February 2012 • Issue #416

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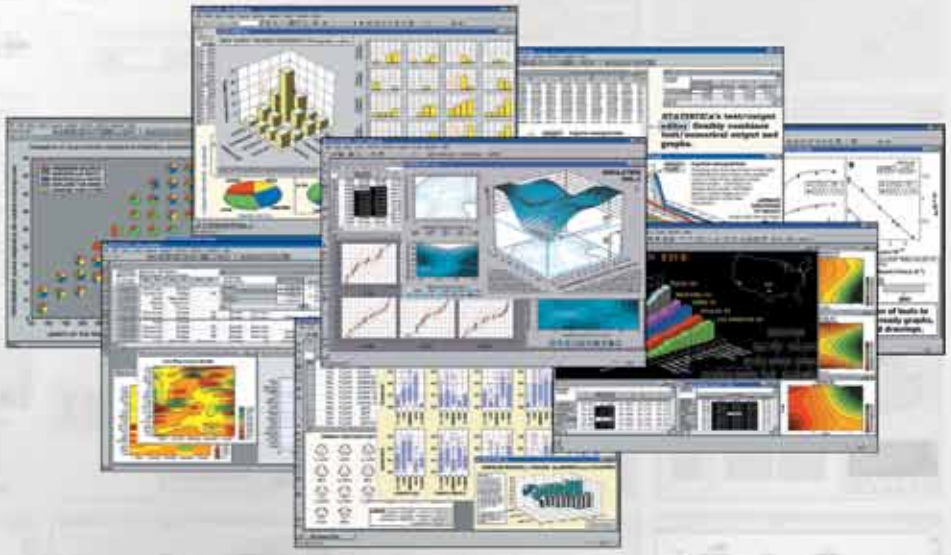

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American Statistical Association

The American Statistical Association is the world's largest community of statisticians. The ASA supports excellence in the development, application, and dissemination of statistical science through meetings, publications, membership services, education, accreditation, and advocacy. Our members serve in industry, government, and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare.

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Statisticians and Clinicians: Collaborations Based on Mutual Respect

This column is written to inform ASA members about what the ASA is doing to promote the inclusion of statistics in policymaking and the funding of statistics research. To suggest science policy topics for the ASA to address, contact ASA Director of Science Policy Steve Pierson at *pierson@amstat.org.*

Berry

Contributing Editor

Donald A. Berry is professor of biostatistics at The University of Texas MD Anderson Cancer Center, where, until 2011, he served as head of the division of quantitative sciences and chair of the department of biostatistics.

29 **MASTER'S NOTEBOOK**
Master's in Statistics Proves Valuable in Workplace

This column is written for statisticians with master's degrees and highlights areas of employment that will benefit statisticians at the master's level. Comments and suggestions should be sent to Megan Murphy, *Amstat News* managing editor, at *megan@amstat.org*.

Bailey

Contributing Editor

Lauren Bailey is a first-year biostatistics PhD student at the University of Illinois at Chicago. She earned her bachelor's degree in mathematics from the University of California at San Diego and a master's degree in statistics from San Diego State University.

Online Articles

The following articles in this issue can be found online at *http://magazine.amstat.org*.

In the November issue of Math Horizon's Aftermath column, the essay "Statistics à la Mode," written by Meg Dillon, discussed the difficulty she experienced as a mathematics professor teaching an introductory statistics course. In response to her essay, several members of the Special Interest Group of the Mathematical Association of America on Research in Undergraduate Mathematics Education explain how teaching statistics is different than teaching mathematics. View the response at *http://magazine.amstat.org/blog/2012/02/01/maa-response*.

Sastry Pantula, 2010 president of the ASA, looks back on his years of service to the association and enthusiastically views the years ahead in his article, "A Seven-Year Itch … or a Seventh-Inning Stretch?" which can be read at *http://magazine.amstat.org/blog/2012/02/01/seven-year-itch*.

Visit the **ASA Calendar of Events**, an online database of statistical happenings across the globe. Announcements are accepted from educational and not-for-profit organizations. To view the complete list of statistics meetings and workshops, visit *www.amstat.org/dateline*.

Many of the **sections and committees** sponsor events and host workshops and meetings. For details about these events and other news, make sure you visit our section, chapter, and committee pages online at *http://magazine.amstat.org*.

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columns

31 **175**
The Secret of Survival Is the Promise for the Future: The ASA at 175

The ASA will celebrate its 175th anniversary in 2014. In preparation, column "175"—written by members of the ASA's 175th Anniversary Steering Committee and other ASA members—will chronicle the theme chosen for the celebration, status of preparations, activities to take place, and, best yet, how you can get involved in propelling the ASA toward its bicentennial.

Stigler

Contributing Editor

Stephen M. Stigler taught at the University of Wisconsin-Madison before moving to The University of Chicago. He was editor of JASA: Theory and Methods *from 1978–1981 and has published several books, including* The History of Statistics *and* Statistics on the Table.

32 **STAT*tr@k***
The Excitement of a Career in Statistics

STAT*tr@k* is a column in *Amstat News* and a website geared toward people who are in a statistics program, recently graduated from a statistics program, or recently entered the job world. To read more articles like this one, visit the website at *http://stattrak.amstat.org*. If you have suggestions for future articles, or would like to submit an article, please email Megan Murphy, *Amstat News* managing editor, at *megan@amstat.org*.

Hahn

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Doganaksoy

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Statistical Leadership: **Preparing Our Future Leaders**

Photo by Michela Osborn

Leadership in Biostatistics students at The University of North Carolina. From left: Margaret Polinkovsky, Alison Wise, Jennifer Clark, Beth Jablonski Horton, Annie Green Howard, and Michael Hussey.

When you think of statistical leaders, what examples come to mind? Do you think of a preeminent researcher, a department head, or an elected officer in our association? All these are important, but an even greater variety of leaders is essential to the vitality and visibility of our profession. In this month's column, I discuss why we need more statistical leaders and ways we can develop future leaders.

Why Is Statistical Leadership Critical?

Leadership ability is a prerequisite for the growth of our field because statistics is an interdisciplinary endeavor and our success ultimately depends on getting others to understand and act on our work.

We need many kinds of leaders, not only in positions of prominence, but in any area of our profession in which there is opportunity to influence the acceptance of statistical contributions. A statistician writing an editorial letter advocating for data-based policy decisions is a statistical leader, as is a manager working with human resources staff to define the job responsibilities of statisticians in a company or government agency.

Along with influencing others, leadership is about helping others succeed. A university professor coaching a student on how to give an effective presentation is a statistical leader, as is an experienced industrial statistician guiding a younger colleague through multiple revisions of a paper.

Robert Rodriguez

How Can We Prepare More Leaders?

We face a shortage of statistical leaders both within our profession and within the organizations in which we work. One reason is that statisticians are not trained for leadership—which is why most of us who do serve in leadership roles landed there unexpectedly! A second reason is that many of our

students and younger statisticians are non-native English speakers who have had limited opportunities for early leadership experience.

The good news is that leadership can be learned. While all of us know individuals who are "born leaders," the ability to lead can be developed. Even better news is that some forward-thinking university departments are beginning to offer training in the skills necessary for statistical leadership. The next two sections highlight two innovative courses I learned about last year, and articles in this issue provide additional information. If you know about other courses, I would appreciate hearing about them.

Teaching Leadership in Biostatistics

When the department of biostatistics at The University of North Carolina recognized that many of its alumni are serving in leadership roles, it decided to develop a course that prepares students for leadership in both academic and nonacademic public health settings (see Page 5). The course was first taught by faculty members Lisa LaVange and William (Bill) Sollecito during the fall of 2011.

Their syllabus covers leadership concepts and management skills, and it features modules taught by guest lecturers who have experience in various settings.

Lisa and Bill invited me to teach a session on professional service leadership. To make this session interactive, I asked the class to work through a series of exercises on the topic of strategic planning, using the ASA's Strategic Plan as a case study. I was impressed by the students' interest, and I discovered they chose to take the course even though they were all busy with the final stages of their doctoral research.

At the end of the semester, Bill and Lisa reported that the most gratifying aspect of teaching the course was "how engaged and enthusiastic the students were in class." And, clearly, the students now see themselves as future leaders. One of them (Mike Hussey) wrote, "I wish to contribute by mentoring students and younger statisticians to become leaders themselves. … I want to establish a work environment where I am seen as a resource more than as 'the boss'." Another student (Jennifer Clark) noted, "You cannot fully plan or prepare for the leadership roles that you will someday take on. … I hope to be able to take the skills and ideas that I learned in this class and use them as I develop my own leadership style."

Teaching Scientific Communication Skills

The ability to communicate clearly with a variety of audiences is essential not only for statistical leaders, but also for statisticians and biostatisticians who work in interdisciplinary environments. At the University of Pittsburgh, the department of biostatistics has introduced a course that helps students develop oral, visual, and written scientific communication skills. Faculty members Jeanine Buchanich and Ada Youk taught the course in the fall of 2011.

Explaining the motivation for the course, Jeanine said, "It started out as informal discussions among faculty members that our students, while very adept statistically, could often not convey the significance of their work, especially to nonstatisticians. We felt that the students needed more practice, both in writing and presenting their results."

Jeanine added that "the most rewarding aspect of the course has been seeing the students' confidence in their presentation skills grow." This was echoed by one of the students (Lei Ye), who wrote, "After taking this class, I feel more confident presenting in front of people."

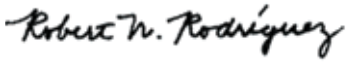
Another student (Umut Ozbek) described the class as a "must" course, saying, "I benefited a lot from the course—learning the skills, seeing good and bad examples, and practicing in front of the audiences." And a third student (Zhen Zeng) concluded, "People say practice makes perfect; however, this course makes me be able to practice perfectly."

Leadership Development After Graduation

Statistical leadership requires a collection of skills, almost all of which can be acquired and improved upon over time. Our association should provide more opportunities to learn these skills, which is why I formed an initiative to propose ways we can offer career-building courses (see my January column). We have made a successful start with occasional workshops at JSM, including the one on presentation skills given in 2011 by Scott Berry, Richard De Veaux, William Li, and Christopher Nachtshelm, which received excellent reviews. And the Statistical Practice Conference, which debuts this month, offers short courses and a track for topics in career development.

Clearly, our students prize this type of training, and it can be a major benefit of ASA membership for younger statisticians. Active service in our association also offers excellent opportunities to develop leadership ability, and I plan to address that in my March column.

I hope I have convinced you that statistical leadership is possible for most of us—not just for a chosen few—and that growing our ability to influence and inform should matter to all of us.



Preparing Biostatisticians for Leadership Opportunities

Lisa LaVange, William Sollecito, David Steffen, Lori Evarts, and Michael Kosorok

A new course on statistical leadership, offered by the department of biostatistics in the Gillings School of Global Public Health at The University of North Carolina at Chapel Hill, was launched last fall. The course was the result of a year-long planning effort initiated by department chair, Michael Kosorok, and a planning committee of senior faculty led by professor William Kalsbeek.

The motivation for offering a course in leadership was two-fold. First, the planning committee determined that many UNC biostatistics graduates held leadership positions throughout academia, government, and industry. Providing a course in leadership would ensure graduates were well-equipped to meet the challenges they would face when tapped for such a position. Second, the committee determined the concepts of organizational leadership and skills required to become an effective leader were not covered in any other course.

As stated by the planning committee, "The general goal of this course is for students to understand where and how biostatisticians can offer leadership (statistical and otherwise) in both academic and nonacademic public health settings." The committee was also specific in requiring that the course combine lectures with "learning from the experience of biostatisticians who have served in various statistical leadership roles."

To address these goals, a team-teaching approach was used. The instructors were faculty members in the school of public health with extensive leadership experience. The team included Lisa LaVange, William Sollecito, David Steffen, Lori Evarts, and Kosorok and was led by LaVange and Sollecito, each with leadership experience in both the private and academic sectors. Steffen conducted a workshop on personal leadership styles, and Evarts taught project management and team leadership. An additional lecturer, Vaughn Upshaw of the UNC School of Government, provided a session on conflict resolution.

A broad-based applications approach that took full advantage of the instructors' experience and combined both leadership and management skills was used to develop the course. Important in this decision was that students enrolled in the course had limited prior management or leadership experience. A large bibliography of suggested readings was provided, but only two texts were required—one directed at managing scientists and one directed at team leadership.

Leadership in Biostatistics students discuss strategic planning during a breakout session. From left: Margaret Polinkovsky, Daniela Sotres-Alvarez (faculty member auditing the course), and Alison Wise.

A key component of the course content was provided by guest lecturers representing contemporary leaders of statistical units in industry, government, and academia. These guests served the dual purpose of being role models for students—sharing their personal stories while also posing specific challenges for the class to solve, drawing upon real-world problems each faced in their leadership positions.

Laura Meyerson, vice president of biometrics at Biogen Idec, Inc., served as the leadership role model from industry, and Kosorok was the guest academic leader. Also, ASA President Robert Rodriguez served as a leader of a professional society/nonprofit organization. LaVange transitioned from academia to government mid-semester and was able to substitute for the guest lecturer from the government sector.

Photo by Michela Osborn

Students report results from a break-out session on organizational structure. Seated, clockwise: Alison Wise, Jennifer Clark, Beth Jablonski Horton, and Annie Green Howard. At board: Michael Hussey and Margaret Polinkovsky.

The course was divided into the following four modules:

1. Broad leadership concepts (e.g., vision, culture, strategic thinking, communication, motivation)
2. Management skills (e.g., delegation, decision-making/analysis, project management)
3. Leadership styles (personal, team, and organizational)
4. Guest leader presentations (leadership stories and class problemsolving)

Additional topics that spanned the modules included financial literacy, conflict resolution, empowerment, diversity, and leading change.

During this inaugural semester, the class included doctoral students with varying degrees of work experience, as well as two faculty members who audited the course. Discussion benefited from the variety of backgrounds and expectations brought into the classroom. The class met once a week for three hours.

Exercises that involved team activities were emphasized early on, and—based on student feedback—provided a good learning experience. Problems posed by the guest lecturers for students to solve in class ranged from developing strategic plans to addressing personnel issues in the workplace to balancing work and family life. The guests gave feedback to the students on their proposed solutions. This real-world problemsolving was clearly one of the most well-received parts of the course.

Another popular and unique aspect of the course was a workshop to determine personal leadership style. Individual assessments were completed using the Myers-Briggs Type Indicator and Emotional Intelligence Indicator. An analysis and discussion was carried out in class, including group exercises to illustrate differences among the leadership styles.

