

DEPARTMENT of STATISTICS

NEWS

Grand Opening of the Mathematical Biosciences Institute is this Fall!

This fall will mark the opening of the new Mathematical Biosciences Institute (MBI) headquartered at The Ohio State University. The MBI is funded by a \$10 million, five-year grant from the National Science Foundation. The institute will catalyze interactions between the statistical, mathematical, biological, and medical sciences through vigorous programs of research and education. The MBI will host approximately six week-long workshops each year, centered on emphasis themes. The first emphasis year (2002-2003) will focus on neuroscience, while the second year's activities will emphasize cellular processes and their relationship to disease. The topics for future years will be decided by a board of governors made up of internationally recognized experts from the mathematical and biological sciences including statisticians Gregory Mack, Ross Prentice, Stephen Ruberg,



Professor Dennis Pearl

Terrance Speed, and Michael Waterman. Current topic workshops in response to exciting new discoveries in the biosciences will also permeate the busy MBI schedule, allowing rapid scientific response to new research results.

The MBI is directed by Avner Friedman who joined the Ohio State Department of Mathematics last year from the University of Minnesota, where he previously directed the Institute for Mathematics and its Applications. Avner brought people together at Ohio State and created a great deal of excitement as plans for the MBI began to unfold. The successful proposal was developed jointly by a team of faculty from the Department of Statistics and the Department of Mathematics. The team included Peter March and David Terman from Mathematics and Doug Wolfe and Dennis Pearl from Statistics. Dennis Pearl will serve as an associate director of the MBI representing the mathematical sciences. Andrej Rotter from the Department of Pharmacology will serve as the associate director representing the biosciences.

*(continued on page 4)***The Statistical Concepts Buffet**

The Ohio State University is among 10 universities that recently received a \$200,000 Pew grant for course redesign. The Pew course redesign grants are administered by the Center for Academic Transformation through its four-year Pew Learning and Technology Program. The center's goal is to encourage colleges and universities to use technology to achieve cost savings and quality enhancements in their instructional approach to large-enrollment, introductory Statistics courses. A full description of the program and the projects it supports may be found at www.center.rpi.edu.



Ohio State will redesign Statistics 135, a five credit hour, introductory statistical concepts course that annually enrolls 2,850 students. The current course offers a "traditional" delivery of three lectures and two active learning laboratories per week to 2400 students, while approximately 450 students take an alternative, self-paced version. An assessment of the current course using the Center for Academic Transformation's course planning tool found several problems. Faculty use their time inefficiently in parallel, duplicative, poorly attended lectures. TA time is allocated in bursts: intensive

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All Aboard for a Letter from the Chair:

Locomotiving in Ohio

By Doug Wolfe



Doug Wolfe

The Department Diesel is still locomotiving ahead along the Olentangy. I have almost completed my second year (hard to believe the Department has survived!) as the conductor of this academic express. Perhaps I have adjusted to the break-neck pace of things and maybe even learned to enjoy the few stations that we slow down for every now and then. (I certainly have learned to distinguish between a deadline and a DEADLINE!) My thanks to all for their excellent efforts again this year. I said last year I would EXPECT the same again this year and I am pleased to know that this high expectation is, in fact, associated with a point mass probability distribution!

The Department has had another active and productive year, despite having to struggle with poor statewide economic conditions and a 3 percent mid-year budget cut. Let me take a few moments to fill you in on some of the important things that your Department locomotive was involved in during this past year, as well as point to some of the opportunities on the horizon.

Mathematical Biosciences Institute

I am very pleased to be able to tell you that we have been successful in our application to the National Science Foundation (NSF) for the establishment of a Mathematical Biosciences Institute (MBI) here at Ohio State (see the article on page 1). Thanks to the

extraordinary effort of our faculty and colleagues from the Department of Mathematics, as well as biological and medical scientists from across campus, we now join a select group of NSF-funded institutes in the mathematical sciences. We are fortunate to have been able to attract Avner Friedman (member of the National Academy of Sciences) from the University of Minnesota to be the director of the MBI. Our own Dennis Pearl will be one of the associate directors, with duties emphasizing the educational aspects of the institute. The second associate director is Andrej Rotter from the Department of Pharmacology. He will help develop the scientific programs for the institute and coordinate the mentoring of a number of postdocs who may spend up to three years here. For more information about the MBI, and its many initiatives, see the web site at <http://mbi.osu.edu/>.

Hiring Update

This has been a relatively stable year with regard to the staff of the Department, although we have had two new hires and a change of duties. First, we hired Kim Cate as our office associate for Graduate Studies. She replaces Patty Burba (who moved on to a similar position in the Department of French and Italian). Kim's many years of experience in the Graduate Admissions Office have already proven useful in her duties in support of our graduate program. Justin Slauson assumed new duties in support of the PEW-sponsored Statistics Buffet initiative spearheaded by Dennis Pearl and Roger Woodard (see related article on page 1), and on web-related issues for the Department. This shift in duties led to the hiring of Eric Drake as an additional computer systems support person for the Department.

Once again, much of autumn and winter quarters were spent processing files and interviewing applicants for two assistant professor positions. This year we were looking specifically for new

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faculty members in the areas of statistical genetics and spatial/temporal Statistics. I am pleased to say that Yoonkyung Lee from the University of Wisconsin will be joining our faculty as an assistant professor beginning autumn quarter 2002. Yoonkyung's interests are in statistical genetics and machine learning and we look forward to her contributions in these areas. We are still in the process of interviewing candidates for the spatial/temporal position, which will be joint with the Department of Civil and Environmental Engineering and Geodetic Science and is intended to provide much needed support for our active and growing program in Spatial Statistics and Environmental Sciences. We opted to delay our search for the senior statistical geneticist provided by the Academic Enrichment Award to the Department until next year so that the presence of a functioning MBI could provide an additional attraction for such individuals.

