are interested in protein structure and are using nonparametric Bayesian techniques

to model several structures and to perform exploratory searches for clues on further aspects of the structures.

Sleep Apnea: Mario Peruggia is collaborating with Dr. Paul Suratt of the University of Virginia School of Medicine on an NIH-sponsored project to study sleep apnea in children. The major goals of this project are (1) to better define breathing and sleep in children with sleep-disordered breathing (SDB), (2) to assess the extent to which SDB disrupts sleep and contributes to impaired general cognitive functions and emotional and behavioral difficulties, (3) to evaluate the impact of SDB on children's growth, and (4) to determine if the skeletal and soft tissues surrounding the airway in children with SDB are different than in children without SDB.

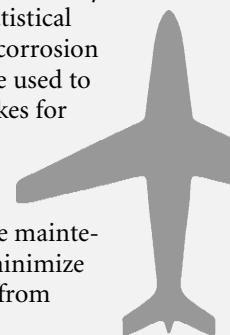
Engineering

Biomechanical Engineering:

Thomas Santner and collaborators from the Biomechanical Engineering Program at Cornell University and the Department of Biomechanics and Biomaterials at the Hospital for Special Surgery (New York City) have developed an approach to the engineering design of optimal prosthetic joints. The design of optimal joints is complicated because of the large number of variables required to describe the performance of the prosthesis. In addition to engineering design variables, such as the geometry of the implant components and their material properties, there are patient variables such as weight, activity, and bone elasticities, and also surgical insertion parameters. Design variables are tightly controlled, while patient variables are distributed across the populations of target patients and surgeons. This collaboration has led to the development of new statistical approaches to design of computer experiments and software to implement the methodology.

Corrosion Science: Doug Wolfe is collaborating with the director of the Fontana Corrosion Center, Jerry Frankel, in the development of appropriate statistical models to analyze the paths taken by corrosion in aircraft wings. These models will be used to provide inference about the time it takes for wing corrosion to become serious enough to require corrective measures. This information will assist aircraft users in setting up appropriate maintenance schedules for their aircraft to minimize downtime but still prevent corrosion from leading to serious consequences.

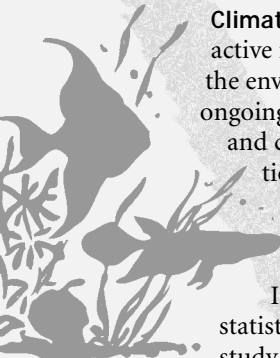
Transportation: The National Consortium for Remote Sensing in Transportation-Flows is supported by the U.S. Department of Transportation to apply remote-sensing



methodology to transportation problems. The objectives include the development of methods to improve the efficiency of the transportation system at the national, state, and local levels by integrating remotely sensed traffic flow data obtained from airborne or satellite platforms with traditional data collected from the ground to monitor and manage traffic flow. This consortium grew out of the collaborative research efforts of Mark McCord (Civil Engineering), Carolyn Merry (Center for Mapping), and Prem Goel.

Environmental Science

Remote Sensing: Noel Cressie is collaborating with NASA scientists at the Jet Propulsion Laboratory, Pasadena, CA, on analyzing aerosol and cloud data from the recently launched Earth Observing System satellite called Terra. Through spatial statistical classification techniques, the sources of aerosols around the world will be tracked and their influence on cloud cover and, ultimately, on global climate change will be assessed.



Climate Modeling: Mark Berliner is active in interdisciplinary research in the environmental sciences. In one ongoing, NASA-funded project, he and collaborators from the National Center for Atmospheric Research (NCAR), the University of Missouri, and the Scripps Oceanographic Institute are developing novel statistical/physical models for the study and prediction of atmosphere and ocean interactions. The data sets to be used include remotely sensed indications of near-surface ocean winds (from a scatterometer) and sea-surface heights (from an altimeter), as well as so-called Lagrangian data provided by ocean drifters.

Biocomplexity: Noel Cressie and Mark Berliner lead an EPA-funded team, including researchers from the U.S. Fish and Wildlife Service and the University of Missouri, addressing issues of prediction of habitat and wildlife population patterns using, in part, weather and climate forecasting.