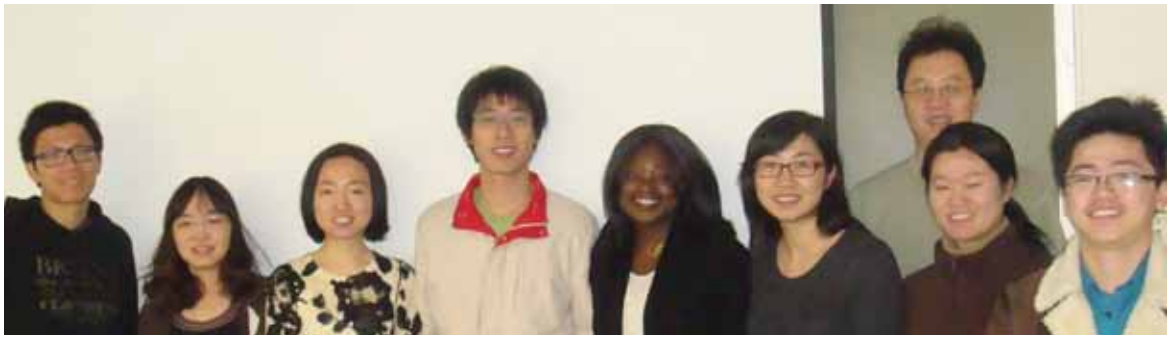
The course ended with a review of key concepts and an emphasis on the fact that leadership education requires lifelong learning, much like mastering statistical skills. It was emphasized that this course was not an end to the students' leadership education.

Feedback from students about the course was positive. The students exhibited high levels of enthusiasm and class participation, and all agreed the course was a valuable learning experience. Comments from students included the following:

- "This is a great course that I would recommend to any biostat student."
- "This was a great course with speakers that had very useful and relevant information and first-hand experience that would have been difficult for me to find/learn on my own." ■

Scientific Course Strengthens Students' Communication Skills

Jeanine M. Buchanich, University of Pittsburgh



From left: LunChing Chang, Xiaozhi Zhou, Lei Ye, Zhen Zeng, Olufunmilayo Ogundele, Jiayan He, Haiwen Shi, Zhaowen Sun, and Yihe Huang

Biostatisticians help scientists and other researchers formulate research questions, make decisions based on data, and discuss and synthesize results. To fulfill that role, biostatisticians must be able to effectively communicate to a variety of audiences. These communication skills include listening to others describe their work and their problems; translating problem statements made by others into statistical questions; formulating and solving the problems quantitatively using statistical methods for design and analysis; and reporting, discussing, and synthesizing results.

Faculty in the department of biostatistics at the University of Pittsburgh Graduate School of Public Health developed a scientific communication skills course to strengthen students' communication skills using different scientific presentation formats (i.e., oral, poster, written). Specifically, the objectives are to develop written and oral communications/presentations describing and interpreting statistical analyses for different audiences; perform critiques of written, oral, and visual materials; and incorporate suggestions and criticisms from critiques into their own work. Students typically use their own research topic, including work on a thesis or dissertation, allowing them to directly translate the skills they learn in class to their own work.

Not only does the course help students in their coursework during their graduate studies, but also as they transition to their professional lives—communicating at scientific meetings, writing grants and manuscripts for professional journals, drafting résumés, interviewing, and sharing techniques with colleagues. These are lifelong skills that can enable biostatisticians to serve not only on a statistical program core, but also in management and leadership positions where communication skills are essential for influencing others.

One of the main objectives for graduates of the biostatistics program is to "communicate the results of biostatistical analyses to individuals with varying degrees of statistical knowledge." Effective written and oral communication skills are critical when conveying biostatistical information. In the current biostatistics curriculum, students do not have many opportunities to refine their communication skills.

The course also helps students meet cross-disciplinary competencies developed by the Association of Schools of Public Health in the domains of communications and informatics and professionalism. These competencies include communicating with different audiences in the context of professional public health activities and commitment to lifelong learning and professional service, including active participation in professional organizations.

By far, the most rewarding aspect of the course has been seeing the students' confidence in their presentation skills grow. The Graduate School of Public Health holds a 'Dean's Day' student competition annually and, last year, C. Akunna Emeremni, who completed the course, won first place in the Biostatistics PhD category. After the competition, she thanked me for the information, advice, and practice she received in the course.

We want our graduates to be successful statistical leaders, and effective communication skills are an integral part of that development. ■

International Year of Statistics Strives to Increase Visibility of Profession

Ron Wasserstein, ASA Executive Director

The ASA has joined other leading statistical societies to declare 2013 the International Year of Statistics in order to promote the importance of statistics to the broader scientific community, business and government data users, media, policymakers, employers, students, and the general public. The goals of the International Year of Statistics (also known as Statistics 2013) include the following:

- Increasing public awareness of the power and effect of statistics on all aspects of society
- Nurturing statistics as a profession, especially among young people
- Promoting creativity and development in the sciences of probability and statistics

The ASA is encouraging its chapters, sections, and outreach groups to participate in this celebration of statistics. In addition, universities, government agencies, businesses—in short, any organization that recognizes the importance of statistics—are invited to participate. To register your organization's interest in participating, simply send your organization's name and the name and email address of a contact person to ASA Executive Director Ron Wasserstein at *ron@amstat.org*. To see who else is participating, visit *http://statistics2013.org*.

We hope many groups will emphasize activities that engage students and potential students of statistics, helping them to become more aware of statistics as a key scientific discipline. Some organizations might consider special foci, such as a broad statistical literacy outreach or promoting the ways in which statistics advances science and improves the human condition.

These ideas are intended to stimulate thinking about possibilities, not to limit it in any way. If you have ideas regarding ways to celebrate statistics in 2013, drop a note to Wasserstein or any of the other members of the International Year of Statistics Steering Committee (see *http://statistics2013.org/committee.cfm*):

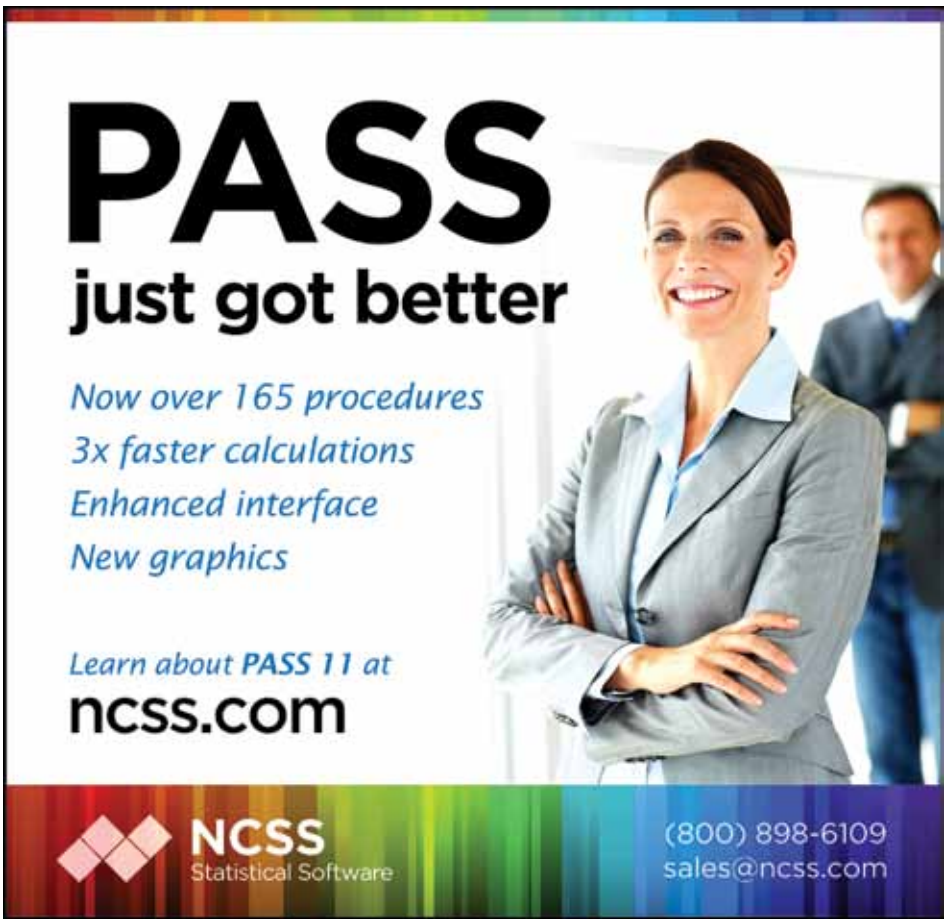
Richard Emsley
Adam Jakubowski
Denise Lievesley
David Madigan
Sastry Pantula
Ada van Krimpen
Vijay Nair

With Statistics 2013 and the 175th anniversary of the ASA in 2014, the next few years promise to be exciting. ■

Getting Involved

There is a variety of ways organizations and societies might choose to recognize an international year of statistics, including the following:

- conferences
- workshops
- symposia
- career fairs
- outreach fairs
- public service announcements
- videos
- op-ed pieces in local and national media
- blogs
- weekly "featured statisticians"
- special editions of magazines or journals



Director of Programs

The American Statistical Association is seeking a director of programs to report to and work closely with the executive director to execute the ASA's strategic and short-range plans. Examples of important activities under way include the International Year of Statistics, 175th anniversary of the ASA, accreditation, advocacy, and education. Other initiatives will arise as the association continues to grow and the profession continues to advance. As a member of the ASA's leadership team, this individual will help advance the ASA's efforts to promote the practice and profession of statistics.

Responsibilities include:

- Design, develop, and implement new programs, initiatives, services, and products to help advance the ASA's efforts to grow and advance the statistics profession and meet member and user needs in the profession
- Implement approved strategies for new program developments and improving existing programs
- Liaise with all relevant committees, chapters, sections, and volunteer leaders in planning, oversight, coordination, and execution of all projects, programs, products, and services in these areas of responsibility
- Write proposals and reports for general and specific program support
- Serve as a key resource person to members, staff, various audiences, and the public

We seek an individual with at least six years of experience as a statistician beyond the individual's highest degree (with a preference for individuals holding a PhD in statistics, biostatistics, or a closely related quantitative field); experience with multidisciplinary teams, volunteers, and committees; demonstrated ability to effectively manage multiple processes and projects; excellent interpersonal and oral and written communication skills. This individual should share the staff's passion for promoting the practice and profession of statistics.

Excellent benefits include health, dental, and vision insurance; 401(k); tuition reimbursement; and subsidized public transportation. Candidates should submit a letter of application, including salary history and résumé. All materials should be emailed to *lynn@amstat.org* or mailed to Human Resources-Surveys/Director of Programs, American Statistical Association, 732 North Washington Street, Alexandria, VA 22314. Review of applications will begin January 15, 2012, and continue until the position is filled.

The American Statistical Association is an Equal Opportunity employer. ■

Consider Donating Textbooks to Statisticians in Cuba

Chris Barker

The average monthly salary in Cuba, according to the U.S. Department of State, is $20 a month. A high-quality statistics textbook may cost $100 in the United States, which is unaffordable for many in Cuba. Consider making a gift of textbooks to our Cuban statistics colleagues and the mathematics statistics library in Havana.

During a recent visit, I brought an extra suitcase with about 30 pounds of textbooks—about two dozen books. Upon arriving at customs, an agent searched my suitcase and flipped through the pages of each textbook, but there were no problems.

While travel to Cuba is not widely advertised, it is possible and reasonably convenient for Americans to visit. Most important is to arrange a trip through an organization that has or can obtain a license(s) and arrange the visas for travel.

For more information about Cuba or to donate books, contact me at *chrismbarker@yahoo.com.*

Annual Fund Drive Reaches Still Higher

Scott Evans, 2011 ASA Development Committee Chair

2011 Annual Fund Drive Team

Scott Evans, Development Committee Chair

John Boyer, Development Committee Member

A. Blanton Godfrey, Development Committee Member

Don Hedeker, Development Committee Member

Joyce Narine, ASA Accountant and Grants Manager

Keith Ord, ASA Treasurer

Steve Porzio, ASA Associate Executive Director and Director of Operations

Jerry Schindler, Development Committee Member

Ron Wasserstein, ASA Executive Director

Lee Wilkinson, Development Committee Member

The generous support of about 570 ASA members led to a record total of contributions to the ASA's Annual Fund Drive during 2011. Nearly $50,000 was received, up $16,000 from last year's record figure. Of this $50,000 figure, about $12,000 was for memorial gifts designated for scholarships honoring Bernie Harris and Martha Aliaga. The remaining $38,000 still exceeds the 2010 record figure by about 12%. Any way you look at it, ASA members have set new marks for generosity.

These funds helped the ASA promote the practice and profession of statistics in several ways during 2011. Here are a few examples of the ways gifts from ASA members were put to good use:

- Advocating to Congress and others promoting statistical literacy for K–12 students
- Addressing statistical education in the Common Core State Standards for Mathematics
- Supporting student travel awards
- Supporting a number of small conferences in developing countries
- Developing the new STAT*tr@k* website for young statistics professionals

Supporters of the 2011 annual fund drive are listed at the end of this article. Also listed are those members who have taken part in the last three annual fund drives. The ASA is deeply fortunate to have such consistent support.

"I have come to realize how much ASA has given to me and how fortunate I have been to know so many of its members," said Susan Spruill, a statistical consultant. "I rely on ASA's publications and its members to help keep me up to date on methodologies and issues facing our profession. That's why it is important to be a member of the ASA and to contribute to its continued efforts to educate the next generation of statisticians and promote our profession's significance in all areas of science, humanity, finance, and education while upholding and promoting professional integrity."

"I have had a very exciting and rewarding career in statistics for the past 30 years," noted Eileen King of Cincinnati Children's

Hospital Medical Center. "My career has allowed me the opportunity for continual growth both in the statistical and health care arena. I am always looking for opportunities to promote the field of statistics as a career to anyone with an aptitude for math and science. I gave to the ASA Annual Fund because I wanted to help fund opportunities for promoting the field of statistics and for providing funds to students who are interested in a career in statistics."

Carol Thompson of Johns Hopkins Bloomberg School of Public Health said, "I consider the membership dues I pay to be a fair reimbursement for the benefits I receive and of which I can take advantage. I choose to donate additionally as my 'investment' in what ASA can provide in the future to our members and to further enhance our profession's role in society."

The ASA Annual Fund Drive is further improved by organizations that supply matching funds to employee donations. We received matching funds this year from the following companies (ASA member donor name in parentheses):

- Amgen (George Williams and Steve Snapinn)
- GE Foundation (Tim Keyes)
- Millennium Pharmaceuticals (Mingxiu Hu)
- Monsanto (Margaret Nemeth)
- Pfizer (Christy Chuang-Stein)

The 2012 annual fund drive will kick off in late spring, though members have the opportunity to contribute throughout the year when they renew their memberships. On behalf of the ASA and the development committee, thank you for your support.