Soledad Fernandez continues in her second year as a visiting assistant professor. She has done an excellent job in the classroom for us this past year and is actively involved in collaborative research in statistical genetics with faculty from the Biostatistics Center and the Human Cancer Genetics program. For the 2002-2003 academic year we will have two additional visiting faculty members in the Department. Jayant Deshpande from the University of Poona will spend a year as a visiting professor. During that time he will share his expertise with our graduate students by teaching a course in reliability and a special topics course in one of his research areas. Henry Park has been appointed to a two-year visiting assistant professor position beginning in autumn quarter. He will assist teaching undergraduate service courses.

Graduate Student Recruitment

The number of graduates from the program was down slightly last year, as it will be again this year, reflecting a couple of smaller recruiting classes several years ago. We are pleased to report, however, that employment opportunities for our graduates remained

right on track despite the overall slowdown of the economy. The list of this year's graduates from our program can be found on the back cover of this newsletter.

With the aid of our Corporate Fellowships from Lubrizol Corporation, Quintiles, Battelle Memorial Institute, Procter and Gamble, and Wyeth-Ayerst, we will be welcoming another strong set of new students to our graduate programs this year. Eighteen students will begin their graduate work this summer quarter and we expect at least another five will join us in autumn quarter. This year's group will have a higher percentage of domestic students than have the past couple of years. Thanks to the tireless efforts of our Graduate Studies Chair Elizabeth Stasny, our total number of graduate students has once again sailed past the targeted mark of 100!

Summer Research for Undergraduates

The Department and the Biostatistics Program in the School of Public Health is again hosting a Research Experience for Undergraduates (REU) Program this summer. This year the project area has been expanded from Biostatistics to include Applied Statistics of all types. Eight outstanding undergraduate juniors from across the nation have accepted our invitation to participate in this summer's program. More details on the REU program and this year's participants can be found on page 7.

Faculty Update

Our faculty continues to race down the tracks involved in the usual wide range of exciting interdisciplinary research problems. Major new external funding was obtained by Noel Cressie, Mark Berliner, and Prem Goel to continue and expand their research programs in spatial/temporal Statistics, climate modeling and biocomplexity, and applications of remote-sensing methodology to transportation prob-



Professor Elizabeth Stasny talks to prospective graduate students.

lems, respectively. Other new externally funded projects under way this year include the effort by Dennis Pearl and Roger Woodard on the Buffet Initiative approach to teaching undergraduate Statistics courses and the establishment of a Consortium for the Advancement of Undergraduate Statistics Education (CAUSE), with our own Deb Rumsey-Johnson as the first director! Noel Cressie organized and coordinated a second year of the environmental data seminar series during winter quarter 2002. Elizabeth Stasny continued her coordination of the Brown Bag Luncheon Seminar Series for the Center for Survey Research. Shili Lin kept her Statistical Genetics Journal Club feasting on DNA and biomarkers. The speaker for the annual Chotey Lal and Mohra Devi Rustagi Special Lecture this year was Richard Smith from the University of North Carolina. He spoke on the Statistics of extremes, with applications in environmental science, insurance and finance.

Spread the Word!

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!

Barring further cuts in state support for higher education that lead to the abolishment of my position, it will be same time, same place again next year when I have the pleasure to tell you what we have done in 2002-2003. Perhaps we will even be able to pull the train into a depot long enough to enjoy a nice round of golf together like the good old days.



Before pigs fly: Kerri Copas graduates before her sister joins program.

Mathematical Biosciences Institute

(continued from page 1)

The strong ongoing ties that the Department of Statistics and the Center for Biostatistics have cultivated with the biomedical sciences at Ohio State will make a key contribution to the success of the MBI. For us in Statistics, this will also be a fantastic opportunity for our faculty and students to collaborate with the leading mathematical scientists and biomedical researchers in the institute's emphasis areas.

Twelve to fifteen postdoctoral fellows will be in residence to receive training at the institute; they will work with Ohio State faculty and a series of distinguished senior visitors to the MBI. The first seven postdocs have already been appointed and Statistics faculty Tom Santner and Xiaotong Shen will serve as mentors for two of these fellows in the first year.

The MBI will be temporarily housed in newly remodeled space on the second floor of Cockins Hall and the adjoining Math Building. Its permanent home will be in Jennings Hall (previously known as the Botany & Zoology building) when the renovation of that building is completed in 2005.

To learn more about the institute's scientific and educational programs and how you can get involved, check out the MBI web site at <http://mbi.osu.edu>.

Statistical Concepts Buffet

(continued from page 1)

grading and office hours just prior to an exam, coupled with unused office hours at other times during the quarter. The course coordinator responds to 150 e-mails per week, often answering redundant questions. These inefficiencies are compounded when 20 percent of enrolling students must repeat the course in a subsequent quarter.

Bear in mind that we had worked for a decade in fine-tuning the delivery of each individual component of the course and thought we had come close to an optimal presentation. Student evaluations were generally positive but admittedly, we had become resigned to the idea that as many as 20 percent of our students would always have difficulty no matter what we did.

The Pew grant redesign of our Statistics course will implement a "buffet" education strategy offering students a choice of interchangeable paths to learn each course objective in the framework of the four-stage learning model of familiar example, alternate context, general principle, and hands-on practice.

Research in learning theory tells us that concept comprehension and retention are enhanced when students have i) a real, vivid, and familiar example to anchor the concept, ii) a second less-familiar example to demonstrate wide applicability to alternate contexts, iii) a means to discover the general principle, and iv) practice working with the concept. These four learning stages represent the salad, side dish, entree, and dessert of a full meal. Since students learn in different ways, even the best "fixed-menu" of teaching strategies are likely to fail for some students, even if those strategies offer the "full meal" of these four learning stages for every course goal. Thus, our redesigned course will offer a buffet—from salad bar to dessert bar—that gives students choices to match their individual learning styles, abilities, and tastes.