Marketing Research

Angela Dean and statistics graduate student Qing Liu, along with Greg Allenby, Fisher College of Business, are investigating optimal designs for conjoint studies. In conjoint studies, consumers are asked to evaluate a number of product profiles, consisting of various combinations of product attributes. The contributions made by the individual



attributes to the overall consumers' preferences are estimated and used by marketers to identify characteristics of products that affect consumers' choice/buying behaviors. This enables analysis of new products and concepts, repositioning, competition, pricing, and market segmentation.

New GIS in Survey Research Approved!

The Graduate Interdisciplinary Specialization (GIS) in Survey Research was approved by the university in Spring Quarter 2000. The GIS is open to any graduate student across the university who is interested in Survey Research. It enables students to increase their knowledge in this growing area, to gain practical experience in survey research, and to make themselves more attractive to potential employers. Successful completion of the GIS is noted on students' transcripts.

The GIS in Survey Research involves 17–23 hours of graduate-level course work in five courses. Three courses are required: Survey Sampling, Questionnaire Design, and a new Survey Research Practicum course. Additionally, students must choose one course from each of two extensive lists of approved electives. The first list includes courses on applications of survey research in the fields of public opinion, public attitudes, tastes and valuations. The second list contains courses dealing with tools of survey research, survey design, conducting surveys, and statistical analysis of survey data. These lists include courses offered in departments across the university, including Agricultural Economics, Agricultural Education, Economics, Educational Policy and Leadership, Geography, Journalism and Communication, Marketing, Political Science, Psychology, Public Health, Public Policy and Management, Sociology, and Statistics, allowing a truly interdisciplinary experience for students.



Some spring graduates attend departmental reception following commencement. Students are (from left to right), Iyue Sung, Yangyan Hu, Gregory Stark, Heather Mathews, Meena Doshi, Elizabeth Scott, and James Rogers.

Where Have all the Hours Gone?

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In addition to the numerous seminars associated with our recruitment process, and the usual busy activity of the Statistics and Biostatistics Seminar Series, there were many special topical seminar series in which department faculty members were involved during this past academic year. Noel Cressie organized and coordinated an environmental data seminar series during Winter Quarter 2001. Prem Goel did the same throughout the year for an interdisciplinary (joint with the Department of Electrical Engineering) research seminar series on the theme of statistical signal and image processing. Mike Fligner and Joe Verducci coordinated a mini-series of seminars on statistical issues in genomics research. Elizabeth Stasny continued her coordination of the Brown Bag Luncheon Seminar Series for the Center for Survey Research and Shili Lin carried on with her Statistical Genetics Journal Club. Haikady Nagaraja organized an international conference on order statistics and extreme values that was held last December in Mysore, India. The speaker for the annual Chotey Lal and Mohra Devi Rustagi Special Lecture this year was Thomas Kailath from Stanford University and he spoke on the use of statistics in signal detection.

What lies ahead for next year? Clearly, more of the racing train and constantly moving target towards the light at the end of the tunnel!

After a long wait, we have finally received word from the Office of Academic Affairs that the department has been chosen to receive an Academic Enrichment Award in Statistical Genetics. This award is the result of hard work by Tom Santner and the rest of our biostatistics faculty in the preparation of the proposal that was submitted in last year's university-wide competition. With this award the recruiting wheels will be spinning fast again this year, as it provides for the hiring of a senior and two junior colleagues in the hot area of statistical genetics. We will also be looking to hire an assistant professor as a joint appointment with the Department of Civil and Environmental Engineering and Geodetic Science. This appointee will be expected to develop and apply original statistical methodology in some area of environmental science or engineering. In addition, new projects concerned with the possibility of establishing an Institute of Statistical Education (spearheaded by Deb Rumsey) here at Ohio State and an innovative approach (called the Buffet Initiative) for teaching undergraduate statistics courses (being developed by Dennis Pearl) promise to add fuel to the fire!

Finally, we remind you that the newsletter is posted on the department web site (www.stat.ohio-state.edu). If you know of Ohio State alumni who have not received a hard copy of the newsletter, please let me know (daw@stat.ohio-state.edu) and we will send them one; in the meantime, please refer them to the Web.