<$100

Athula Abeyratne
Suja Aboukhamseen
John Abowd
Erin Abrahams
Michael Adena
William Aflleje
Rabia Ahmad
Khalid Algabir
Diahn Allen
Rich Allen
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Constantine Gatsonis
Alexios Ghalanos

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Ruth and Al Michaelsen
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Renee Miller
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Michael Wolf
Derek Wong
Caleb Wright
Michael Wulfsohn
Kazunori Yamaguchi
Jie Yang
Hung-Wen Yeh
Lisa Ying
Marian Yong
Tonglin Zhang
Jun Zhang
Georgia Ziemba Morgan
Corwin Zigler

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Alfredo Aliaga
Albert Anderson
Arlene Ash
Vincent Barabba
Carol Bigelow
Richard Bittman
Mary Ellen Bock
John Boyer
James Breneman
Peter Bruce

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Robert Davis
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Jonas and Susan Ellenberg
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Ronald Fecso
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Roxy Peck
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Martin Ribe
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Joan Rosenblatt
Charles Rowland
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Adriano Sarmiento
Stanley Sclove
Richard Smith
Marla Smith
Dolores Smith
Society for Industrial and Applied Mathematics
Daniel Solomon
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Lev Sverdlov
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TDS Construction
Ronald Thisted
Carol Thompson
Alan Tupek
Vassiliy Voinov
Christine Waternaux
Sanford Weisberg
Andrew White
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Gooloo Wunderlich
Donald Ylvisaker
Jerome Yurow
Marvin Zelen

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Nancy Geller
Mark Gunderson
Dallas Johnson
Daniel Kasprzyk
Jon Kettenring
Margaret Martin
Sally Morton
Sastry Pantula
Robert Rodriguez
Steve Snapinn
Juanita Tamayo Lott
Jessica Utts
Leland Wilkinson

$1,000 +

David Banks
Keith Crank
Marie Davidian
Susan Harris
Mingxiu Hu
J. Stuart Hunter
Ron Wasserstein

Participants from the last three annual fund drives

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Michael Adena
Dorothee Aeppli
Alfredo and Martha Aliaga
Lily Altstein
Wendy Alvey
Alexander Andronov
Arlene Ash
Stanley Azen
David Banks
Jarrett Barber
Laurie Barker
Maria Beltrami-Carter
Todd Blessinger
Mary Ellen Bock
Ricardo Bolado
John Boyer
Nancy Brucken
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Huaguang Feng
Dianne Finkelstein
Julie Fondurulia
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Joseph Gastwirth
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Thomas Gerig
Robert Gerwien
Alexios Ghalanos
Michael Ginevan
Ramanathan Gnanadesikan
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Jon Helgeland
Susan Hilsenbeck
David Hoaglin
Heike Hofmann
Richard Holcomb
Nicholas Horton
Welling Howell
Yu-yi Hsu
J. Stewart Hunter
Michael Ikeda
Manabu Iwasaki
William Iwig
Peter Jaehnig
Imke Janssen
Ananda Jayawardhana
Masato Kagihara
Lee Kaiser
Ihsan Karabulut
Theodore Karrison
Daniel Kasprzyk
Jerome Keating
Elizabeth Kelly
Elizabeth King-Sloan
Martin Klein
Gary Koch
Uwe Koehn
Peter Lachenbruch
Jodi Lapidus
Eugene Laska
Eric Leifer
Russell Lenth
David Letcher
Anthony Lonardo
Thomas Love
Timothy Lutz
Ryan Machtmes
Wendy Mack
Dalisay Maligalig
Nami Maruyama
Robert Mason
Joseph Massaro
Madhu Mazumdar
Alexander McClung
Barbara McIntyre
Raymond McIntyre
John McKenzie
Mary-Jane Mietlowski
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J. Keith Ord
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Charles Papsadore
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Luigi Pieri
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Melissa Reitkopp
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Robert Rodriguez
Rachel Rutkowski
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V. Samaranayake
Ulderico Santarelli
Robert Santos
Robert Scheer
Paul Schmidbauer
Mildred Schmidt
John Schoolfield
John Schuenemeyer
Stanley Sclove
Nagambal Shah
Patrick Shrout
Satya Siddani
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Dolores Smith
Marla Smith
Steve Snapinn
Daniel Solomon
Steven Sonder
Ed Spar
Nancy Spruill
Christopher Sroka
Robert Starbuck
Marco Steenbergen
John Stewart
Susan Stewart
Mark Strong
Walter Stroup
Wendy Swanson
Ruth Swanton
Glenn Swetman
Ronald Thisted
Carol Thompson
Cynthia Van Landingham
Vassiliy Voinov
Ron Wasserstein
Andrew White
Linda Whitehand
Derek Wong
Jie Yang
Hung-Wen Yeh
Donald Ylvisaker
Marian Yong
Marvin Zelen
Corwin Zigler

Thank You

Highlights from the COPAFS December 2011 Meeting

Robert Lussier, COPAFS Representative, Government Statistics Section

COPAFS is the Council of Professional Associations on Federal Statistics and acts as an advocate for the development and dissemination of high-quality federal statistics. Member organizations include professional associations, businesses, research institutes, and others interested in federal statistics. Through COPAFS, members have an opportunity to review and affect issues such as timeliness, quality, confidentiality, and the relevance of data. COPAFS holds quarterly meetings, the last one being on December 2, 2011. Detailed minutes, together with copies of the overheads used by the presenters, can be found at *www.copafs.org*.

COPAFS chair Felice Levine announced that Ed Spar will be stepping down as COPAFS executive director at the end of 2012. Anybody interested in the executive director position should contact the board.

All current eligible board members agreed to serve for the coming year, including the following:

Chair—Felice Levine

Past Chair—Judie Mopsik

Vice Chair—Maurine Haver

Secretary—Ken Hodges

Treasurer—Seth Grimes

Members at Large—Ralph Rector, Linda Jacobsen, Bob Parker, and Chet Bowie

A motion to approve the 2012 board was made and seconded, and the 2012 board was approved.

As part of his executive director's report, Ed Spar talked about budgets. Nearly all agencies are looking at numbers that are worse than the previous year. Especially hard-hit agencies include the U.S. Census Bureau, Bureau of Economic Analysis, and Bureau of Justice Statistics.

A Review of Plans for the National Center for Education Statistics

Marilyn Seastrom of the National Center for Education Statistics (NCES) described her organization as collecting, reporting, analyzing, and disseminating statistics on the condition and progress of education at the preschool, elementary, secondary, postsecondary, and adult levels in the United States and other nations.

The NCES budget has been just under $240 million in recent years. The NCES major divisions are devoted to assessment, early childhood international and crosscutting studies, elementary/secondary and libraries studies, and postsecondary studies.

Seastrom presented a list of NCES programs and surveys. The National Assessment of Educational Progress (NAEP) is an ongoing nationwide assessment of what American students know and can do in various subject areas. 2011 had notable projects, including a 2009 science report card; 2009 high-school transcript study; and 2010 report cards on civics, history, geography, reading, and mathematics. A state mapping report is using NAEP as a yardstick to compare proficiency standards across states. The report finds wide variation among state proficiency standards.

Other programs include a geomapping application that currently reports data at the school district level, but is being enhanced to produce boundaries for specific public schools, the Schools and Staffing Survey, the College Affordability and Transparency Center (providing information about tuition and net prices at postsecondary institutions), a Baccalaureate and Beyond study, a program for the international assessment of adult competencies, and the National Household Education Surveys (NHES). Seastrom described improvements being applied to the various surveys.

An Overview of American Demographic History

Census Bureau retiree Campbell Gibson described the website (*www.demographicchartbook.com*) he and some colleagues are putting together that is devoted to the demographic history of the United States as shown by data from the census. The census is a great source of historical data and trends, much of it going back to the first census in 1790. Gibson

acknowledged *Historical Statistics of the United States: Millennial Edition* as the source of many data points.

Gibson proceeded with a series of charts illustrating interesting historical facts and patterns. He concluded by suggesting that census data can make valuable contributions to the teaching of American history and expressed hope that the website might encourage greater use of census data in the history classroom.

Rural Statistical Areas: A Rural-Centric Approach to Defining Geographic Areas

Michael Ratcliffe of the U.S. Census Bureau described the Rural Statistical Area (RSA) as a proposed concept in response to dissatisfaction with the way urban and metropolitan definitions treat rural and nonmetropolitan as residuals, combined with frustration with the limited geographic detail for which one-year ACS data are reported. A state could have rural area with a population of 400,000, but no way to subdivide to smaller areas meeting the 65,000 population threshold for the reporting of one-year ACS data.

The RSA concept was developed as part of a three-year joint research project between the Census Bureau and State Data Centers (SDCs). The goal was to use rural counties (and potentially county subdivisions and/or census tracts) as building blocks to create rural or predominantly rural sub-state areas of 65,000 or more people to enhance the analysis of one-year ACS data. "Urban" would be the residual in this scheme.

The RSA delineation process started with the classification of counties based on the U.S. Department of Agriculture's Urban Influence (UI) codes, which distinguish non-metro counties according to factors such as adjacency to metro areas and presence of an urban core. Counties of 65,000 or more population were designated as "standalone" RSAs and are, in effect, the residual urban areas. The next step was to aggregate counties in a meaningful way. The approach used established initial groupings based on the UI codes and highway networks. Non-standalone counties were combined until the population threshold of 65,000 was reached. The initial groupings were later modified in an interactive process with the SDCs.

Looking to next steps, Ratcliffe explained that the SDC Steering Committee asked the Census Bureau to adopt RSAs as a standard tabulation geography. The Census Bureau is agreeable, but wants to review the concept further and issue a Federal Register notice seeking comments.

Research on Measuring Same-Sex Couples

Nancy Bates of the U.S. Census Bureau presented on measurement error in relationship and marital status questions. The bureau faces challenges because societal and legal definitions of marriage have changed and new terms—such as same-sex husbands/wives, domestic partnerships, and civil unions—have become widespread. Complicating matters are state-to-state variations in the recognition of same-sex marriage and the lack of any federal-level recognition.

An interagency workgroup on measuring relationships in federal household surveys has conducted focus groups and found that respondents have interpreted questions in a manner consistent with legal status. However, the groups identified the need for response options reflecting new legal unions. New versions of the relationship and marital status questions were developed. Cognitive interviews were conducted. The next step calls for further testing of the recommended version of these questions.

Martin O'Connell of the U.S. Census Bureau described data on same-sex couple households. The totals fluctuate, with the 2000 census at about 250,000 same-sex married couples and the ACS just under 400,000 through 2007, then dropping to under 150,000 due to forms and processing changes. The 2010 census count jumped up to 350,000, a total known to be unrealistically high. A revised version of the 2010 census count brings the number down to about 130,000.

One might expect that the excess of same-sex married couples would trace to same-sex couples reporting as married when that status is not legally recognized. However, the Census Bureau noticed the excess in the original 2010 number was most pronounced in areas with high levels of nonresponse follow-up (NRFU). The NRFU form used had a presentation of the male/female response option that was prone to misreporting. In other words, accidental errors in the reporting of sex seem to have created much of the excess same-sex couples. The NRFU form also was used in the 2000 census. The problem existed with the 2000 census, but it was not recognized.

When the excess of same-sex couples was noticed, the bureau investigated the effect of sex misreporting by comparing reported sex with the likelihood of the name being of that sex. Almost one-third of same-sex couples were found to be probably opposite sex. With these households reclassified, the same-sex totals dropped to levels consistent with recent ACS estimates and are reported in the "preferred" version.

The next COPAFS meeting will take place on March 16. ■

Meet EPA's Chief Statistician Barry D. Nussbaum

Amstat News invited Barry D. Nussbaum, chief statistician at the U.S. Environmental Protection Agency to respond to the following questions so readers could learn more about him and the agency he leads. Look for other statistical agency head interviews in past and forthcoming issues.

Barry D. Nussbaum has been with the EPA since 1975, and became chief statistician in 2006. He has taught graduate statistics courses for The George Washington University and Virginia Tech.

What have you enjoyed most about being chief statistician at EPA?

In many regards, the role of EPA's chief statistician is to serve as a cheerleader for implementing the use of proper statistical techniques and the proper interpretation of the resultant statistical inference. We have many analysts scattered throughout EPA's programs, regions, and laboratories. Establishing an EPA statistics users group to try to provide some cohesion and periodically meeting with these analysts has been my most enjoyable endeavor. It has enabled our folks who are busy on their own individual projects to share problems, techniques, approaches, experiences, and, ultimately, successes.

Incidentally, this is a statistics users group, not a statisticians group. I picked that term very carefully to include those who are in associated fields but perform statistical analyses. Initially, I was frequently met with remarks such as "I am not a real statistician." To me, this is all the more reason to partake in these discussions. I notice I now get fewer and fewer of that type of response and far more acknowledgements and appreciation for opening up this dialog among users of statistics.

What do you see as your biggest challenge(s), and have they changed significantly since you started this position?

The biggest challenge is communication. I am well aware that sounds like a well-worn, threadbare answer taken from any field, any application, or any endeavor involving more than one person! But it is real. EPA faces many pressures affecting its rulemaking and enforcement activities. These include environmental, legal, economic, scientific, health-based, and data concerns. By properly weaving all these concerns together, EPA has been successful. But that means communicating the supportive role of proper statistical analysis to decisionmakers confronted with all these concerns who sometimes feel their degrees of freedom have gone negative. The EPA statistician cannot afford the luxury of confining him or herself to just the statistical area, but must integrate it all and effectively communicate the statistical ramifications. I am happy to report that this enhanced interactive communication has improved since I started in this position. I am more than willing to acknowledge that I am not EPA's smartest statistician, but I do rank quite high on the effective communicator tail of the distribution.

Describe your top two or three priorities going forward.

It is no secret that EPA is under increased scrutiny in its regulatory activities. This means its data acquisition, information handling, and resultant inferences also will be under the magnifying glass. Simultaneously, budgets to accomplish these efforts are essentially stagnant. This is both an opportunity and a challenge for statistical analyses in EPA. My first priority is to ensure we effectively use all the possible statistical tools and sampling techniques in a comprehensive, cost-effective manner.

Hand-in-hand with this is a second priority to make sure we take our voluminous stock of administrative data and integrate the information from these sources in a proper, useful manner.

The next priority recognizes that more and more of our efforts involve questionnaires and surveys. Frequently, the allure of the ease of implementing current survey software is so compelling that one neglects the basic tenets of fundamental survey design. I have to see that this is not neglected!

What do you see as the role for the broader statistical community in supporting your work?