Students will be offered an assortment of interchangeable paths to approach each stage and learn each course objective. For a specific objective, students may choose to hear and discuss a vivid familiar example in lecture, view and read about a real example in an annotated video presentation, encounter an example in a group problem-solving session, or generate an example through a group project. Students may choose to practice working with a concept in a data analysis laboratory, in an individual web-based activity, in a facilitated study session, or by explaining it to others in a jigsaw formatted review.

In order to promote student commitment to follow through on their choices and to enable efficient tracking of each student's progress through the course, the choice of learning modes will be exercised through an on-line "contract" entered into by students at the beginning of each of the four units of study.

To understand how the buffet model will work, let's trace a hypothetical student, Jacqueline, through the process. The first day of class is devoted to an orientation providing information about the buffet structure, the course content, the learning contract, the purpose of the learning styles and study skills assessments, and some hands-on practice with the course software. Out of class, Jackie fills out the online learning styles and study skills questionnaires and is presented with a brief report of her results, and directions on how to interpret them and use them to build her course contract.

Next, Jackie is told more about the buffet model and the goals, learning objectives, content of the course, along with various ways that she might choose to learn this material. Out of class, Jackie works through the online contract. She is given a set of options chosen by the software to match her learning styles and study skills, but decides to add an extra day of lecture presentation and eliminate a day in a group problem-solving session.

After completing the online form, Jackie receives a detailed contract that includes her full assignment for unit one leading up to the test. The assignment is a detailed list of what she'll need to accomplish, due dates, and relationships to the learning objectives of the unit.

At the beginning of the second week of classes Jackie checks in through the course software. The system asks her to check off all completed assignments from week one and to prepare for the next week's assignments. Jackie does well on the set of multiple-choice questions designed to diagnose the achievements from the week's assignment and feels a sense of accomplishment. The short statements she wrote explaining her choices matched well with the model responses generated by the system as feedback.

The software gathers performance data and identifies concepts that students find difficult. Student responses are available in aggregate and can guide the instructors on future lessons. When an individual student shows a deficiency in this low-stakes quizzing, the system suggests an alternate approach to learning the objective involved. Perhaps Jackie will be asked to attend a study session or be directed to an activity that was not included in her original assignment.

After the "check-in" and "check-up" are both complete, Jackie still has a question about the course, so she is directed to the online help desk where she tries both the hierarchical search and the keyword search. If she can't find the answer to this question in the FAQ library, she types her question and logs out of the system. In an hour or two she receives an automated e-mail from a "gatekeeper" who quickly found the answer to her question and forwarded the appropriate FAQ from the database.

On the first exam, Jackie was disappointed with her performance in one concept area. She can fine-tune her contract for unit two, choosing an additional problem-solving session. Jackie also has read the student testimonials from earlier quarters and has decided to attend several optional study sessions during the second unit to become more familiar with the data analysis software. Jackie improves on the second unit test and decides to keep the same contract for the last two units of study.

Ohio State's course redesign effort will be a multidisciplinary collaborative effort drawing on subject matter expertise from the Department of Statistics and the Mathematics and Statistics Learning Center (MSLC), and on expertise in the use of course technology from the Office of the CIO/TELR, as well as expertise in learning and teaching from the Office of Faculty and TA Development. We will examine the results of the buffet approach using instruments and methods designed in collaboration with the Flashlight Assessment group of the Teaching, Learning, and Technology Affiliate of the American Association for Higher Education.

Project Team

- Dennis K. Pearl (Professor of Statistics, Project Leader)
- Stephen Acker (Director, Technology Enhanced Learning and Research)
- Alan Escovitz (Technology Enhanced Learning and Research)
- Alan Kalish (Director, Faculty and TA Development)
- Deborah Rumsey (Director, Mathematics & Statistics Learning Center)
- Roger Woodard (Program Specialist in Statistics Education)
- Programmers: Bryce Bate, Justin Slauson

Preparing the "Servers"

The buffet approach allows us to better match the teachers with the delivery options for which they have a talent. TAs who do well in one-on-one help but have not yet mastered the management of whole-class discussions can facilitate study sessions or provide individual help during problem-solving sessions. TAs who have a talent for facilitating small group discussions and managing the dynamics of a hands-on laboratory experiment should utilize these skills and not be overburdened with grading duties. This supply side match, coupled with the student demand side match, should greatly individualize the instructional process, even though the course has a large enrollment.

Environmental Data Seminar At Ohio State

In 2001 and 2002, the Statistics Department's Program in Spatial Statistics and Environmental Sciences* (SSES) ran a highly successful interdisciplinary seminar that featured data from environmental science and engineering problems. Speakers were Ohio State faculty and staff, and the seminars were advertised widely throughout campus and to interested parties in Ohio.

The setting was informal and animated discussion during and after the talks was a highlight. Refreshments served before the talk proved to be a popular feature of the seminar. Logistical arrangements were co-ordinated by Director Noel Cressie, Program Assistant Terry England, and the help of all members of the SSES Program. The seminar was sponsored by both the Department of Statistics and the College of Mathematical and Physical Sciences.

The following units were represented during the 18 seminars: Agricultural, Environmental and Development Economics; Byrd Polar Research Center; Chemistry; Civil and Environmental Engineering and Geodetic Science; Food, Agricultural, and Biological Engineering; Geography; Geological Sciences; Public Health; School of Natural Resources; and Statistics. Topics ranged in scope from global (carbon sequestration; sea level rise), to continental (Antarctica's ice sheet), to regional (land use in the Midwest), to local (long-term wetland experiment), to microscopic (chemistry and pollutant interaction of natural organic matter).

For details on the 2002 Environmental Data Seminar, go to the web site: www.stat.ohio-state.edu/~sSES/seminar.html.