If the train doesn't crash and the light at the end of the tunnel doesn't go out, I will be back next year (same time, same place) to report once again on the special and important projects that occupy the time and energy of the people in our department.

Faculty News

The Department of Statistics now has two tenure track positions at the regional campuses, one at the Marion campus and one at the Newark campus. Omer Ozturk has been teaching at the Marion campus since autumn, 1996, and this year Ernest Fokoue was hired to fill the Newark position (see Ernest's biographical sketch below). In the autumn we are beginning a program where faculty members at the regional campuses will spend one quarter on the Columbus campus teaching and doing research so they can become more fully integrated into the activities of the statistics department.

This year Jason Hsu and Bill Notz became Fellows of ASA and Mark Berliner became a Fellow of IMS. The department now has 12 ASA Fellows, seven IMS Fellows and 10 elected members of ISI. Steve MacEachern was promoted to full professor effective autumn 2001. Bill Notz has assumed the editorship of *Technometrics* and Angela Dean read a paper (jointly with Sue Lewis) on group screening to the Royal Statistical Society in May 2001.

The department hired Peter Craigmile as a new assistant professor on the Columbus campus, Soledad Fernandez has a two-year appointment as a visiting assistant professor on the Columbus campus and Ernest Fokoue was hired as an assistant professor on the Newark campus. Biographical sketches of our three newest faculty members follow. In their own words:

Peter Craigmile

I recently graduated from the University of Washington in Seattle. The title of my dissertation was "Wavelet-based Estimation of Trend-contaminated Long Memory Processes," with Donald Percival and Peter Guttorp. The thesis focuses on a topic in time series analysis, namely estimating a trend component (large-scale variations) in the presence of long memory errors (slowly decaying autocorrelations). I have also investigated wavelet-based approximate maximum likelihood estimators for fractionally differenced processes, and established the validity of an exact method for simulating these — and related — processes. My work is a mix of theoretical, methodological, and applied statistics (e.g. analyzing Northern Hemisphere temperatures since the mid 1800s).

For the last sixth months, I have been a lecturer in the Department of Statistics at the University of Washington. I have taught two undergraduate classes of Statistics for Engineers, and a graduate computing class. Teaching a class of 150 students was quite an eye-opening experience!



Peter Craigmile

In my spare time, I enjoy singing in choirs, listening to music, traveling, and reading. I am hoping to get back into cycling again when I get to Columbus and I also hope to have the chance to (re)learn some foreign languages.

I was a mathematics and statistics major at Glasgow University, Scotland, and received a Diploma in Mathematical Statistics from Cambridge University, England. I moved to the U.S. in September of 1997 and received my Ph.D. in Statistics from the University of Washington in December of 2000. I am looking forward to becoming part of the statistics faculty at Ohio State.



Soledad
Fernandez

Soledad Fernandez

I was born in Montevideo, Uruguay, where I received a B.S. in Agronomy at the University of Uruguay. After working for three years in the dairy industry, I decided to pursue graduate studies in the United States. In 1994, I joined the Department of Statistics at Iowa State University as a graduate student. While working towards the M.S., which I completed in 1998, I became interested in applying statistical

methods to problems in animal breeding and genetics. I feel fortunate that at Iowa State University I had the opportunity to work on a joint Ph.D. degree that consists of two independent curricula (animal science and statistics) with a common research program.

After completing the required preliminary examination in both departments in 1998, I received the T.A. Bancroft Statistics Award, which is given annually in recognition to the most outstanding Ph.D. candidate with a joint major in statistics. This year, I was honored with the Teaching Excellence Award, given in recognition to outstanding performance as a teaching assistant for the Department of Statistics.

My research interests lie in the area of statistical and computational aspects of QTL mapping, marker-assisted selection, finite locus models, and controlling error rates for significance testing. Another novel area in which I plan to make sustained contributions is that of methods for analysis of gene expression data. In my present position as a research associate with the Department of Animal Science, I am working on a project to detect and map QTL for meat quality traits in swine populations.