Answering this is based on serving as the former

chair of the ASA's Statistics and the Environment Section and my current chairmanship of the ASA's Statistical Partnerships Among Industry, Academe, and Government (SPAIG) committee. I am routinely jealous that at forums such as JSM, attendance in environmental sessions rarely is "standing room only." Similarly, I have noted that most of the action, particularly involving the annual SPAIG award, seems to be collaborations between industry and academe, with little government involved. I think governmental statistics in general, and environmental statistics in particular, have lots to offer. I would love to garner additional interest in these areas.

I also think the statistical community could do a better job of highlighting successes that have been achieved by effective statistical work. This would help not just EPA, but all those who practice this trade. I believe the trick is to spotlight the accomplishment in the applied area and then show it was based on the statistical work. After all, if Hal Varian, Google's chief economist, said statistics is the sexy profession of the decade, let's take advantage of it.

What do you see as the biggest accomplishment (to date) of you and your colleagues during your tenure?

One of my major goals has been to put EPA on the 'statistical map.' EPA, of course, is a regulatory agency and justifiably not primarily acknowledged for its statistical work. Yet, we have done some excellent work and I am seeing that recognition. I was absolutely thrilled that, in 2011, EPA statisticians won both the Jeanne Griffith Mentoring Award (won by Jenise Swall) and the Roger Herriot Award for Innovation in Federal Statistics (won by Mike Messner). This is the first time either award went to an EPA recipient. We are on our way!

Somewhat more seriously, I think I have seen a better integration of EPA data analysts with the program offices and labs. We are doing a better job of merging the statistical analyses with all our other concerns. By keeping our eyes on the prize, I believe we are far more effective in supporting environmental outcomes.

In the 1967 movie "The Graduate," Dustin Hoffman was given the advice, "Plastics." What is the one word of advice you give out most as EPA chief statistician?

Stratify. ■

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CENSUS at SCHOOL

Uses Real Data to Teach Statistical Problemsolving

Champions wanted to expand program

Rebecca Nichols, ASA Director of Education

In 2010, with the support of the ASA and Population Association of America, former ASA Director of Education Martha Aliaga and other ASA staff members worked with prominent statisticians and statistics educators to launch the U.S. version of Census at School—a free, international classroom project that engages students in grades 4–12 in statistical problemsolving using their own real data. The Census at School project (*www.censusatschool.com*) began in the United Kingdom in 2000 and now includes Australia, Canada, New Zealand, South Africa, Ireland, Japan, and the United States.

The ASA is building upon the success of the UK and other countries in using Census at School to enhance statistical problemsolving and interdisciplinary studies using real data of interest to students. Through Census at School, grade 4–12 teachers can enhance their statistics knowledge to better teach the increased statistics content in the Common Core State Standards.

In 2010, middle-school students from Washington, DC, participated in the pilot program for Census at School. Former ASA director of education, Martha Aliaga, observes the students while they participate in statistical investigations using their own data.

Under the direction of their teachers, students involved in the program anonymously complete an online survey, analyze their class census results, and then compare those results with results from random samples of participating students throughout the world. Teachers guide students to apply the concepts in the GAISE pre-K–12 report (*www.amstat.org/education/gaise*) and the Common Core State Standards (*corestandards.org*) by exploring problems that require them to formulate questions of interest that can be answered with the Census at School data, collect/select and analyze the data, and make appropriate conclusions in context. Students are engaged in the statistical problemsolving process with real data of interest to them about themselves and their peers.

The online survey includes 13 questions common to children in every participating country and a few questions specific to children in each country. All questions lead to a variety of categorical and quantitative responses. The common questions include those related to measurement—length (height, arm span, foot length), travel time to school, reaction time to an online applet, time to complete an online memory test—and category—favorite sport or activity. The U.S. questionnaire has additional questions about text messaging, hours of sleep, technology usage, future plans, allergies, and preferences (e.g., foods, music, school subject, super power). The entire questionnaire is available at *www.amstat.org/censusatschool/students.*

U.S. Census at School: Its Beginnings

U.S. Census at School began in 2010 as a pilot program with middle- and high-school teachers in Washington, DC. The teachers met for a series of full-day training sessions on Saturdays at the ASA office, which included instruction in statistics in context of Census at School and how to implement the Census at School program in the classroom. ASA staff observed the teachers presenting the material to their students in the classroom and their students engaging in statistical investigations in context of their own Census at School data. Participants in the pilot program helped develop the U.S. questionnaire and refine the materials and website before making the program available. As of December 2011, there were approximately 6,000 students from 37 states who had participated in the project.

View the U.S. Census at School website at *www.amstat.org/censusatschool*

Teachers can extract the data submitted by their own students and obtain a random sample of data from other students in the United States through the online U.S. random sampler or from other countries participating in Census at School through the online international random sampler. Both the U.S. Census at School random sampler and the international Census at School random sampler are linked from the U.S. Census at School homepage.

Teachers who are comfortable with statistical problemsolving and data analysis can begin using the program in their classes at any time. There are detailed instructions, five instructional webinars, a PowerPoint presentation, and other resources at *www.amstat.org/censusatschool/teachers.*

Lesson Plans Wanted for Statistics Education Web

The new editor of Statistics Education Web (STEW), Mary Richardson of Grand Valley State University, is accepting submissions of lesson plans for an online bank of peer-reviewed lesson plans for K–12 teachers of mathematics and science. Lesson plans will showcase the use of statistical methods and ideas in science and mathematics based on the framework and levels in the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report: A Pre-K–12 Curriculum Framework* (*www.amstat.org/education/gaise*).

Consider submitting several of your favorite lesson plans according to the STEW template to *steweditor@amstat.org*. For more information, visit *www.amstat.org/education/STEW.*

Getting Involved

The ASA is seeking champions to expand the U.S. Census at School program. Champions can be teachers who use the program in their classes or statisticians and statistics educators who assist teachers who are not yet comfortable with statistics and statistical problemsolving. There are a variety of ways to get involved, including sharing information about the program with local schools, writing lesson plans, and teaching local workshops for teachers. For those interested in teaching local workshops, the ASA will provide materials.

The ASA also is building online Census at School resources and seeking those interested in writing new U.S. Census at School lesson plans or adapting international Census at School lesson plans for U.S. data. Those teaching grades 4–12 pre-service teachers might consider encouraging them to create lesson plans using U.S. Census at School data and submit them to the STatistics Education Web (STEW), an online bank of peer-reviewed lesson plans for K–12 teachers. STEW lesson plans relating to Census at School will be published on the Census at School website in the resources area. For information about submitting lesson plans to STEW, visit *www.amstat.org/education/STEW.*

Educators teaching or advising undergraduate or graduate statistics students might consider encouraging or requiring them to get involved in service learning by working with grades 4–12 teachers and students to incorporate Census at School and enhance their statistical problemsolving skills.

Other ideas to enhance and expand the program are welcome. Contact Rebecca Nichols, ASA director of education, at *rebecca@amstat.org* about these or any efforts regarding service learning or other activities.

On the Horizon

There will be an international Census at School workshop held after the 2012 Joint Statistical Meetings in San Diego, California, on August 2 and 3. The two-day meeting will provide an opportunity for international Census at School leaders and U.S. Census at School champions to coordinate the international Census at School project, share hands-on curriculum materials, achieve common understanding of the international project, acquire experience with country-specific data-handing activities and resources for teachers and students, and increase awareness of international efforts to improve statistical literacy in school children. ■

JASA HIGHLIGHTS

December *JASA* Features 2011 ASA Presidential Address

2011 ASA president, **Nancy Geller,** addressed members of the association on August 2, 2011, at the Joint Statistical Meetings in Miami Beach, Florida. The theme of the annual meeting was "Statistics: An All-Encompassing Discipline." Geller's remarks cover the importance of collaboration in allowing statistics to influence many other disciplines. A written version of the address is the lead article in the December issue of the *Journal of the American Statistical Association* (*JASA*). Geller draws on her 30 years of experience collaborating with biomedical scientists to provide advice about what it takes to have successful interdisciplinary projects. She emphasizes the critical role of communication for effective collaboration.

Applications and Case Studies

The Applications and Case Studies section includes numerous articles that represent the outcome of successful collaborations of the type described by Geller in her address. A collaboration between statisticians **Roee Gutman** and **Jun Liu**; neuropsychologist **David Caplan;** and speech, language, and hearing expert **Gayle DeDe** explores the nature of aphasia, the loss of the ability to produce and/or comprehend language due to brain injury. Their article, "Rasch Model and Its Extensions for Analysis of Aphasic Deficits in Syntactic Comprehension," finds that the standard approach to analyzing performance on sentence comprehension, the Rasch model, does not capture scientifically important features of their data.

The study being analyzed asks subjects to perform two comprehension tasks on a range of sentence types. The Rasch model generally assumes independence of responses and thus fails to capture, for example, the correlation of respondents' performance across the two tasks. Gutman and colleagues introduce a mixture model that clusters patients into similar response patterns and abilities. The mixture model better describes the experimental results and produces additional scientific insights into how patients use different cognitive resources in different comprehension tasks.

Geller

A second collaborative project uses statistical methods to improve quantitative precipitation forecasting. In "Geostatistical Model Averaging for Locally Calibrated Probabilistic Quantitative Precipitation Forecasting," authors **William Kleiber, Adrian Raftery,** and **Tilmann Gneiting** develop an approach to combining information from an ensemble of weather prediction models that has good performance when examined globally (over a large region) or locally (over a smaller region).

The most basic approach to forecasting precipitation uses an ensemble of numerical weather prediction models to obtain probabilistic forecasts. These, however, are uncalibrated and biased in the sense that the reported probabilities do not match empirical results. A variety of authors have developed statistical post-processing techniques for these forecasts that reduce the bias and produce appropriate calibration when evaluated over a range of locations. Kleiber and coauthors introduce a technique they call "geostatistical model averaging" (GMA) that allows parameters from the precipitation model to vary from locality to locality and consequently achieve better local calibration. They demonstrate the approach on 48-hour-ahead forecasts of daily precipitation in the North American Pacific Northwest, where GMA is shown to have better local and global calibration than existing methods.

Theory and Methods

The notion of "agreement" permeates statistical thinking. A casual survey courtesy of the Web of Science reveals on the order of 200 papers associated

. . . including one paper titled "Agreeing to Disagree."

with the topic keyword "agreement," including one paper titled "Agreeing to Disagree." In biomedical studies "agreement" is often used synonymously with "reliability" to refer to examining the similarity among different diagnostic tests or raters, or to validate a new diagnostic instrument by comparing it to a gold standard. Agreement studies of this type are generally designed to address the reproducibility of measures of the same kind and are therefore limited to comparing measurements on the same scale.

In "A Framework for Assessing Broad Sense Agreement Between Ordinal and Continuous Measurements," **Limin Peng, Ruosha Li, Ying Guo,** and **Amita Manatunga** introduce a concept they call "broad sense agreement" (BSA). BSA extends the classical notion of "agreement" to allow one to assess the correspondence of a continuous measurement and an ordinal scale. The authors propose and study a robust nonparametric estimator of broad sense agreement. Inference, including variance estimation and confidence interval construction, is carried out via large-sample asymptotic approximations. The authors conclude with an application to a study of antidepressants in malignant melanoma patients. The new estimator of broad sense agreement is used to assess the agreement between two measures of depression, the Hamilton Depression Scale (HAM-D) and a self-report dimensional scale (Carroll-D).

Regression tree methods and related recursive-partitioning–based methods have been widely studied since the publication of **Leo Breiman** and coauthors' *Classification and Regression Trees*. Although recursive-partitioning methods are commonly applied to survey data collected via complex sample designs, the sampling properties and large-sample convergence of trees and partitioning methods has been little studied for such data. **Daniell Toth** and **John Eltinge** address this gap in their article, "Building Consistent Regression Trees from Complex Sample Data."

The authors propose and study a method for incorporating complex sample design information when constructing regression trees via recursive partitioning algorithms. Toth and Eltinge demonstrate sufficient conditions on the population, sample design, and partitioning algorithm for their proposed estimator to be asymptotically design unbiased (ADU) and asymptotically design consistent (ADC) with respect to a super-population model. That is, the authors define a nonparametric regression estimator based on a class of recursive partitioning algorithms that is both ADU and ADC for the super-population regression function.

Toth and Eltinge illustrate their recursive partitioning algorithm with an analysis of Occupational Employment Statistics Survey establishment data linked to Quarterly Census of Employment and Wage payroll data of the Bureau of Labor Statistics. The example illustrates the effect of complex sample designs on regression tree modeling and the benefits of the new method.

There are many other informative articles in both sections of the December issue, as well as a set of book reviews. The full list of articles and a list of the books under review can viewed at *http://pubs.amstat.org/loi/jasa.* ■

Biopharmaceutical Symposium to Offer Tutorials, Short Courses

The nineteenth annual Biopharmaceutical Applied Statistics Symposium (BASS XIX) will be held November 5–9 at the Mulberry Inn Suites in historic Savannah, Georgia. At least 16 one-hour tutorials on diverse topics pertinent to the research, clinical development, and regulation of pharmaceuticals will be presented from November 5–7 by speakers from academia, the pharmaceutical industry, and the U.S. Food and Drug Administration (FDA). Four parallel two-day short courses will be presented November 7–9. Highlights of the symposium include the keynote address and reception on November 5 and the FDA biometrics session on November 7.

BASS is a nonprofit entity, sponsored by the department of biostatistics at Virginia Commonwealth University and the Jiann-Ping Hsu College of Public Health at Georgia Southern University. Its purpose is to raise funds for graduate fellowships in biostatistics.

For more information, visit *http://BASS.georgiasouthern.edu* or contact the BASS registrar at *bass@georgiasouthern.edu* or Karl E. Peace at (912) 478-7905 or *kepeace@georgiasouthern.edu.*

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TECHNOMETRICS HIGHLIGHTS

Techno-Tweets: A Rapid Glance at the February 2012 Issue of *Technometrics*

Hugh Chipman, *Technometrics* Editor

The February 2012 issue of *Technometrics* is filled with interesting articles. For a change, my summary consists of a "tweet" for each one, attempting to summarize the main points in 140 or fewer characters. Comments about this format are welcome at *hugh.chipman@acadiau.ca*—and need not be 140 or fewer characters.

"Massive Data Set Analysis for NASA's Atmospheric Infrared Sounder" by **Amy J. Braverman, Eric J. Fetzer, Brian H. Kahn, Evan M. Manning, Robert B. Oliphant,** and **Joao P. Teixeira**
Massive data reduction preserves distributional characteristics, enabling analysis.

"Bayesian Scale Space Analysis of Differences in Images" by **Lasse Holmström** and **Leena Pasanen**
Smoothing at different levels tells us that some parts of these images are not like the others.

"Gaussian Process Single-Index Models as Emulators for Computer Experiments" by **Robert B. Gramacy** and **Heng Lian**
New interpretation of "E (Y|x) = f(linear function of x)," with "f" a Gaussian process, for computer experiments

"Gaussian Surrogates for Computer Models with Time-Varying Inputs and Outputs" by **Max D. Morris**
Weight function gives appropriate distance for Gaussian process covariance function with functional data.