* The SSES Program

The Program in Spatial Statistics and Environmental Sciences was established at Ohio State in 1999 with Noel Cressie as its first director. It is involved in applied statistical research that is spatial or environmental in nature, and currently holds grants from the Environmental Protection Agency, the Office of Naval Research, and the National Aeronautics and Space Administration. Members of the program are part of science teams and regularly publish and speak in forums that are either statistical or appropriate to the substantive-matter problems under investigation. Abstractions of the applied problems encountered provide a rich source of theoretical Statistics problems. The program has developed graduate courses in spatial Statistics and in environmental Statistics. Finally, the program is available to give advice on data and uncertainty-modeling issues that are encountered by scientists and engineers at Ohio State.



Professor Elizabeth Stasny presents the Craig Cooley Award to Pankaj Choudhary at the spring picnic.

Graduate Student Profile: Pankaj Choudhary

Coming to Ohio State was one of the best things to happen in my life. My first few days in this country were quite an experience. Going to McDonald's and not being able to make out what the cashier said when he blurted out "for here or to go" with lightning speed, or going to Subway and not knowing what to say when the cashier asked what would I like to have on my sandwich—these are a few things I can't forget. One day I had to gulp down a whole mug of black coffee. I didn't know that just "coffee" meant "black coffee," and I was too embarrassed to ask for milk and sugar.

I was glad to find the university and the Department incredibly hospitable. Some Indian Students Association volunteers gave me shelter in their apartment and this help was really god-sent. The Office of International Education (OIE) has a very knowledgeable and caring staff and they do a great job of advising international students. I was much comforted when an adviser said during the orientation that OIE is a home away from home for us. I am happy to say that it is true even today.

The Department is big and the professors have diverse research interests. There are plenty of opportunities to get financial support as a TA, RA, or a student consultant. I got support for two years each as a RA and a TA. I thoroughly enjoyed both these assignments and learned a great deal. The Department pays us well. The Department has an excellent computer lab with fast and up-to-date computers, and the computer support staff is very cooperative. It's also really convenient to have computers in our offices. Further, the library resources at Ohio State are outstanding. In my four years here, I can't recall if it

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Research Experience for Undergraduates Program in Applied Statistics and Biostatistics—Summer 2002

The Department of Statistics and the Biostatistics Program in the School of Public Health hosted their second Research Experience for Undergraduates (REU) Program during summer 2002. This summer the scope of the projects expanded from Biostatistics to include other applied Statistics topics as well. Eight undergraduates (listed below along with their institutions) were selected from nearly 50 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:

- Efficacy of psychoeducation in the overall treatment of childhood mood disorders;
- Structural variables that determine individual environmental behaviors, with specific attention to toxic lawn chemicals;
- Use of human response times to evaluate theories of mental processing, from investigations of the early visual system to complex decision making;
- Parameters of floral perfumes learned and remembered by bees as they forage for nectar;
- Mechanisms by which dietary compounds inhibit carcinogen-induced lung and esophageal cancer in rodents;
- Evaluation of histopathologic biomarkers in prostate tumors using chemical staining and immunohistochemistry;
- Analysis of longitudinal data on lung damage in HIV-positive patients;
- Cancer control initiatives among rural white, African American, and Native American women; and
- Analysis of driving behavior.

Participants took courses in theoretical and applied Statistics appropriate for their projects during six weeks of the program. Each participant was assigned a research project and two faculty mentors, one from the disciplinary area of the project and one from among the faculty in the Department of Statistics. Throughout the summer program the participants met with their faculty mentors and other relevant personnel to learn about subject matter issues related to their specific projects as well as to discuss alternative ways of analyzing the data associated with their projects. Once again each participant prepared a written report documenting the relevant scientific questions and the associated statistical analyses for the data from their project and made a verbal presentation of their report to the other participants. A poster session was organized at which the program participants also shared their summer experiences with a broader scientific community at Ohio State.

Participants in the summer 2002 REU in Biostatistics and Applied Statistics Student Undergraduate Institution:

Shannon Fraker — Virginia Tech University
 Susan Hunter — North Carolina State University
 David Kadonsky — University of Wisconsin, Madison
 Melissa Ludack — University of Wisconsin, River Falls
 Emily Johnson — Dartmouth College
 Catherine Pichotta — St. Olaf College
 Peter Sprangers — St. Olaf College
 Jeremy Strief — St. Olaf College



Participants in the summer 2002 REU in Biostatistics and Applied Statistics (from left to right):

First row: Emily Johnson, Melissa Ludack
 Middle row: Marilisa Gibellato (GTA), Shannon Fraker, Katie Pichotta, Kristin Blenk (GTA)
 Back row: Susan Hunter, Peter Sprangers, David Kadonsky, Jeremy Strief

Graduate Student Profile

(continued from page 6)

ever took more than a week for a book to arrive when the library didn't have it.

Overall the faculty members of the Department are very approachable and considerate. I remember several instances when their thoughtfulness touched me. Let me recount just four of them. The first time was the day of Qualifying Exam, unquestionably the most stressful day in a Ph.D. student's life. I had done horribly in the morning session. During the lunch break I was coming to my office completely disappointed with my performance and was very nervous about the next session. It was then that I saw Prof. Wolfe's door open. I just went inside and almost cried before him. He listened to me patiently and tried to cheer me up. His encouragement helped me to concentrate in the afternoon session and I did pass the exam. Next was in the summer of 2001 when I went to Prof. Fligner with a request to let me teach a course. Getting some additional teaching experience was absolutely critical before I could send out my job applications. He understood my situation and, even with my minimal teaching experience, gave me a Statistics 145 recitation for fall. And in the very next quarter, he gave me the sole instructorship of Statistics 427! I believe this teaching experience really strengthened

my candidature. The third time it was Prof. Santner. He had kindly agreed to write a recommendation letter for me. During the fall teaching evaluations I asked him if he could come to evaluate me and write about my teaching abilities. The deadline was within a week and still he readily agreed. I didn't expect him to come to my class the very next day and so didn't bother to tell him that it was a quiz day. But he came and somehow I gathered the courage to tell him so. He left calmly and came again to my next class four days later, and nominated me for the Outstanding TA Award. Finally, I must mention Prof. Stasny. I had asked her to write a letter supporting my nomination for the Graduate School Leadership Award and again the deadline was within a week. She was extremely busy but found the time to dig up my file and wrote about several things that I had forgotten to mention in my own information form.