On a personal note, last March 21 my husband Marcelo Dapino and I were blessed with a baby boy (Fernando Martin). In the autumn quarter, Marcelo will be joining the Department of Mechanical Engineering as an assistant professor. Since Fernando was registered at the Ohio State Child Care Center, we look forward to all three of us becoming Buckeyes!

Ernest Fokoue

I was born in Nkongsamba, a little town in Cameroon (Africa). From my very early childhood, I developed a keen interest in numeracy as a whole, influenced by my brother's enthusiasm for mathematics and my father's love of geometric objects. As I grew up, it became crystal clear that I was going to embrace a career involving one or many aspects of mathematical sciences.



Ernest Fokoue

I obtained my B.S.(Hons) in Mathematics and Computing Science from the Mathematics Department of the University of Yaounde (Cameroon) in 1990. After some years outside academia (mainly as a volunteer), I joined the Catholic University of Central Africa where I worked as an assistant lecturer of computing science from 1995 to 1997. I then obtained a British Government scholarship that allowed me to join the prestigious Neural Computing Research Group at Aston University (England) where I did my M.S. by research in Pattern Analysis and Neural Networks, concentrating on Mean Field Methods for Gaussian Process Classifiers.

I completed my Ph.D. at the University of Glasgow under the supervision of Professor Mike Titterton, mainly exploring various topics in the analysis of latent structures. My research interests tend to gravitate towards methodological and computational aspects of statistical learning theory, and I am definitely keen on exploring aspects of the interface between statistics and other branches of mathematical sciences. While doing my Ph.D., I worked as a graduate teaching assistant with the Department of Statistics, contributed a number of communications at various conferences, and won a Young Researchers' Prize for best full contribution at the Compstat 2000 conference in Utrecht (Netherlands).

As I prepare to embark on my new appointment as assistant professor of statistics, I feel both enthused and thrilled, as I anticipate both the challenges and their underlying rewards. To do research and publish good papers would no doubt feed my ego and my sense of worth, and that is great. To share my little knowledge with others through my teaching will always feed my soul, and that is greatly rewarding and enlightening. My aim, therefore, is to strike a perfect balance between these two essential components of my appointment.

The little I know so far about my future colleagues and collaborators is abundantly reassuring, and I can foresee a pleasant take-off of my American academic odyssey.

Teaching Update

The Department of Statistics at Ohio State is fortunate to have faculty members who are interested in both good research and good teaching. Many new initiatives are underway to make our courses the best at Ohio State.



Roger Woodard

One initiative is the addition of Roger Woodard (Ph.D. Missouri, 1999) to the department as a full time statistical education specialist. Roger's duties include teaching and coordinating several of the department's undergraduate courses, as well as developing programs to improve TA teaching. As part of his teaching duties, Roger is coordinating Statistics 135 (Elementary Statistics) and Statistics 133 (Statistics for Business Sciences). Working with faculty

from the School of Business, Roger has produced an extensive set of classroom and lab materials to refine and improve the content of Statistics 133.

Along with teaching, Roger is working with Joe Verducci to enhance the Statistics 603 (Teaching of Statistics) experience for our new graduate students. They have added several new aspects to the course, including bringing in an outside consultant to make TAs aware of the value of customer service. The course not only helps to improve the teaching of undergraduate courses, but also gives the department's graduate students valuable experience in written and verbal communications skills. Improving the teaching and communications skills of departmental TAs is not restricted solely to Statistics 603, however, as Roger regularly visits the classrooms of TAs and instructors throughout the year to give them additional feedback.

This year has also seen the return of department alumnus Deb Rumsey (Ph.D. 1983) to Ohio State. Deb left a tenured position at Kansas State University to return to campus as the new director of the Mathematics and Statistics Learning Center (MSLC). As director of the MSLC, Deb oversees a small army of tutors who serve the math and statistics classes at OSU. Along with her administrative duties, Deb teaches several courses each academic year. This year she taught a special section of Statistics 145 (Introduction to the Practice of Statistics) for the University Mount Scholars Program.

Roger and Deb are not the only people working on statistics education at Ohio State. The Electronic Encyclopedia of Statistics Examples and Exercises (EESSEE), which was initially developed by Dennis Pearl, Elizabeth Stasny, and Bill Notz, continues to evolve. This project, originally developed with NSF support, is now self-sufficient and supports several department graduate students who help develop additional content. One significant change to EESSEE will be its scheduled migration to a web-based

format. Students will no longer purchase a separate CD-ROM, but will instead be given a password to access the stories and data on the Web.