"Robust Design Optimization with Quadratic Loss Derived from Gaussian Process Models" by **Matthias H.Y. Tan** and **C.F. Jeff Wu**
Computationally tractable optimization in robust parameter design incorporates parameter uncertainty.

"Robust Designs for Poisson Regression Models" by **J.M. McGree** and **J.A. Eccleston**
Optimal design of experiments when optimum depends on unknown parameters

"A Robust Standard Deviation Control Chart" by **Marit Schoonhoven** and **Ronald J.M.M. Does**
Robust estimation in phase I protects against individual outliers and outlying groups.

"Nonparametric Estimation of a Periodic Sequence" by **Ying Sun, Jeffrey D. Hart,** and **Marc G. Genton**
Leave-out-one cycle cross-validation finds integer periods in time series. ■

Industrial Math/Stat Modeling Workshop to Take Place at NCSU

The Industrial Mathematical and Statistical Modeling (IMSM) workshop, to take place July 16–24 at North Carolina State University, exposes graduate students in mathematics and statistics to real-world problems from industry and government. The corresponding problems are not the kind of academic exercises often considered in classrooms. The issues raised in these problems typically require fresh insight for both formulation and solution. Often, the biggest challenge is figuring out what the real question is. Students learn how to do this and how to get a usable result under a tight deadline.

By providing a unique experience of how mathematics and statistics are applied outside academia, the workshop has helped many students decide what kind of career they want. In some cases, this help has taken the form of direct hiring by the participating companies. By broadening the horizon beyond what is usually presented in graduate education, the workshop gives students interested in academic careers renewed excitement about their field.

Additionally, students get experience in the team approach to problemsolving. During the workshop, they are divided into six-member teams. Each team is mentored by both the problem presenter and a faculty adviser. The team members work together to produce an oral presentation and written report of their results, which can lead to subsequent journal publications. Often, the teams come up with useful solutions to a company's problem. Moreover, several projects initially presented at the workshop have resulted in long-term collaboration between students and faculty and the companies involved.

The workshop is sponsored by the Statistical and Applied Mathematical Science Institute, Center for Research in Scientific Computation, and the department of mathematics at North Carolina State University.

Local and travel expenses will be covered for students at U.S. institutions. The application deadline is April 15. More information is available at *www.samsi.info/IMSM12*, and questions can be directed to *imsm_12@ncsu.edu*. ■

SCIENCE POLICY

Statisticians and Clinicians: Collaborations Based on Mutual Respect

Donald A. Berry, The University of Texas MD Anderson Cancer Center

This month's guest columnist, Don Berry, describes his policies and philosophy for developing collaborations between statisticians and clinicians. Since starting at ASA, I've heard about the challenge of statisticians to be engaged early in an experiment or study. I invited Berry to do this piece after hearing about his widely respected efforts to address that challenge.

~Steve Pierson, ASA Director of Science Policy

Collaborative research is about mutual respect. The same principles apply in any relationship, whether business, science, or marriage. You cannot respect me if I don't respect you.

I moved to MD Anderson in 1999 to found a department of biostatistics. MD Anderson is the biggest cancer center in the United States, with an annual budget of more than $3 billion and more than 1,500 faculty members, a number that has approximately doubled in the last 10 years. More than 10,000 patients per year participate in our clinical research. Our statisticians work with our clinicians to design and run hundreds of clinical trials each year.

The department of biostatistics expanded into a division of quantitative sciences (DQS)—including a department of bioinformatics and computational biology—with more than 40 faculty members and about 45 statistical analysts. Most of our analysts have master's degrees; some have PhDs. The analysts are organized into about 10 teams, each with a team leader. They report on a line separate from division faculty up to the director of quantitative research, who reports to the division head. However, analysts work closely with division faculty on all projects.

Faculty and analysts in DQS collaborate with faculty and other personnel in every academic department in the institution, of which there are more than 50. Every academic department is assigned a faculty member and analyst team leader in biostatistics. These are initial contacts for clinical and basic scientists in the respective departments.

Our statisticians become specialists in the diseases within which they collaborate. A statistician might be responsible for a single, large department. More typically, they are assigned several departments that focus on related diseases. They learn about the standard treatments, depending on disease and disease subtype. They learn about the biology of the disease, the role of biomarkers, etc. My pet peeve is the statistician who designs a clinical trial by asking for the null rate, clinically important difference, and accrual rate and uses standard software to produce a sample size. Where are the questions about the disease, its standard treatment, its prevalence, and its biology?

We send clear messages to our clinical collaborators that we are as interested in curing cancer as they are. We work as a team. Even though we have tools, we are not mechanics.

As a National Cancer Institute (NCI)–designated comprehensive cancer center, we get a major "core grant" from the NCI. One of the major cores is biostatistics. Another is bioinformatics. These are the only two of the 20-plus cores that do not charge for their 'services.' I have always insisted on this policy, and it is supported by our administrations, even though it is not popular with everyone. We are collaborators. Collaborators don't pay each other to collaborate. However, I encourage joint grants and funding for statistical collaborators on clinical, translational, and basic science grants.

Every protocol initiated within the institution must have a statistical collaborator. And every protocol undergoes review by the biostatistics department. (In view of the large number of protocols presented at the nearly weekly meetings, the statistical reviewer who presents the protocol is limited to three minutes, with discussion being open-ended.) The department develops a consensus review, and this review is communicated to the institution's review boards (IRBs). Our IRBs have developed great respect for these reviews, in part because they represent the whole department and not a single reviewer. Not incidentally, these review sessions are wonderful learning experiences for students and young faculty.

Be confident, but keep learning, especially about science and medicine.

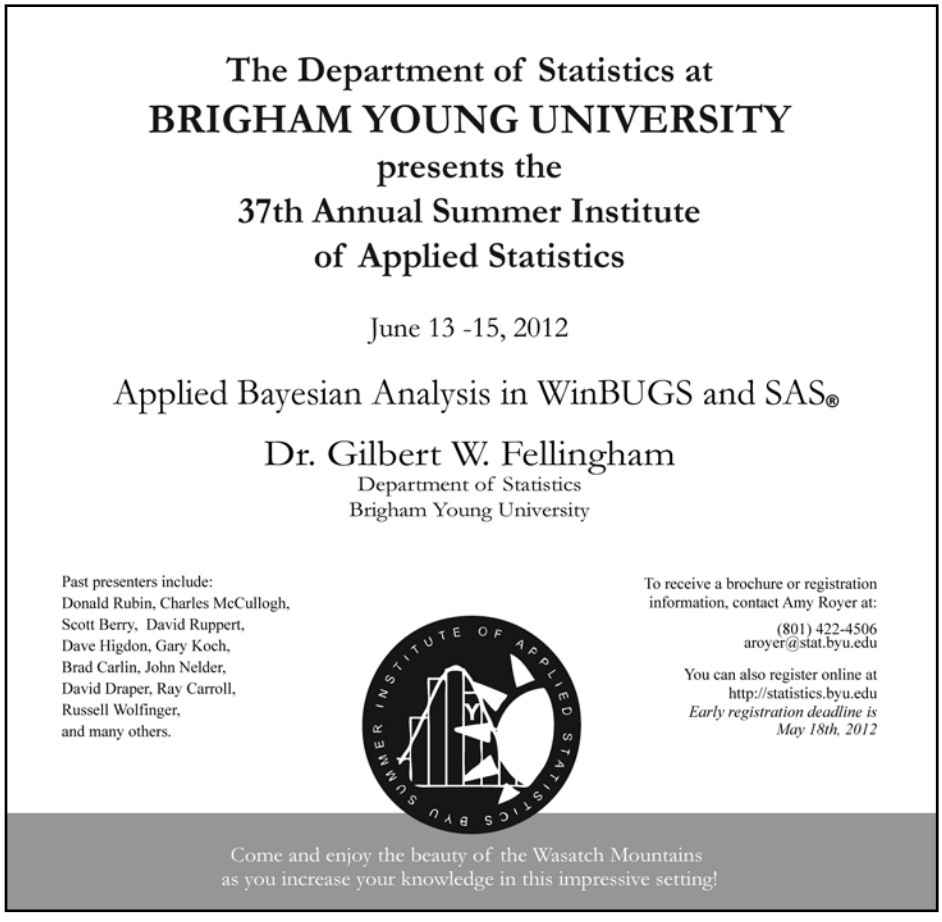
From the beginning, and supported by our president, my policy was that 50% of faculty time would be devoted to developing methodology and other purely statistical research. This is consistent with a traditional 50:50 division of teaching and research at major research universities and it made us competitive in hiring top faculty. In practice, the 50% statistical research is synergistic with our collaborative cancer research. For example, a statistician works with a clinician in building a design for an actual trial and then they publish the design in a statistics journal, run the trial, and publish the results in a clinical journal. The statistician is the first author on the former and second author on the latter.

A major consequence of our faculty's statistical research is that we have established an excellent reputation in our discipline. We publish in top statistics journals, as well as in top medical journals, and we obtain research grants in both quarters. Our clinical colleagues know about our strong statistical reputation and they respect us for it. So do reviewers for clinical grants. It happens that we are best known for developing and applying Bayesian methods in cancer research. Perhaps the only relevance of the Bayesian approach as regards the subject of this article is that clinicians relate to it. It's the way they think. It provides a bond between us. But it is not a necessary component of a healthy collaborative environment.

As much as I avoid using the word "service," we do provide services to the institution. Very early on, I established a 'drop-in' statistical clinic, analogous to a medical clinic. It is staffed by statistical analysts and is 'open' three times per week. Anyone in the institution can bring problems to the clinic. There is no charge. Typical services are doing straightforward analyses and providing advice for incorporating statistical analyses into projects and manuscripts. Some projects turn out to be large, requiring more than an hour or so, and are referred to the statistical faculty member or team leader assigned to the particular client's department.

MD Anderson provides a great environment for promoting collaborations. Its motto is "making cancer history," something collaborations between our statisticians, clinicians, and basic scientists are helping to do.

My advice to statisticians who want to establish equal partnerships relates to my opening sentence: Foster mutual respect. Respect yourselves, including by establishing a statistical reputation outside of your institution. Be confident, but keep learning, especially about science and medicine. Seek to achieve scientific and medically important goals. Think outside of your box. Listen more than you talk. Don't interrupt. If you hear rot, guide your collaborators down a path that helps them see the rot without you having to announce it. ■



MASTER'S NOTEBOOK

Master's in Statistics Proves Valuable in Workplace

Lauren Bailey

When I was an undergraduate at the University of California at San Diego, a professor introduced Cantor's diagonal argument. The elegance and creativity of Georg Cantor's contradiction blew me away. It now seemed the real numbers was merely a giant block of Swiss cheese, containing infinitely many holes.

This was the first time I saw mathematics as a creative undertaking, not merely a dry application of stodgy equations. Appreciating that proof was a life-changing day for me and solidified my commitment to mathematics and statistics. Elated, I stood up, grabbed my skateboard, and soared to the registrar's office to change my major from chemistry to mathematics. The sparkle of ingenuity I discovered that day is embedded in mathematics and statistics. It continues to reveal itself and keeps me motivated to push myself and the boundaries of research.

When I finished my undergraduate degree, I had a difficult time securing a job. Interview after interview I was told the same thing: "We like that you have a degree in math; that tells us that you can think. However, we need someone here who knows statistics." I had no idea that statistics was so valuable in the workplace. As an inroad to the subject I loved, I decided to return to school and complete a master's degree in statistics.

Fresh from my master's degree, I landed my first job as a research statistician and statistical programmer at the University of California at Irvine (UCI). I worked with a health economist on several projects involving regulation and quality measures of nursing facilities. It was at this job that I learned about the practical and interdisciplinary nature of statistics, which I continue to find rewarding.

Working on econometric modeling procedures required me to tweak my statistical approach and way of thinking. For example, when deciding which variables to throw out of a model, school had taught me to use stepwise regression (or some other type of iterative variable selection technique). However, my boss disdained these techniques, opting to use joint F-tests with a pre-selected group of variables based on the theory underlying the research question, to discard variables from the model. These new methodologies forced me to consider several approaches when analyzing data or setting up an investigation. One valuable lesson I took away from working at UCI was to keep an open mind about statistical approaches—there is more than one way to skin a cat!

After working as a researcher at the university for almost two years, I had identified the objectives that would contribute to a fruitful and stable career for me. These included (1) research leadership, (2) specialization, (3) networking and getting involved, (4) working extremely hard every day, and (5) smiling. I had (4) and (5) down, so I decided to focus on (1)–(3).

I had taken several biostatistics classes in my master's program and enjoyed health topics. This seemed like the perfect segue to specialize in a rewarding statistics-related field with a healthy growth outlook. I thought a doctorate would enable me to obtain the knowledge and credentials I would need to be a lead on a research team. So, I resolved to pursue a PhD in biostatistics. In my quest to get more involved, I was recently elected secretary for the ASA's Section for Statistical Programmers and Analysts. It has been exciting to work with a group committed to representing and enriching the statistical programmer community.