I was fortunate to have Prof. Nagaraja as my adviser. He has nurtured me like a father in both my academic and personal lives. His guidance, critique, and support have greatly helped me grow both as a person and as a statistician. He has been very generous with his time and patience. I fondly remember my weekly meetings with him. These meetings served to renew my dampened spirits and I used to come out feeling very energetic and enthusiastic.

The composition of graduate students in the Department is truly international and this atmosphere offered a unique opportunity to learn about other cultures and develop friendships. I made several friends here including a wonderful Greek guy. The Department is also a great place for romantic involvement. I have heard about several budding relationships, many of which culminated in marriages. I hope to keep up with this tradition!

Ohio State is vast and the opportunities to get involved in service activities are in the same proportion. I represented the Department on the Council of Graduate Students for two years and served on several CGS committees. It was a marvelous experience. Not only did I get to collaborate with fellow students and learn from their perspectives, but I also learned a great deal about American society. That's why I always wonder, despite its great rewards, why most of the CGS committees are always in need of volunteers. My involvement in Ohio State sports was limited to reading *The Lantern* to know whether we won in football and basketball games. Once I played softball and created an amusing scene: after hitting the ball I ran without throwing the bat as in the game of cricket, and to my utter surprise everyone burst into laughter.

I am leaving Ohio State with a heart full of fond memories of my stay here. I look forward to spreading the Buckeye spirit at University of Texas, Dallas. Go Bucks!



Everyone enjoys the annual Statistics picnic.

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 2001-02, the award for best TAs were presented to Subharup Guha and Kevin Tordoff. Each of these TAs made an outstanding contribution to the teaching mission of the Department. The faculty award was presented to Professor Douglas Wolfe.

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 2001-02, the winner of the best consultant in the Statistical Consulting Service was presented to Yuqun Luo. The award for the best research associate was shared between Haiying Chen and Shiling Ruan. The award for best research leading to the Ph.D. was shared among Pankaj Choudhary, Jeffrey Lehman, and Yuqun Luo. We congratulate these people and thank them for their hard work.

CRAIG COOLEY MEMORIAL PRIZE

The Craig Cooley Memorial Prize for 2001-02 was awarded to Pankaj Choudhary. 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, see "Thank You," on page 10.

UNIVERSITY FELLOWSHIPS

Single year University Fellowships were awarded to Zhenhuan Cui, Juan Du, Xiaobai Li, Zhongmei Su, Kristen Swinton, Shuyan Wan, and Qingzhao Yu. In addition, Jesse Frey was awarded a three-year Dean's Distinguished University Fellowship.

INDUSTRIAL FELLOWSHIPS

Each year the Department of Statistics is able to offer special recruitment fellowships to some of the very best new applicants to our graduate programs. These fellowships are funded through the generous support of sponsoring industrial organizations, for which the Department is always grateful. The sponsoring organizations, their

Fellowship stipend amounts, and the 2001-02 student recipients are as follows:

Lubrizol Foundation Fellowships

An award in the amount of \$3,000 is provided by the Lubrizol Foundation. The 2001-02 recipient was Kevin Brucker from McKendree College.

Battelle Fellowship

An award in the amount of \$5,000 is provided by Battelle. The 2001-02 recipient was Jesse Frey from University of North Carolina.

We appreciate all the past support from the Lubrizol Foundation and Battelle.

CHAIR FELLOWSHIPS

Single-year awards in the amount of \$1,000 are provided through the Department as Chair Fellowships. The 2001-02 recipients were incoming students Matthew Snow, Kristen Swinton, Jessica Westbay, and Heather Wiseman.

National Student Paper Award-Winning Graduate Students

We are very pleased that again this year two of our graduate students won national paper contest awards and will be presenting their award-winning papers at the Joint Statistical Meetings in New York this August.

Chen Quin (Eric) Lam is a winner in the student paper competition sponsored by the ASA's Government Statistics Section, Social Statistics Section, and Section on Survey Research Methods. His winning paper is titled "Handling Undecided Voters: Using Missing Data Methods in Election Forecasting." Eric wrote this paper based on his research conducted during summer 2001. The research was funded through a graduate student summer research award from The Ohio State University Center for Survey Research and the College of Social and Behavioral Sciences.

Subha Guha is a winner in the Student Paper Competition competition sponsored by the Sections on Statistical Computing and Statistical Graphics. His paper, which he will present in a special session at this summer's meeting, is titled "Benchmark Estimation for Markov Chain Monte Carlo Samples." The paper grew out of a project that Subha did in Statistics 825. The work is joint with Mario Peruggia and Steve MacEachern.

CSR/SBS Summer Research Award Winners

Two of our graduate students won awards to conduct original survey research through the OSU Center for Survey Research/College of Social and Behavioral Sciences 2002 summer research program. Xiang Ling (second-year graduate student) won this summer support for her proposal "Missing Data Imputation and a Hierarchical Approach for the Change of Support Problem in the Buckeye State Poll." Jessica Westbay (first

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Award Winners

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year graduate student) won for her proposal "Handling Missing Data: Union Formation Issues and Those Lost to Follow-Up."

Congratulations to our "Future Faculty"

Joseph Kosler and Charalampos (Babis) Papachristou were both selected to participate in the OSU "Preparing Future Faculty" program for 2001-2002. This program allows the award winners to work with faculty members at smaller liberal-arts institutions to help prepare them to be faculty members at such schools.