A team from the Department of Mathematics, the MSLC, and Department of Statistics led by Dennis Pearl and Deb Rumsey has successfully obtained grant funding for new equipment for the departments' computer lab cluster. This grant provides for 30 new computers for each of the four teaching labs in the Eighteenth Avenue (EA) building. The new machines, along with new networking infrastructure, will greatly improve the experience of students in Statistics 135 and 145. They will also allow Statistics 133 to move into the EA labs in the upcoming year, enabling us to add a true lab component to this course.

A number of distinguished members of the statistics education community will gather at Ohio State this summer to discuss the formation of an Institute for Undergraduate Statistics Education. Such an institute would build on the momentum generated by the ASA Undergraduate Statistics Education Initiative (JSM 2000 Symposium). This institute would bring together people interested in statistical education and help disseminate information regarding initiatives and results, as well as resources for teaching and learning statistics at the undergraduate level. This summer's planning meeting will be co-chaired by Deb Rumsey and Joan Garfield, University of Minnesota, and is made possible through a grant from the American Statistical Association, as well as additional financial support from the statistics department.

Record-Breaking

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each game by more than 10 runs. The winning ways continued through the first three rounds of the playoffs, until, decimated by injuries, we lost to our arch nemesis, the dreaded "Undergrad Team." But all in all, we felt very good about our season and look forward to improving our softball prowess next year.

The departmental co-ed soccer team also had a promising season. Mario Davidson stepped up and learned to play goalkeeper like a pro, while Stephanie Dickinson, Amy Kornokovich, Elizabeth Scott, and Larissa Howell (Aaron's wife) had excellent rookie years. We had great field players too, like Jian Zhang and Zhengxiao Wu who played center midfield with impressive creativity, and Gardar Johannesson and Hao (Liyan Hua's husband) who controlled the center of the field as defenders. Kerrie Copas and Fan Lu were threats up front, creating goal-scoring chances almost every possession. Yu Feng Ding added excitement with his speed and Aaron Howell was a versatile utility player. And Marilisa Gibellato, the captain, just really enjoyed being on a team that had so much fun playing the world's most popular game: soccer.

CONGRATULATIONS TO OUR AWARD WINNERS!

POWERS TEACHING AWARDS

The Thomas and Jean Powers Teaching Awards are presented each year in two categories to (1) the best TAs teaching either recitations or lectures, and (2) an outstanding professor in the department. These awards were instituted in 1986 through a generous gift to the Statistics Development Fund by Tom and Jean Powers.

The department is lucky to have a large number of excellent graduate teaching associates. The selection of the best TAs is never an easy task, and there are always a number of extremely good teachers who are runners-up for the award. In 2000–01, the awards for best TAs were presented to Swati Biswas, Clara Henry-Mabry, Babis Papachristou, and Michelle Persinger. Each of these TAs made an outstanding contribution to the teaching mission of the department. The faculty award was presented to Professor Angela Dean.

WHITNEY AWARDS

In 1992, Professor Emeritus Ransom Whitney and his wife Marian Whitney made a generous gift to the Statistics Development Fund to institute several awards for graduate students. In 2000–01, the winner of the best consultant in



Angela Dean receives Teaching Award and gift from students.

the Statistical Consulting Service was shared between Qianqiu Li and Tao Wang. The award for the best research associate was presented to Pankaj Choudhary. We congratulate these people and thank them for their hard work.

CRAIG COOLEY MEMORIAL PRIZE

The Craig Cooley Memorial Prize for 2000–01 was awarded to Jim Rogers. Each year this award is presented to a graduate student in the department demonstrating exceptional scholarly excellence and leadership abilities. Craig embodied these two qualities throughout his graduate career. Tragically, he was killed just before receiving his Ph.D. in 1996. To honor his memory, the department created the Craig Cooley Memorial Prize. For additional information about contributing to this fund, please see below. *(continued on page 10)*

Send Us Your News!