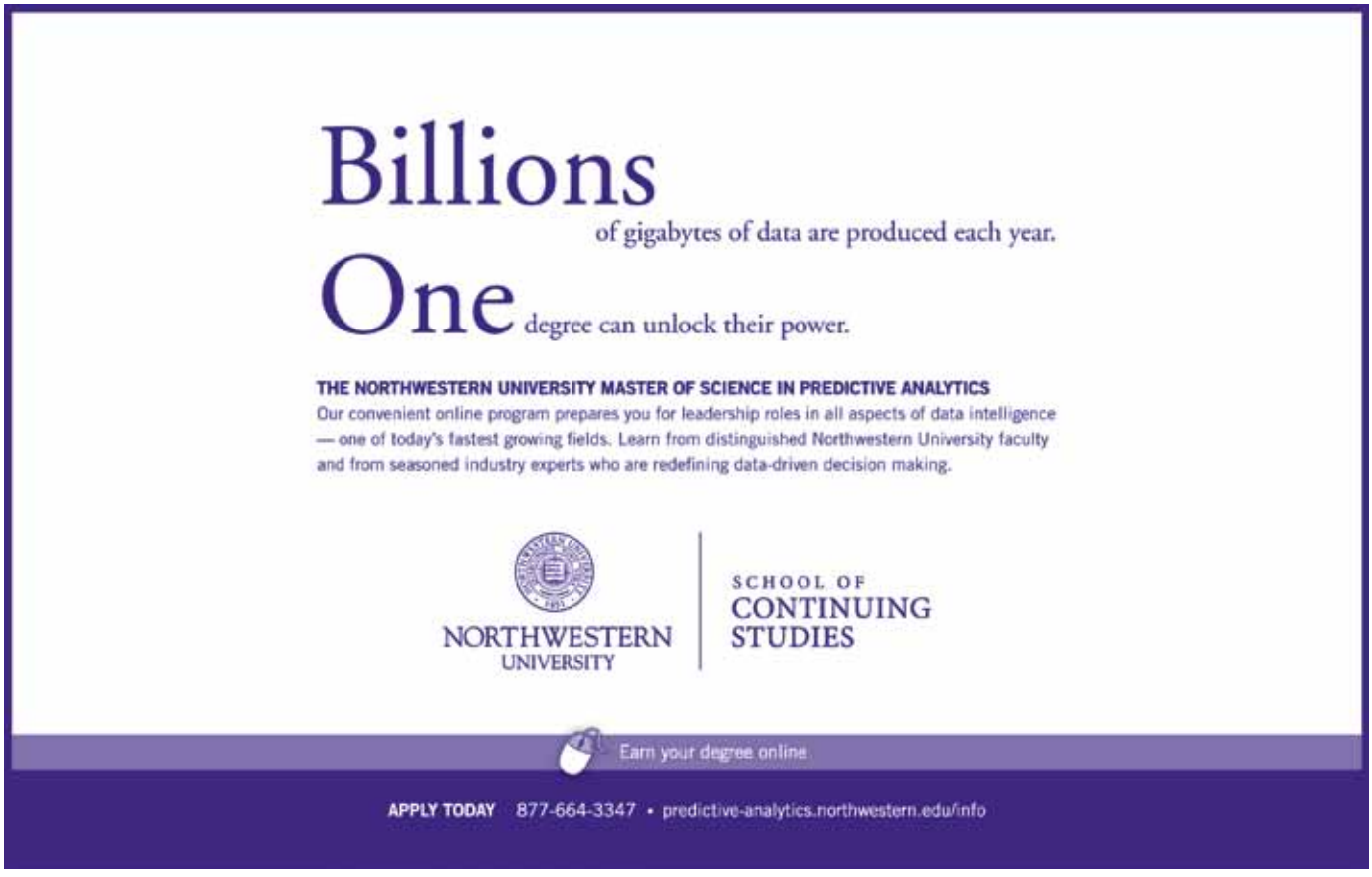
clinicians have different statistical needs than what I expected

Going back to school has entailed life changes. Daily life now involves several challenging classes, providing mentoring to students through a teaching assistantship, and working as a research consultant. I have relocated from the sunny beaches of Southern California (where I spent my entire life) to Chicago. And winter has just begun to set in … However, after all these events, I am confident this was the best choice for me and my future professional objectives.

One of my current activities is a research assistantship position at the Institute for Health Research and Policy. The interdisciplinary work I enjoyed at UCI continues to expand in my work at UIC. Clinicians and researchers come to me with their statistical questions and problems to solve. They may need power and sample size calculations for an R-01 grant, exploratory longitudinal graphs, or programming help for a certain flavor of logistic regression. I have the exciting opportunity of assisting all types of researchers with diverse problems.

Much like the lessons learned from my former economist boss, clinicians have different statistical needs than what I expected and they often have a very practical approach to problems. Recently, a clinician asked me for help analyzing data from a small investigation. When I proposed several analysis plans using fancy models that would yield (somewhat) complicated results and multifaceted conclusions, the clinician said, "No, no. I need something that physicians can use in the clinic, one simple measure that is easy to use when there are 100 things all happening at once in a busy clinic environment." I had never really understood the value of results that are easily interpretable and can be applied quickly in the clinical setting.

I have been thrilled to go through a journey from that initial spark of creativity stemming from Cantor's diagonal argument through a master's and now onto doctoral training in an exciting, applicable field where I have the opportunity to work with and learn from a diverse array of health professionals. ■



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The Secret of Survival Is the Promise for the Future: The ASA at 175

Stephen M. Stigler, The University of Chicago

The American Statistical Association was founded in Boston in 1839. In one sense, it was a late arrival. There were some two dozen statistical societies begun before 1840, including the London (later Royal) Statistical Society (1835). Some of these had short lives; none of the first three (of four) appearances of the Societé de Statistique de Paris (1803, 1829, 1830) or the Glasgow and Clydesdale Statistical Society (1836) lasted even a decade. Others lingered on much longer before they succumbed; the Societé de Statistique de Marseille (1827) led a fairly active life until about 1900.

The secret behind the longevity of the ASA and RSS is not hard to deduce: Both societies adapted and changed with the times, while those that remained stagnant failed. All the early statistical societies began in response to the growing economic activity of the time and to curiosity about the facts of the state—the "statistics" of their respective nations. Most contented themselves with meetings and discussion; only the RSS began a serious publication program before 1840. The failed societies slowly or rapidly degenerated into social clubs for businessmen and politicians and disbanded when interest in dry statistics faded.

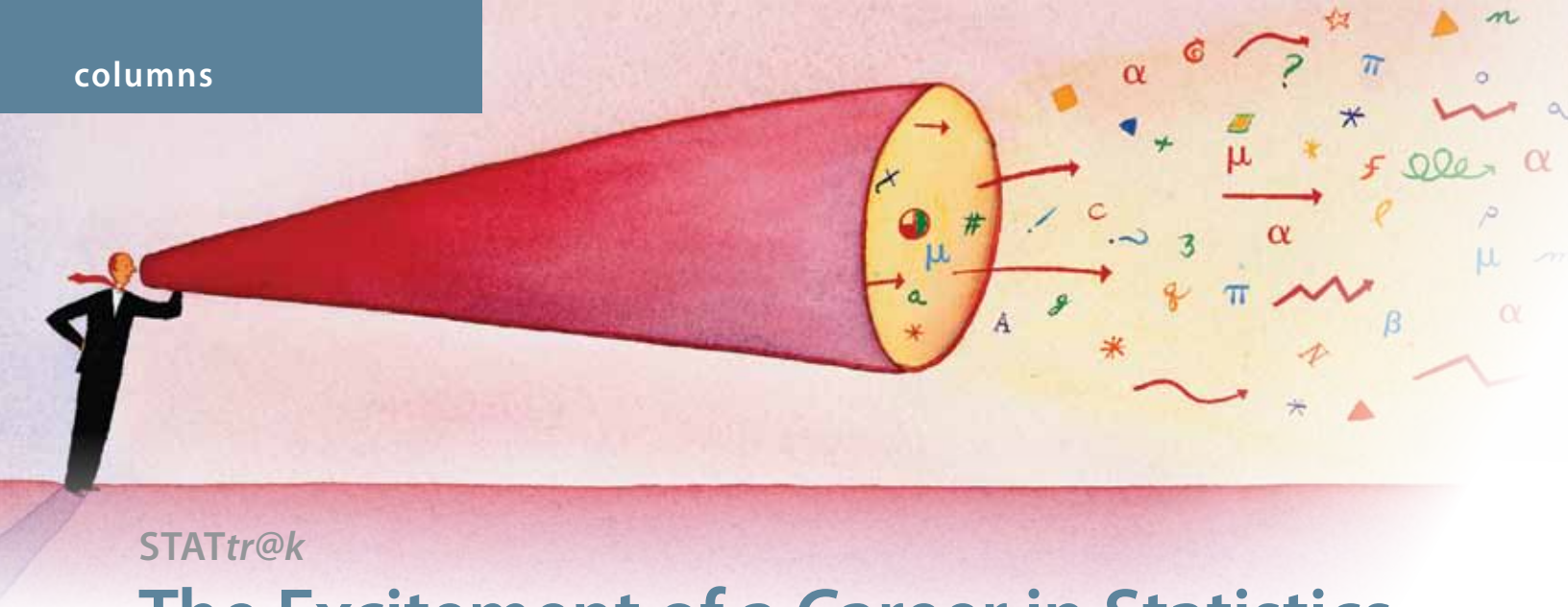
For most of its first half century, the ASA did little better than the others did. Before 1888, when it finally founded a journal, its publications were few, sporadic, and dull. But while the early ASA was a sedentary organization, with a small local membership meeting quarterly for discussion, its members' interests maintained some contact with the exciting new nation. Perhaps the first work of real import that can be closely associated with the ASA was the Ninth Census of the United States in 1870, for which ASA member Francis Amasa Walker served as superintendent. The decennial American censuses date from 1790, but with the 1870 Census, their reports were lifted to a new level of quality in analysis and presentation of results. The latter included the great *Statistical Atlas,* published in 1874, which set a new standard for the graphical display of data. Nearly two feet in height, it towers as a landmark in American statistics, both intellectually and physically.

Walker also holds the dubious distinction of being the only ASA president to have lost his life in the line of duty. Elected in 1882, he served until his death and was instrumental in arranging the first ASA meeting to take place outside the Boston area in late December of 1896, in Washington, DC. Despite weak health, he travelled in winter weather to attend and died within five days of his return to Boston.

The mission of the ASA at its founding was "to collect, preserve, and diffuse statistical information in the different departments of human knowledge." Since, at present, the ASA does none of these, at least as "statistical information" was understood in 1839, there has clearly been a major change. That change began during Walker's presidency, with the founding of the *Journal of the American Statistical Association* (*JASA*) in 1888 and, consequently, a new role in publications. The discipline of a rigorous professional journal changed the character of the ASA and the focus of its meetings. It moved from being a regional discussion club to a national and then international producer of research.

The focus of the journal has changed, as well. Over the first decades of the 20th century, *JASA* was as much an economics journal as a statistics journal. But with influential works by Harold Hotelling and Holbrook Working (confidence bands for regression lines) in 1929 and Milton Friedman (rank tests for two-way ANOVA) in 1937, it moved toward its present status as a premier journal of applicable statistical theory and methodology. The 1958 paper by Edward Kaplan and Paul Meier on survival analysis remains the most-cited work on statistics in the scientific literature. The ASA has added other journals to its portfolio, and they too have grown in excellence.

After 175 years, the ASA still faces daunting challenges. Will we find a sustainable way forward in the digital age for publication? Will we find a solution to the problem of holding large meetings and maintaining a unifying focus despite the growing variation of topics under our umbrella? Can we continue to provide value to members beyond our core publications in a world that innovates at rapidly increasing speed? Other societies face the same challenges; none has as yet found solutions. But in view of the principled adaptability shown through our 175-year history, we can be optimistic of overcoming these and many similar challenges. ■



STAT*tr@k*

The Excitement of a Career in Statistics

Gerald J. Hahn and Necip Doganaksoy

Editor's Note: These comments are abridged from Gerald Hahn and Necip Doganaksoy's recent book, *A Career in Statistics: Beyond the Numbers.*

Many years ago, we decided on a career in statistics. It was one of the two best decisions we ever made (second only to our choice of spouses). We wake up, at least most days, eager to face the challenges of work—a key criterion in selecting a career.

What makes a career in statistics so exciting? How has the recognition of the field changed during the course of our careers? And how does being a statistician affect our day-to-day thinking beyond the workplace?

What Turns Us On

Some reasons why statistics continues (after a combined 75 years in the field) to excite us include the following:

- The diversity of problems in which we become involved. Statistics deals with just about everything, from agriculture to zoology. Or, quoting a comment attributed to John Tukey, "The best thing about being a statistician is that you get to play in everyone's backyard." Most statisticians eventually focus on one or a few application areas, at least for a while, but even within these, there is much variety.
- The intellectual challenge of the work. Statisticians have been called data detectives and gatekeepers of the scientific method. Problems are rarely clear-cut, and often part of the challenge is to define the real problem. There is ample opportunity to be imaginative.
- The importance to our employers and often to society of what we do.
- The opportunity to interact with a wide variety of interesting people with different backgrounds.

An Upward Trend

We are gratified by the trend in the public recognition accorded to statistics through the course of our careers. Quoting Lynne Hare, "In years past, I used to get nerd associations with statistics. Now I get mostly awe. Wow, you can understand that stuff? And you make money doing it? 'Yup,' I say. 'Not many people can do it, the demand is high, and I can make a bundle.'"

CareerCast.com rated statistics as fourth best in its 2011 ratings of 200 jobs. (The top three jobs were in the related positions of software engineer, mathematician, and actuary. The ratings for statistician in 2010 and 2009 were #8 and #3, respectively).

In a 2009 *Wall Street Journal article,* Sarah Needleman asserts that "A degree in statistics is one of the top degrees to have in terms of getting good and secure jobs. On top of that, it offers many opportunities for a challenging and rewarding career." Similar sentiments have been expressed in 2009 articles in the *The New York Times* and *The Washington Post*. And Hal Varian, chief economist at Google, said in a widely quoted remark, "The sexy job in the next 10 years will be statistician—and I'm not kidding."

With continuously increasing computing capabilities, our opportunities keep expanding. And so do the areas of application in such diverse fields as automated tracking, bioinformatics, environmental science, genetics, and nanotechnology.

Effect on Your Thinking

Statistics is more than a career. It is a way of looking at situations that pervade our daily lives. Statisticians think in terms of probabilities and variation and search for the data that might support specific contentions and assess their validity. Thus, some claim statisticians—perhaps like scientists, engineers, and lawyers—are more rational (and

possibly less emotional)—at least in their reasoning and decision-making—than many in other fields. In assessing the safety of different forms of travel, for example, statisticians might estimate the risk probabilities associated with the various alternatives and tailor these to their specific situations, such as driving skill, available air travel options, and weather conditions.

With an appreciation of statistics, there comes a passion for procuring as much relevant data as possible before making a decision. Consider the following:

- In purchasing a car, we may avidly—some might say obsessively—seek information about repair frequency to guide our selection.
- Statisticians typically do not salt their meals before tasting them.
- If told that a particular community has more than 300 days of sunshine yearly, a statistician might assert that this statement has little meaning without specifying how a "day of sunshine" is defined and measured.

Training in statistics also gets one to look critically at studies reported in the media. Many statisticians enjoy leisurely discussions of the potential pitfalls of these with friends and family.

And only a statistician, when told that a bird in the hand is better than two in the bush, might respond with, "That depends upon the probability that you can capture both birds and your risk function. (What, for example, if the proverbial birds are actually your pair of shoes?)"

A career in statistics is not for all. But for the right person, it can bring great opportunities, excitement, and rewards. ■

Downsides to a Career in Statistics

If it moves, it's biology; if it stinks, it's chemistry; if it doesn't work, it's physics; if it puts you to sleep, it's statistics.

~ Anonymous student

There must be some downsides associated with being a statistician. What are they?