Our Students Travel—and Win Awards to Do So!

Roxana Alexandridis and Swati Biswas each received a student travel award to present their papers in the June 2002 workshop on Developments and Challenges in Mixture Models, Bump Hunting, and Measurement Error Models.

Yufeng Liu, who really likes to travel, won three travel awards! Yufeng was awarded an NSF travel grant to attend the General Linear Models Conference in April 2002; a student scholarship to present a paper at the Spring Research Conference on Statistics in Industry and Technology in May 2002; and a travel grant to present a paper at the Quality and Productivity Research Conference in June 2002.

Our Students Talk and Talk

Ohio State's Department of Statistics has been well-represented by our students at national conferences in the past year. Below is a list of conference papers presented by our students.

Swati Biswas, "An Alternative Approach to the A-test for Obtaining Unbiased Estimates of the Linkage Parameters in the Presence of Heterogeneity," (with S. Lin), Workshop on Developments and Challenges in Mixture Models, Bump Hunting, and Measurement Error Models, June 2002.

Kristin Blenk, "Using Propensity Scores to Control Coverage Bias in Telephone Surveys," (with E. Stasny), Joint Statistical Meetings, August 2001.

Haiying Chen, "Ranked Set Sampling for Estimating Population Proportion: How to Do the Ranking?" (with E. Stasny and D. Wolfe), 2002 Spring Research Conference on Statistics in Industry and Technology, May 2002.

Pankaj Choudhary, "Approaches for Assessing Satisfactory Agreement in Method Comparison Studies," (with H. N. Nagaraja), Joint Statistical Meetings, August 2001.

Pankaj Choudhary, "Selecting the Instrument Closest to a Gold Standard," (with H. N. Nagaraja), ENAR Spring Meetings, March 2002. Also presented at the IISA International Conference on Statistics, Probability, and Related Areas, June 2002.

Liyan Hua, "Estimating the Finite Population Mean by Judgment Post-Stratification," (with E. Stasny and S. MacEachern), 2002 Spring Research Conference on Statistics in Industry and Technology, May 2002.

Tena I. Katsaounis, "Irregular Factorial Designs," Joint

Statistical Meetings, August 2001. "On Information Matrices of Irregular Factorial Designs," Spring Research Conference on Statistics in Industry and Technology, June 2002.

Jeff Lehman, "Sequential Design of Computer Experiments for Constrained Optimization," (with T. Santner, W. Notz, and B. Williams), Joint Statistical Meetings, August 2001.

Yufeng Liu, "K-circulant Supersaturated Designs" (with A. Dean), Spring Research Conference on Statistics in Industry and Technology, May 2002. Also presented at the Quality and Productivity Research Conference, June 2002.

Yuqun Luo, "Two-Gene Modeling of Complex Traits via Markov Chain Monte Carlo," (with S. Lin), Joint Statistical Meetings, August 2001. "Information Gain for Genetic Parameter Estimation with Incorporation of Marker Data," (with S. Lin), The 25th Midwest Biopharmaceutical Statistics Workshop, May 2002.

Shiling Ruan, "Statistical Modeling of Minimum Intergranular Corrosion Path Length in High Strength Aluminum Alloy," (with D. Wolfe, W. Zhang, and G. Frankel), Spring Research Conference on Statistics in Industry and Technology, May 2002.

Jessica Westbay, "Exact Run Length for One-Sided Exponential Mixture CUSUM Charts," Joint Statistical Meetings, August 2001.

Yonggang Zhao, "Linear Regression Analysis of Survival Data Based on the Random Sieve Likelihood," (with X. Shen and D. Pearl), Joint Statistical Meetings, August 2001.

Two Students Earn the GIS in Survey Research

Two of the first three Ohio State students to graduate with the Graduate Interdisciplinary Specialization (GIS) in Survey Research are Statistics Students! Kevin Townsend graduated with the GIS in Survey Research (and his MAS degree) in winter quarter. Kevin previously received an M.A. in Political Science from Ohio State. Jennifer Beere graduated spring quarter with the GIS (and her MAS degree).

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 Department of Statistics 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 # 525898

Whitney Scholarship — Awards for consulting and research for graduate students — Fund # 536826

Rustagi Memorial Lecture — Fund # 526245

Statistics Support Fund — Includes support for visiting colloquium speakers, conference travel awards for graduate students, and the Craig Cooley Memorial Award — Fund # 537669

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!!

Maria (Baron) Duffy (M.A.S., 1994) married Mike Duffy on November 17, 2001. Mike is also a statistician. (This is happening too often to be completely random!!) They are both employed by the New Jersey Department of Health and Senior Services in the Center for Health Statistics, where Maria has worked since 1995. Honor attendants included Becky (Busam) Sorice (M.A.S. 1994). Among the guests were Amy (Crase) Rosen (M.S. 1994), Tiffany (Reed) Hartzell (M.S. 1994), Keith Schleicher (M.S. 1994—check out his entry below!), Brian Wynne (M.S. 1994), and Nicole DePriest (still currently a student at Ohio State). In December, Mike and Maria bought a home in Burlington Township, N.J. (MBaron4729@aol.com)

Stephen Wisniewski (M.A.S., 1988) received his Ph.D. in Epidemiology from the University of Pittsburgh after leaving Ohio State. He is now an assistant professor of Epidemiology and Psychiatry at the University of Pittsburgh where he works in the Epidemiology Data Center helping to coordinate multi-center trials. He is currently married and has two daughters, Phoebe and Anna, aged five and one. (WISNIEW@EDC.GSPH.PITT.EDU)