Please complete this form for our files and return to:

Mike Fligner
Department of Statistics
The Ohio State University
1958 Neil Avenue
Columbus, OH 43210-1247

or reply by e-mail to fligner.1@osu.edu

Alumni Reply Form

Name _____

Home Address _____

City _____ State _____ Zip _____

Home Phone _____ Degree(s) and year(s) _____

Current Professional Title _____

Institution/Company _____

Business Address _____

City _____ State _____ Zip _____

Business Phone _____ Fax Number _____

E-mail Address _____

Personal and/or Professional News

Please share some information about yourself with us. Unless you request otherwise, we will assume it may be mentioned in future newsletters.

(continued on page 10)

award from the Ohio State Center for Survey Research and College of Social and Behavioral Sciences.

Satoshi Miyata is a winner of the student paper prize from the Statistical Computing Section of the ASA. His winning paper, titled "Adaptive Free Knot Splines," is based on his dissertation research.

CSR/SBS SUMMER RESEARCH AWARD WINNERS

Two of our graduate students won awards to conduct original survey research through the Ohio State Center for Survey Research/College of Social and Behavioral Sciences 2001 summer research program. Kristin Blenk (second-year graduate student) won support for her proposal, "Small Area Estimation of Victimization Prevalence Using Hierarchical Logistic Regression." Chen Quin (Eric) Lam (first-year graduate student) won for his proposal, "Handling Undecided Voters: Using Missing Data Methods to Improve Election Forecasting."

OSU TRAVEL AWARDS

Senior graduate students Yuqun Luo and Pankaj Choudhary won travel awards from the Ohio State Council of Graduate Students this year. They will use their awards to travel to the Joint Statistical Meetings this August where they will present their research. Yuqun's paper, joint with her advisor Professor Shili Lin, is titled "Two-gene Modeling of Complex Traits via Markov Chain Monte-Carlo." Pankaj's paper, joint with his advisor Professor Haikady Nagaraja, is titled "Approaches for Assessing Satisfactory Agreement in Method Comparison Studies."

THANK YOU!!

We wish to say a special thank-you to all of you who help support our department activities through your donations to the university. You are helping to make lives richer for the students who are following in your footsteps. We encourage you to specify your university donations to be applied to one of the following statistics department funds. Keep in mind that memberships in the Presidents Club can also be designated to one of the following funds.

***Powers Award** — Teaching awards for graduate students and faculty — Fund # 06940-605898*

***Whitney Scholarship** — Awards for consulting and research for graduate students — Fund # 06940-607689*

***Rustagi Memorial Lecture** — Fund # 06940-606245*

***Statistics Support Fund** — Support for visiting speakers and graduate student conference travel — Fund #06940-307669*

***Craig Cooley Memorial Award** — Fund # 06940-601434*

ALUMNI NEWS

Compiled by Mike Fligner. Alumni need to complete the Alumni Reply Form or e-mail me since that's the way to keep this column going!!

Sandy (Long) Althouse (M.S., 1999) married David Althouse on October 23, 1999. Since graduation, Sandy has been working as an assistant pharmacokineticist at Wyeth-Ayerst Research. (dmalthouse@earthlink.net)

William Harper (M.S., 1976) went on to receive a Ph.D. in Industrial Engineering in 1984. Bill returned to the Columbus area where he is now an associate professor in mathematical sciences at Otterbein College. Bill co-authored *Practical Geostatistics 2000* with Isobel Clark, which was published in August of 2000. This 442-page book is an applied geostatistics book that provides the practitioner with the necessary mathematics and concepts along with many geostatistical analyses. According to Bill, readers will find this an enjoyable and informative book that is a must for anyone interested in geostatistics. Copies may be purchased from their web site: <http://geoecosse.hypermart.com> or <http://go.to/geostatistics>, although you will need to talk to Bill directly about getting the special Ohio State alumni discount. (WHarper@otterbein.edu)

Amy (Stai) Worden (M.A.S., 1998) and Brent Worden (M.S., 1997) reported on their marriage and job status in the last newsletter. Now they would like to introduce the newest member of their family, Matthew Allen Worden, born July 19, 2000. His categorical variables are health=good and hair=reddish blond and his quantitative variables are birth weight=5 pounds and 4 ounces and birth length=19 inches. On last report, Amy was doing great but Brent was a complete wreck. (AmyStai@DynaMark.com)