Start with the name and the general perception. We concur with 2011 ASA President Nancy Geller's urging our profession to not shun the "s word" in her August 2011 President's Corner column. But let's face it—the public's image of a statistician is still not in the same league as that of an astronaut, biotechnologist, or physicist. Statisticians are associated with statistics—and statistics is sometimes regarded as boring, deceptive, or both. It will not be long until you hear the worn quote that Mark Twain attributed to Disraeli: "There are three kinds of lies: lies, damn lies, and statistics." Or the story about the chap who became a statistician because he did not have the personality to be an accountant.

Initial negative impressions are furthered by the often less-than-exciting introductory statistics course that many have taken in college. Such courses may have focused on the mechanics of the calculations or the mathematical theory at the expense of stressing statistical concepts and demonstrating their broad applicability. The ASA and many colleagues are working hard to help make introductory courses more appealing and to place greater emphasis on statistical concepts and statistical thinking. There has been important progress in recent years, including some down-to-earth introductory texts and the introduction in the United States of the Advanced Placement course in statistics for high-school students.

Another concern is that, under some organizational structures, statisticians are viewed as outsiders. This can make them vulnerable to budget cuts and undermine their effectiveness. It is one reason why we urge statisticians to strive to become proactive participants and team members in the projects on which they are involved.

Because the value of statistics is still not universally recognized, many statisticians—especially early in their careers—spend much time marketing themselves, often in a "soft sell" mode. This can be unappealing to those who prefer to focus on their technical work.

Yes, there are downsides associated with a career in statistics. But, in our view, they are far outweighed by the plusses for the right person.

Read about your colleagues and friends in the news. Go to *www.amstat.org* and click on "Statisticians in the News."

In November of 2011, the American Association for the Advancement of Science council elected 539 members as Fellows. These individuals were recognized for their contributions to science and technology at the Fellows forum during the AAAS annual meeting in Vancouver, Canada. The new Fellows received a certificate and blue and gold rosette as a symbol of their distinguished accomplishments.

The nine ASA members elected as Fellows to the AAAS Section on Statistics include the following:

George Casella
University of Florida

Dipak K. Dey
University of Connecticut

Robert E. Fay
Westat

Wing Kam Fung
University of Hong Kong

Joan F. Hilton
University of California at San Francisco

André I. Khuri
University of Florida

Sastry G. Pantula
National Science Foundation

Xiaotong Shen
University of Minnesota

George W. Williams
Amgen, Inc.

The entire list can be viewed at *www.aaas.org/news/releases/2011/1206fellows.shtml.* ■

A conference to celebrate the achievements of **David L. DeMets** will take place at the University of Wisconsin-Madison from May 31 to June 1. DeMets, the Max Halperin Professor of Biostatistics and chair emeritus of the department of biostatistics and

DeMets

medical informatics, is a Fellow and long-time member of the American Statistical Association.

Distinguished speakers will include Robert Califf, Jonas Ellenberg, Susan Ellenberg, Thomas Fleming, Lawrence Friedman, Curt Furberg, Charles Hennekens, Gordon Lan, Marc Pfeffer, Frank Rockhold, Anastasios Tsiatis, George Williams, Janet Wittes, and Marvin Zelen.

Further updates and information about the conference can be found at *www.biostat.wisc.edu/DLD_conf.htm.* ■

Sudipto Banerjee, from the University of Minnesota, was awarded the 2011 Mortimer Spiegelman Award from the American Public Health Association on November 1, 2011, during the association's meeting in Washington, DC.

The award, given annually since 1970, is presented to an outstanding public health statistician under the age of 40. Banerjee was recognized for contributions to spatial and environmental statistics. The committee also acknowledged his leadership and strong success in external funding, PhD supervision, short course instruction, software development, and journal editing and refereeing. ■

Applied Probability Workshop on Tap for June

The International Workshop in Applied Probability will be held in Jerusalem, Israel, from June 11–14. It is intended for scientists in applied probability and stochastic modeling. Expected to attend are scientists with diverse backgrounds in mathematics, statistics, statistical physics, biophysics, financial engineering, and econophysics.

Plenary speakers for the workshop include Soren Asmussen, Aarhus University; Onno Boxma, Eindhoven University; Peter W. Glynn, Stanford University; Edward Kaplan, Yale University; Way Kuo, City University of Hong-Kong; Thomas Mikosch, University of Copenhagen; Pascal Moyal, Technical University of Compiegne; and Adolfo Quiroz , University of Los Andes.

Participants are encouraged to submit their contributions to the *Journal of Methodology and Computing in Applied Probability.* Visit the workshop website at *www.reg.co.il/iwap* for more information.

Myrto Lefkopoulou Distinguished Lecture

Each year, the Myrto Lefkopoulou lectureship is awarded to a promising biostatistical scientist who has made contributions to either collaborative or methodologic research in the applications of statistical methods to biology or medicine and/or excellence in the teaching of biostatistics. Ordinarily, the lectureship is given to an individual within 15 years of receiving an earned doctorate. In the case of nominees without an earned doctorate, the committee makes a relative adjustment of time in keeping with the spirit of the selection process. The lecture targets a general scientific audience and is the first department colloquium of each academic year. The lectureship includes travel to Boston, a reception following the lecture, and an honorarium of $1,000.

Nominations for next year's lectureship are being solicited and should be sent to the Myrto Lefkopoulou Lecture Committee, Department of Biostatistics, Harvard School of Public Health, 655 Huntington Ave., Building II, 4th floor, Boston, MA 02115 or to Vickie S. Beaulieu at *vbeaulie@hsph.harvard.edu.* Nominations should include a letter of nomination and a CV. The deadline for submission is March 31.

The annual Myrto Lefkopoulou Distinguished Lecture was initiated in 1993 in memory of Myrto Lefkopoulou, a former faculty member and student in the department of biostatistics. Lefkopoulou died of cancer in 1992 at the age of 34.

Previous lecturers include Jeffrey Morris, David Dunson, Xihong Lin, Heping Zhang, Francesca Dominici, Jianqing Fan, Mark van der Laan, Geert Molenberghs, Marie Davidian, Danyu Lin, Bradley Carlin, Steven Goodman, Giovanni Parmigiani, Kathryn Roeder, Ronald Brookmeyer, Trevor Hastie, Hans-Georg Mueller, and Louise Ryan. ■

Deadlines and Contact Information for ASA National Awards, Special Lectureships, and COPSS Awards

www.amstat.org/awards

March 2, 2012 ASA Fellows	Ji Zhang *ji.zhang@sanofi.com*
March 2, 2012 ASA SPAIG Award	Jessica L. Thompson, *jessica.thomson@ars.usda.gov*
March 9, 2012 ASA Statistics in Chemistry Award	Phil Ramsey *PJRSTATS@aol.com*
March 15, 2012 Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society	Nominations: Pam Craven, *pamela@amstat.org*
March 15, 2012 ASA W. J. Dixon Award for Excellence in Statistical Consulting	Nominations: Pam Craven, *pamela@amstat.org* Questions: Michael R. Chernick *chernickm@mlhs.org*
March 15, 2012 ASA Founders Award	Nominations: Pam Craven, *pamela@amstat.org* Questions: Nancy L. Geller, *nancylgeller@gmail.com*
March 15, 2012 ASA W. J. Youden Award in Interlaboratory Testing	Nominations: Pam Craven, *pamela@amstat.org* Questions: Michael J. Messner, *messner.michael@epa.gov*
March 15, 2012 ASA Waller Education Award	Nominations: Pam Craven, *pamela@amstat.org* Questions: June Morita, *june@stat.washington.edu*
April 2, 2012 ASA Gertrude M. Cox Scholarship	Nominations: Pam Craven, *pamela@amstat.org* Questions: Eleanor Feingold, *feingold@pitt.edu*
April 2, 2012 ASA Outstanding Statistical Application Award	Nominations: Pam Craven, *pamela@amstat.org* Questions: Petrutza C. Caragea, *pcaragea@iastate.edu*
April 2, 2012 ASA Edward C. Bryant Scholarship	Nominations: Pam Craven, *pamela@amstat.org* Questions: Tapabrata Maiti, *maiti@stt.msu.edu*
April 2, 2012 ASA Excellence in Statistical Reporting Award	Nominations: Pam Craven, *pamela@amstat.org* Questions: Morteza Marzjarani, *marzjara@svsu.edu*
April 2, 2012 ASA Samuel S. Wilks Memorial Medal	Nominations: Pam Craven, *pamela@amstat.org* Questions: Paul P. Biemer, *ppb@rti.org*

sectionnews

Biometrics

The Biometrics Section begins 2012 with an introduction to this year's executive committee members. The section also needs volunteers to chair sessions at this year's JSM in San Diego, California. If you are interested, contact the section's 2012 program chair, Timothy Johnson, at *tdjtdj@umich.edu*.

Applications are being accepted for funding to support the development of innovative outreach projects focused on enhancing awareness of biostatistics among quantitatively talented students in the United States. The section is particularly interested in projects that will encourage students to pursue advanced training in biostatistics. Total funding for each project is expected to be $3,000. All investigators are encouraged to apply by submitting a three-page application by February 29. Allowed expenditures include supplies, domestic travel when necessary to carry out the project, professional expertise (e.g., instructional designer or webmaster), and cost of computer time. Expenditures that are not allowed include secretarial/administrative personnel, tuition, foreign travel, and honoraria and travel expenses for visiting lecturers to the investigator's home institution. A project period with a start date no earlier than March 15 and an end date no later than December 31 also should be specified.

Applications should be submitted electronically to the Strategic Initiatives Subcommittee chair, Roslyn Stone, at *Roslyn@pitt.edu*.

For details about the section's activities, visit the section news department online at *http://magazine.amsta.org/?cat=17.*

To view section news in its entirety, visit *http://magazine.amstat.org.*

Biopharmaceutical

The Biopharmaceutical Section is cosponsoring, along with Ball State University, the Midwest Biopharmaceutical Statistics Workshop (MBSW) from May 21–23 at the Alumni Center of Ball State University in Muncie, Indiana.

The 2012 workshop features three, half-day short courses: Comparative Effectiveness Using Observational Research by Thomas Love, High-Dimensional Data and Nonnegative Matrix Factorization by Paul Fogel, and Prevention and Treatment of Missing Data by Craig Mallinckrodt.

This year's workshop theme is "Strategic Use of Statistical Thinking." The Monday afternoon plenary session speakers are Lee Wilkinson, who will give a talk titled "Expert Systems and Statistical Graphics," and Lisa LaVange, who will present "Select Regulatory Statistical Challenges."

Contributed posters will be accepted for the poster session on Tuesday over the lunch hour, with Paul Berg of Eli Lilly serving as chair. Posters will be considered on any biopharmaceutical statistical topic. Abstracts must be submitted by April 20.

Students are especially encouraged to participate in the MBSW activities. To help financially, limited scholarships are available to students to offset travel costs, with preference given to students who present posters. The best student poster, as judged by a committee including past workshop chairs, will receive the Charles Sampson Award, named in honor of a founder and guiding force behind this series of workshops. Students or faculty sponsors interested in applying for scholarships should access the website at *www.mbswonline.com* or contact Berg at *pberg@lilly.com*.

The cost of the workshop is $195 and includes most meals. Inexpensive accommodations are available in Muncie.

Questions not answered on the website can be addressed to the publicity chair, Melvin Munsaka, at *melvin.munsaka@takeda.com*; the workshop chair, Douglas Faries, at *faries_douglas_e@lilly.com*; or the local arrangements chairs, Mir Masoom Ali at *mali@bsu.edu* and Dale Umbach at *dumbach@bsu.edu.*

For detailed information about the section's activities, visit the section news department online at *http://magazine.amsta.org/?cat=17*.

Health Policy Statistics

More than 210 statisticians, methodologists, and health policy experts gathered from October 5–7, 2011 at The Ritz Carlton in Cleveland, Ohio, for the ninth International Conference on Health Policy Statistics (ICHPS).

The meeting's theme, "Advancing Methods to Improve Health Care," reflected the growing importance of research methods in facilitating informed discussions regarding health reform and other efforts to improve health care in the United States. The newly minted Patient-Centered Outcomes Research Institute's calls for research that reflects the effect of many of the methods showcased at ICHPS 2011.

Major presentations covered a broad range of topics, including longitudinal data; spatial data; causal inference and treatment heterogeneity; quasi-experimental studies and novel use of randomization; and Bayesian analysis including prior specification, hierarchical modeling, and random effects.

A special issue of the journal *Health Services and Outcomes Research Methodology*, dedicated to papers from ICHPS 2011, is to be published in June. Details of all sessions can be found at *www.amstat.org/meetings/ichps/2011.*

The tenth ICHPS is planned for October of 2013 in Seattle, Washington, and will be co-chaired by Andrew Zhou of the University of Washington and Don Hedeker of the University of Illinois at Chicago. For more information, contact Zhou at *azhou@u.washington.edu* or Hedeker at *hedeker@uic.edu.*

For details about the 2011 meeting and to see photos, visit *http://magazine.amstat.org/blog/category/membernews/amstatsections/health-policy-statistics.*

Quality and Productivity

March 1 is the deadline to apply for the Quality and Productivity Section's Mary G. and Joseph Natrella Scholarship. The scholarship will support participation of two students in the Quality and Productivity Research Conference (QPRC) in Long Beach, California, June 5–7. Application is open to full-time students pursuing a master's or doctoral degree at an accredited college or university who have a demonstrated interest in the application of statistics to quality and productivity. Further information about the scholarship can be found at *www.amstat-online.org/sections/qp/Natrella_Scholarship.html.*

Limited QPRC student scholarships, which include complimentary conference registration, are available. Interested students should apply immediately by sending their résumé and one letter of recommendation from a current statistics professor to the conference chair, Daniel R. Jeske, at *daniel.jeske@ucr.edu.* For information about additional student travel support, visit *www.qprc2012.com.*

The deadline for abstract submission is March 31. Follow the submission instructions posted on the Call-for-Papers link at the conference website, *www.qprc2012.com*. For detailed information, visit the section news department online at *http://magazine.amstat.org/?cat=17.*

Statistics and the Environment

The Statistics and the Environment Section of the ASA is pleased to announce a short course, Introduction to Analysis of Extremes: Univariate and Multivariate Cases, will take place at this year's Joint Statistical Meetings in San Diego, California, from July 28 to August 2. The presenter is Dan Cooley of Colorado State University, Fort Collins.

For information about this year's Joint Statistical Meetings, visit the meetings website at *www.amstat.org/meetings/jsm/2012.*

Survey Research Methods

Mike Larsen, SRMS program chair, is looking for ideas to help develop a proposal for a late-breaking invited session at this year's JSM in San Diego, California.

A late-breaking session must cover one or more technical, scientific, or policy-related topics that have arisen in the one-year period prior to the JSM in which the session is proposed to appear. Proposals for late-breaking sessions for JSM 2012 should be submitted by April 13. They can go directly to the JSM program chair, Steve MacEachern, at *snm@stat.osu.edu* or Larsen at *mlarsen@bsc.gwu.edu*.