Keith Schleicher (M.S., 1994) is a group manager for Underwriting for Capital One in Richmond, Va. Keith has worked in a variety of roles for Capital One since 1994, focusing on applications of statistical models for credit scoring and target marketing. He is currently evaluating ways of finding blind spots in credit scoring models, identifying inaccuracies in third-party data, and detecting outliers within the credit card applicant pool. Keith and his wife Robbi were married in 2001 (so we know he attended at least two weddings last year). Keith is the proud step-dad of Ryan, 5, and expectant father of a baby girl due in June. (keith.schleicher@capitalone.com)

Dan Voss (Ph.D., 1983) is completing his 19th year on the faculty in Mathematics and Statistics at Wright State University in Dayton, Ohio, where he is now professor, Statistics program director, settled, happy, and still sane. Over the years he has enjoyed professional trips to Cincinnati, Columbus, Cleveland, Germany, Israel, and India, and a few places in between. Rumors of his administrative ambitions are unfounded, despite publication of his book *Design and Analysis of Experiments* (with Angela Dean). Dan and wife Nancy are enjoying the tranquility of life in Beavercreek, Ohio, with two teenage boys: Tommy is almost 15 and Jimmy is recently 13, trumpeters both! (Editor's note: tranquil teenagers is an oxymoron!) Favorite hobbies are tennis and golf, and losing to Jimmy in chess. Dan extends his greetings and best wishes to all his Buckeye friends! You'll need to contact Dan directly about

getting the Buckeye discount on his Experimental Design book which we now use in our Stat 641 course. (dvoss@noether.math.wright.edu)

Laura Salter (Ph.D., 1999) and Justin Kubatko (M.A.S., 1998) are still happily married and living in Albuquerque New Mexico, where Laura is on the faculty at the University of New Mexico and Justin coordinates and teaches their large undergraduate Statistics courses. Justin and Laura had their first baby, Zachary John Kubatko, on March 11, 2002. The Statistics are: 7 lbs. 3 oz. and 20.75 inches long! (salter@stat.unm.edu)

George Hauschak (M.S., 1973) is Chief of the Geospatial Information Branch at USDA's National Agricultural Statistics Service. The branch is responsible for two major activities. The first is the building, maintenance, and statistical design of the nation's Area Sampling Frame for U.S. agricultural Statistics. The other major activity of the branch is the creation of a Cropland Data Layer (GIS format), which includes crop specific categorization of Landsat satellite data and regression estimation for crop acreage for selected major crop producing states. George recently received a Departmental Award from Secretary of Agriculture Ann Veneman. (Ghanuschak@nass.usda.gov)

Ramzi Nahhas (Ph.D., 1999) had his second daughter Jenna Faith, born November 17, 2001 (sharing her birthday with Duffy's anniversary). Ramzi and his wife are attending the Graduate Institute of Applied Linguistics in Dallas, Texas, where they are working towards being involved in

(continued on page 12)



Eric Drake receives vote for "most wired" Halloween costume.

CONGRATULATIONS

To the following students earning degrees in 2001-01!

M.A.S.

Summer 2001	Jing Chen Zhongxian Han Xibao Li Xiaoming Zou
Autumn 2001	Stephanie Dickinson Jun Li Lori Price Kevin Townsend Paul von Hippel
Winter 2002	Sara Branin Zhiru Li Amy Ruppert
Spring 2002	Jennifer Beere Lei Rong John Boyer Kristen Swinton Kerrie Copas Geraldine Wright Smita Kulkarni Fang Yu Kang Liu Yanjuan Zhang Glenn Miller

M.S.

Summer 2001	Sijin Liu Yufeng Liu Liling Wang Tao Wang
Autumn 2001	Meng Chen
Winter 2002	Marilisa Gibellato Fan Lu
Spring 2002	Mario Davidson Cheryl Venard Dingus Kelly Geyer Liyen Hua Michelle Persinger

Ph.D.

Summer 2001	Satoshi Miyata
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Alumni News

(continued from page 11)

Bible translation somewhere in the world; location yet to be determined. Ramzi claims that linguistics is really analytical-like math with words and recommends that we all try it. (Ramzi-Jill_Nahas@sil.org)

Greg Mack (Ph.D. 1977) spent his first three years after graduation as an assistant professor in the Mathematics and Statistics Department at Miami University in Oxford, Ohio. Greg joined Battelle Memorial Institute in Columbus in 1980 as a research scientist in the Applied Statistics Department. He became associate manager of the Department in 1983, and manager in 1986. Greg is now vice president and manager of the Measurement and Data Analysis Sciences (MDAS) division, which consists of the Statistics Department and a second department that specializes in analytical chemistry. MDAS consists of 130 staff members who conduct \$20 million of research annually for such clients as the U.S. Environmental Protection Agency, Department of Housing and Urban Development, Department of Transportation, Department of Defense, Centers for Disease Control and Prevention, and a number of private sectors clients. Greg and his staff maintain a healthy relationship with the Department of Statistics at Ohio State. Over the years, many Ohio State graduate students in Statistics have worked as hourly employees at Battelle, and a number have gone on to full-time jobs at Battelle after graduation. Battelle also supported Ohio State in its recent successful proposal NSF to operate a Mathematical Biosciences Institute (MBI). Greg is a member of the Board of Governors of the MBI. Greg has been married to the former Dianne Marsh since 1979, and has four grown stepchildren. Greg and Dianne reside in Dublin. (mackga@BATTELLE.ORG)

Bridgette Byrd Hazelett (M.A.S., 2000) eloped with James Hazelett at Walt Disney World the week after graduation. In fact, they have just returned from WDW after celebrating their second anniversary. A week after getting married, Bridgette started full time at Nationwide. She



Reception for the annual Rustagi lecture.