Karen (Mather) Blocksom (M.A.S., 1999) is beginning a new job as a statistician with the USEPA in Cincinnati as part of the Ecosystems Research Branch. Amazingly, Karen has managed to find a job combining both her zoology and statistics degrees!! Her work involves assisting states in developing bioassessment programs for streams and lakes, required by the Clean Water Act. (kblocksom@fuse.net)

Robert Price (M.S., 1989) went on to receive his Ph.D. in Statistics from the University of Wyoming. He is currently an assistant professor in the Department of Mathematics at East Tennessee State University. Bob and his lovely wife Laura have just had their second child, Hendrix Robert. They still have family in the Ohio area and visit the department once or twice a year. During his summer visit, Bob always manages to golf with his old buddies from the department. Despite the fact that he doesn't play as much as in his graduate student days and has gotten a little rusty, we still think of him as "Tiger" Price. (pricejr@access.etsu.edu)

Zoltan Szentkiralyi, (M.S., 1997) is continuing his life as a drummer/ex-statistician. His band has recorded their first full-length album which has 10 songs and is 17 minutes long! He is taking more drumming lessons and, according to Zoltan, he is making great progress. We are anxiously awaiting their first performance in Mershon Auditorium. Information about the band can be found on the web site www.uselessmusic.com. (zoltan@prodigy.net)

William Donaldson (M.A.S., 1987) took a job with the USDA in Washington after graduation. He worked there and in the Madison, WI, office for several years. Bill then decided to go back to school at the University of Wisconsin-Madison in computer science. He received his Ph.D. in May of 2000, with his main areas of study in the theory of computing and mathematical programming. Bill accepted a position with the Raytheon Company in Garland, TX, where he was hired as a physics engineer II, but he will be doing mostly applied mathematics work. (wwd@cs.wisc.edu)



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There will be a dinner on **Monday, August 6, 2001**, at the **Atlanta Joint Statistical Meetings** for department alumni and friends. The details concerning dinner location, departure place and time will be announced soon on the department web site, www.stat.ohio-state.edu, and by letter to all alumni.



Statisticians and volleyball — it doesn't get any better than this!

Record-Breaking Intramural Season

The statistics department 2000–2001 intramural teams had a stellar year. We started out the summer of 2000 with a co-ed softball team that saw many new faces. Drs. Wolfe and Stasny outdid themselves in recruiting this year and were able to land some of the top athletes in the nation interested in statistics graduate school. Our rookies all held their own in the grueling summer softball leagues. As a team, we started out a little slow piecing together the right combination of players, but we finished the regular season with a two-game winning streak before being eliminated from the playoffs by a stacked undergraduate team. The winning ways continued in the fall with a co-ed volleyball team. But again, the coveted intramural championship T-shirt was not to be had as the undergraduate teams once again had our number.

The winter quarter saw a disappointing basketball season, so we won't dwell on that. In spring quarter the department fielded not one, but two intramural teams: a co-ed soccer team and a co-ed softball team. The softball team steam-rolled through the regular season, going undefeated and winning

(continued on page 8)

CONGRATULATIONS

To the following students earning degrees in 2000–01!

M.A.S.

Summer 2000	Xudong Feng
Autumn 2000	Chad Husby Shannon Stetzer
Winter 2001	Amy Ferketich Xiuhong Li Sandya Liyanarachchi Giuseppe Scaturro Renyuan Shao Xiaoling Zhang
Spring 2001	Meena Doshi Lacramioara Evans Yangyan Hu Xirui Tang Jing Zhao

M.S.

Summer 2000	Petra Graham Sumithra Ramaswamy
Autumn 2000	Qianqiu Li
Spring 2001	Kristen Blenk Patrick Bobbitt Ofelia Marin Emil Marinescu Heather Mathews Elizabeth Scott Fengjuan Xuan

Ph.D.

Summer 2000	Brian Williams
Winter 2001	Brian Millen
Spring 2001	James Rogers Gregory Stark lyue Sung