received a promotion to marketing specialist about a year ago, and according to Bridgette, "I'm making the big bucks now!" She has trained a few new employees including Ohio State graduate Doug Mayfield who joined Nationwide about a year ago. Also, her department has been working closely with Ohio State grad Zhengda Shen who works at Merkle. They've been keeping him busy building a lot of models for NW which just goes to show that it is a small world after all. James and Bridgette built a house (with the help of Dominion) and have been living there for a year. She claims their house is "the funnest toy we have so far!" (bbyrd@columbus.rr.com)

Brad Hartlaub (Ph.D., 1992) is chair and associate professor of Mathematics at Kenyon College where he has been a faculty member for 12 years. Kenyon College now offers a mathematics major with concentration in Statistics and a minor in Statistics, and Brad's teaching load consists almost exclusively of Statistics courses. He has advised a variety of undergraduate research projects and received a Council on Undergraduate Research Student Summer Research Fellowship in Science and Mathematics for 2002. As a Faculty Consultant for the College Board and the Educational Testing Service, he has served as a Table Leader at four of the first six readings for AP

Statistics, completed item writing assignments, and led AP Teacher Training Conferences in the Midwest Region. He has also taught an AP Teacher Development Institute in St. Louis. Brad has continued to work on research projects in nonparametric Statistics, and he is currently working on a textbook project with Doug Wolfe. He has completed four Columbus Marathons with a PR of 3:21:08 (chip time). His goal for 2002 is to qualify for the Boston Marathon. Brad and his wife Sherri also keep busy with their two kids, Brittany (12) and Shane (9). Coaching soccer, roller hockey, and baseball keep Brad out of trouble, along with the occasional golf outing with his old faculty buddies at Ohio State! (hartlaub@kenyon.edu)

Cathy Savino Dolsen (M.A.S., 1991) and Doug Dolsen (M.A.S., 1991) have been married for seven years and had their first child, Zachary Lee in July 2000, weighing in at 9 lbs. with a length of 21 inches. Cathy works for the credit card division of Household International, where she has worked since May 1994. She builds statistical models that are used for account acquisition, account management and collection of delinquent accounts. Doug is a senior manager in advanced analytics with A.C. Nielson. (cddolse n@mediaone.net)

Please complete this form for our files and return to:

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 Columbus, OH 43210-1247

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

Send Us Your News!

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.



2001-2002 Department of Statistics Intramural Soccer Team

Alumni Reply Form (continued)

Comments about the Newsletter

Sports Update

The Department intramural teams have had a successful 2001-2002 season. To kick it off in the fall, the coed volleyball team, anchored by the veteran leadership of Stephanie Dickinson, advanced into the playoffs before suffering a heartbreaking defeat in the first round. The team ended the season 2-2 and looks forward to improving this record with many new recruits in the upcoming year.

Unfortunately, in the winter quarter, the usual stellar coed basketball team was not able to field a contender due to devastating injuries and salary cap issues. However, team owner Dr. Doug Wolfe, has reportedly liquidated several assets, given an across-the-board raise to the players, and plans on fielding another championship contender next year.

The 2002 spring quarter was a stellar intramural quarter when the Department fielded both a coed softball team and a coed soccer team. The softball team completed its season on Tuesday, May 21, with a controversial loss in the first round of the playoffs after posting a 2-1 regular season record. The team had a winning record for the third consecutive season, and did so with contributions from the whole team, including four players who had never played softball before. Kevin Brucker and Professor Ernest Fokoue handled pitching duties, while Omer Bilgin, Kristen Blenk, Kerrie Copas, Amy Copas, Mario Davidson, Cheryl Dingus, Eric Drake, Aaron Howell, Larissa Howell, Amy Kornokovich, Joe Kornokovich, Bidisha Mandal, Scott McKinley, Michelle Persinger, Matt Snow, and Jun Li played the field. Though the season ended in defeat, the team had a lot of fun playing and looks forward to a winning season during summer quarter.

And last, but certainly not least, the spring departmental coed soccer team, Type II, had perhaps the most

successful season of any departmental team ever. Experience from the previous season seems to have served them well with many returning players aiding the development of team chemistry. They have also added a few new players including Cathy Gibellato—the sister of Marilisa—Dr. Stacy Stephenson from the Department of Biomedical Engineering, Dr. Lei Shen from the School of Public Health-Biometrics, and Xian Cui (Sam) from the Department of Electrical Engineering. The greatest improvement this year was on the offensive end with seven different players contributing to scoring. Jian Zhang was the top male goal-scorer with 10 (as of this writing). His ability to actually dribble around the opposition's entire team, including the goalkeeper, resulted in many of his goals. Cathy also scored 10 goals—many of them by burying the ball in the far corner. Other scorers include the captain, Marilisa, (6), Sam (7), who has also helped the team with smooth dribbling skills and a strong goal sense, and Kerrie Copas (2). The teams offensive dominance gave them an undefeated regular season in which 8 goals were scored in each of the four games. The defensive end has been superb as well. Hao Hui (Liyan Hua's husband) has anchored the back three with technical tackling and skillful positioning. Eric Lam (who also scored one goal) was able to make runs from the back to create scoring opportunities. Stacy has been a wonderful asset at the right fullback position. Aaron Howell started as goalkeeper for all of the games and was a giant in the net. His ability to come off his line to make diving saves has prevented many goals (and earned him a shut out). Aaron even had a (very long and optimistic) shot on goal. The indispensable utility players this season have been Lei Shen, Zhengxiao Wu (one goal), and Fan Lu. All three of them were able to come in at any position and contribute. These top-quality footballers have

given the team great depth and flexibility. As of this writing, the team was still alive in postseason play, after winning their first playoff match 5-2. With a bit of luck and some skill they may become intramural champions.

The intramural outlook for the 2002-2003 academic year remains very promising. With general manager Dr. Stasny reporting a long list of stellar new recruits, and team owner Dr. Wolfe reporting a solid financial outlook for all our intramural teams, next year appears to have all the makings of a banner year for the Department.



2001-2002 Department of Statistics Intramural Softball Team



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