Meanwhile, Steven Pedlow and Ting Yan, co-editors of the SRMS newsletter share the highlights of the January issue. Some of the highlights include a call for volunteers from outgoing chair, Stephen Cohen; how to participate in the SRMS mentoring program and the fourth International Conference on Establishment Surveys (ICES-IV, June 2012) from incoming section chair, John Czajka; instructions for accessing the entire SRMS *Amstat News* history from publications officer John Finamore; details on the effect of the new ASA Section on Statistics in Imaging from Council of Sections representatives Rachel Harter and Tony An; the list of winners of the SRMS JSM 2011 poster award; and the history of the Waksberg Award—the winners and a call for nominations.

The January 2012 newsletter is available at *www.amstat.org/sections/srms/newsJan12.pdf.*

For details, visit *http://magazine.amstat.org/?cat=17.*

To list your section's news in *Amstat News,* send an email to Managing Editor Megan Murphy at *megan@amstat.org* with the details.

chapternews

Cleveland

The Cleveland Chapter of the ASA is offering its 26th spring conference/short course on May 11. Heping Zhang, a Fellow of the ASA and Institute for Mathematical Statistics, will present "Recursive Partitioning and Applications." The day-long presentation will cover chapters 1–4, 6, 8, and 9 of his book with the same name. Topics will include the basics of tree construction, logistic regression and trees for a binary response, random forests, and analysis of censored data. The course will benefit those who want to use trees and adaptive splines to analyze high-dimensional and complex data, as well as students and researchers who wish to develop related classification and regression methods and software. The registration form and more information are available at *www.bio.ri.ccf.org/ASA/cspring.html* (case sensitive).

The following events are the latest additions to the ASA's online calendar of events. Announcements are accepted from education and not-for-profit organizations only. To view the complete list of statistics meetings and workshops, visit *www.amstat.org/dateline*.

* Indicates events sponsored by the ASA or one of its sections, chapters, or committees

›› Indicates events posted since the previous issue

2012

March

2–3—Conference of Texas Statisticians, Beaumont, Texas
For more information, visit *www.math.lamar.edu/activities/COTS* or contact Kumer Das, Associate Professor, Department of Mathematics, Beaumont, TX 77710; (409) 880-7947; *kumer.das@lamar.edu*.

14–16—IAENG International Conference on Data Mining and Applications 2012, Hong Kong, China
For details, visit *www.iaeng.org/IMECS2012/ICDMA2012.html* or contact IAENG Secretariat, Unit 1, 1/F, 37-39 Hung To Road, Hong Kong, International HK, Hong Kong; (852) 3169-3427; *imecs@iaeng.org*.

26–27—Signal Processing and Inference for the Physical Sciences, London, United Kingdom
For details, visit *http://royalsociety.org/events/signal-processing* or contact Emily Roberts, 6-9 Carlton House Terrace, London, International SW1Y 5AG, UK; *Emily.Roberts@royalsociety.org*.

30–31—Information and Econometrics of Networks, Washington, DC
For details, visit *www.american.edu/cas/economics/info-metrics/workshop/workshop-2012-spring.cfm* or contact Amos Golan, 4400 Massachusetts Ave. NW, Economics, Kreeger 104, Washington, DC 20016; (202) 885-3770; *info-metrics@american.edu*.

April

***2–5—SIAM Conference on Uncertainty Quantification (UQ12), Raleigh, North Carolina**
For more information, visit *www.siam.org/meetings/uq12* or contact Kirsten Wilden, 3600 Market St., 6th Floor, Philadelphia, PA 19104; (215) 382-9800; *wilden@siam.org*.

10–12—Fifth International Conference MAF 2012 - Mathematical and Statistical Methods for Actuarial Sciences and Finance, Venice, Italy
For details, visit *maf2012.unive.it* or contact Marcella Niglio, Via Ponte Don Melillo, Fisciano, International 84084, Italy.

29–5/1—24th Annual Kansas State University Conference on Applied Statistics in Agriculture, Manhattan, Kansas
For more information, visit *www.k-state.edu/stats/news/conference.html* or contact John Boyer, Kansas State University, Department of Statistics, 101 Dickens Hall, Manhattan, KS 66506; (785) 532-0518; *jboyer@ksu.edu*.

May

11—Conference on New Statistical Methods for Next-Generation Sequencing Data Analysis, Ames, Iowa
For more information, visit *www.stat.iastate.edu/Conference2012* or contact Dan Nettleton, 2115 Snedecor Hall, Department of Statistics, Ames, IA 50011-1210; (515) 294-7754; *dnett@iastate.edu*.

14–18—SAMSI Interdisciplinary Workshop for Undergraduate Students and Faculty, Research Triangle Park, North Carolina
For details, visit *www.samsi.info/workshop/interdisciplinary-workshop-undergraduate-students-and-faculty-may-14-18-2012* or contact Karem Jackson, 19 T.W. Alexander Drive, RTP, NC 27709; (919) 685-9324; *admin@samsi.info*.

>>14–18—eCOTS: Electronic Conference on Teaching Statistics, Online
For more information, visit *www.causeweb.org/ecots* or contact Jean Scott, 1958 Neil Ave., Columbus, OH 43210; (614) 688-5913; *scott.961@osu.edu*.

>>14–18—Microeconometrics with Focus on Panel Data and Discrete Choice: Theory and Practice, Washington, DC
For more information, visit *www.american.edu/cas/economics/info-metrics/econometrics.cfm* or contact Amos Golan, American University, 4400 Massachusetts Ave. NW, Kreeger 104, Washington, DC 20016; (202) 885-3770; *info-metrics@american.edu*.

15–18—WCBF - 11th Annual Lean Six Sigma and Process Improvement in Healthcare Summit 2012, New Orleans, Louisiana
For more information, visit *www.wcbf.com* or contact Selina Mirpuri, WCBF Ltd. First Floor, Jubliee House, Merrion Avenue, Stanmore, Middlesex, London, International HA7 4RY, UK; +1 312 466 5774; *selina.mirpuri@wcbf.com*.

17–19—Methods and Models for Latent Variables (MMLV2012), Naples, Italy
For details, visit *www2.stat.unibo.it/MMLV/default.asp* or contact Stefania Capecchi, c/o Department of Statistics, Via Rodino' 22, Naples, International I-80138, Italy; +390812537465; *stefania.capecchi@unina.it*.

>>*21–23—Thirty-Fifth Annual Midwest Biopharmaceutical Statistics Workshop (MBSW), Muncie, Indiana
For details, visit *www.mbswonline.com* or contact Melvin Munsaka, One Takeda Parkway, Deerfield, IL 60015; (224) 554-2846, *melvin.munsaka@takeda.com*.

>>29–6/2—Data Mining and Information: Theory and Practice, Washington, DC
For more information, visit *www.american.edu/cas/economics/info-metrics/econometrics.cfm* or contact Amos Golan, American University, 4400 Massachusetts Ave., NW, Kreeger 104, Washington, DC 20016; (202) 885-3770; *info-metrics@american.edu*.

29–8/17—2012 MBI Undergraduate Summer Research Program, Columbus, Ohio
For more information, visit *www.mbi.osu.edu/eduprograms/undergrad2012.html* or contact Rebecca Martin, 1735 Neil Ave., Columbus, OH 43210; (614) 688-3519; *rebecca@mbi.osu.edu*.

>>31–6/1—David L. DeMets Symposium, Madison, Wisconsin
For details, visit *www.biostat.wisc.edu/DLD_conf.htm* or contact Sue Parman, 600 Highland Ave., Box 4675, Madison, WI 53792-4675; (608) 263-1706; *parman@biostat.wisc.edu*.

June

>>1–22—Financial Time Series Analysis: High-Dimensionality, Nonstationarity, and the Financial Crisis, Singapore
For more information, visit *www2.ims.nus.edu.sg/Programs/012hidim/index.php* or contact Claire Tan, 3 Prince George's Park, Singapore, International 118402, Singapore; 65161892; *imstlf@nus.edu.sg*.

***4–7—Quality and Productivity Research Conference (QPRC), Long Beach, California**
For details, visit *www.qprc2012.com* or contact Daniel Jeske, Room 2605, STAT-COMP Building, 900 University Ave., Riverside, CA 92521; (951) 827-3014; *daniel.jeske@ucr.edu*.

6–9—MedicReS World Congress on Good Medical Research, Vienna, Austria
For more information, visit *www.ic2012.medicres.org* or contact Burcin Akicier, Armada Is Merkezi Kat 12 Sogutozu, Ankara, International 06100, Turkey; +905072072777; *info@bsb.com.tr*.

>>14–15—Symposium on Modeling Immune Responses from Complex Data, Rochester, New York
For details, visit *cbim.urmc.rochester.edu/education/2012-symposium* or contact Jeanne Holden-Wiltse, Dept. of Biostatistics and Computational Biology, University of Rochester, 601 Elmwood Ave., Box 630, Rochester, NY 14618; (585) 275-0386; *jeanne_wiltse@urmc.rochester.edu*.

17–21—ISBIS 2012, Bangkok, Thailand
For more information, visit *www.isbis2012-thailand.org* or contact David Banks, Department of Statistical Science, Box 90251, Duke University, Durham, NC 27708; (919) 684-3743; *banks@stat.duke.edu*.

18–29—Joint 2012 MBI-NIMBioS-CAMBAM Summer Graduate Workshop Stochastics Applied to Biological Systems, Columbus, Ohio
For more information, visit *www.mbi.osu.edu/eduprograms/graduate2012.html* or contact Rebecca Martin, 1735 Neil Ave., Columbus, OH 43210; (614) 688-3519; *rebecca@mbi.osu.edu*.

20–24—8th International Symposium on Statistics, West Lafayette, Indiana
For more information, visit *www.stat.purdue.edu* or contact Diane Martin, 250 N. University Ave., West Lafayette, IN 47907; (765) 494-3141; *martindl@purdue.edu*.

International Conference to Focus on Statistics and Engineering

The second International Conference on the Interface Between Statistics and Engineering (ICISE) will take place at National Cheng Kung University in Tainan, Taiwan, from June 23–25. This international conference, bringing together statisticians and engineers, will focus on applied statistics, data mining and machining learning, statistical data analysis integrated with engineering models, quality and reliability engineering, optimal decisionmaking, optimal manufacturing and service enterprise systems, and statistical controls in semiconductor industry.

Featured keynote speakers include Way Kuo, president and distinguished professor of City University of Hong Kong; Vijay Nair, Donald A. Darling Professor in the department of statistics at the University of Michigan; and Kazuyuki Suzuki, professor in the graduate school of informatics and engineering at the University of Electro-Communications.

For details, visit *http://conf.ncku.edu.tw/icise/index.php*.

To view the entire list of statistics meetings and workshops, visit *www.amstat.org/dateline.*

24–27—32nd Annual International Symposium on Forecasting, Boston, Massachusetts
For details, visit *http://forecasters.org/isf/index.html* or contact Pam Stroud, 53 Tesla Ave., Medford, MA 02155; (781) 234-4077; *isf@forecasters.org.*

25–29—SAMSI Summer Program: Nonlocal Continuum Models for Diffusion, Mechanics, and Other Applications, Research Triangle Park, North Carolina
For more information, visit *www.samsi.info/workshop/nonlocal-continuum-models-diffusion-mechanics-and-other-applications* or contact Karem Jackson, 19 T.W. Alexander Drive, RTP, NC 27709; (919) 685-9324; *admin@samsi.info.*

July

1–4—IMS Asia Pacific Rim Meetings, Tsukuba, Japan
For more information, visit *http://ims-aprm2012.org/index.html* or contact Runze Li, Department of Statistics, Penn State University, University Park, PA 16802-2111; (814) 865-1555; *rli@stat.psu.edu.*

>>3–5—Leeds Annual Statistical Research (LASR) Workshop, Leeds, United Kingdom
For more information, visit *www1.maths.leeds.ac.uk/statistics/workshop/lasr2012* or contact Kanti Mardia, University of Leeds, School of Mathematics, Woodhouse Lane, Leeds, International LS2 9JT, UK; *workshop@maths.leeds.ac.uk.*

3–6—International Statistical Ecology Conference (ISEC) 2012, Oslo, Norway
For more information, visit *www.cees.uio.no/news/2010/isec2012.html* or contact Carl Schwarz, Statistics and Actuarial Science, Burnaby, British Columbia, V5A1S6, Canada; (778) 782-3376; *cschwarz@stat.sfu.ca.*

4–6—World Congress on Engineering 2012, London, United Kingdom
For details, visit *www.iaeng.org/WCE2012* or contact IAENG Secretariat, Unit 1, 1/F, 37-39 Hung To Road, Hong Kong, International HK, Hong Kong; (852) 3169-3427; *wce@iaeng.org.*

4–6—Statistical Inference in Complex/High-Dimensional Problems, Vienna, Austria
For details, visit *www.univie.ac.at/inference2012* or contact Hannes Leeb, Department of Statistics, Universitaetsstr. 5/3, Vienna, International 1010, Austria; +43 1 4277 38620; *hannes.leeb@univie.ac.at.*

>>9–12—Australian Statistical Conference 2012, Adelaide, Australia
For more information, visit *www.sapmea.asn.au/conventions/asc2012* or contact Paul Sutcliffe, P.O. Box 213, Canberra, International 2616, Australia; 82988179; *sutters@bigpond.net.au.*

9–14—8th World Congress in Probability and Statistics, Istanbul, Turkey
For details, visit *www.worldcong2012.org* or contact Aycil Yesilirmak, Ayazmaderesi Cad. Karadut Sok. No: 7, Dikilitas, Istanbul, International 34349, Turkey; +90 212 381 46 00; *aycilyesilirmak@figur.net.*

16–18—International Symposium in Statistics (ISS) 2012 on Longitudinal Data Analysis Subject to Outliers, Measurement Errors, and/or Missing Values, St. John's, Newfoundland
For more information, visit *www.iss-2012-stjohns.ca* or contact Brajendra Sutradhar, Elizabeth Avenue, St. John's, Newfoundland A1C5S7, Canada; (709) 864-8731; *bsutradh@mun.ca.*

16–20—MBI BioSciences Problem-Solving Workshop (PSW@MBI), Columbus, Ohio
For more information, visit *www.mbi.osu.edu/2012/stgrdescription.html* or contact Rebecca Martin,

Plans for IWSM&A Under Way

Serguei Pergamenchtchikov and Alexander Tartakovsky

The International Workshop on Sequential Methods and Their Applications (IWSM&A) will take place from June 4–8 in University of Rouen, France. The goal of the workshop is to bring together researchers and practitioners from varied areas within sequential methodologies.

The IWSM&A will focus on all aspects of sequential methodologies, including optimal stopping, hypothesis testing, estimation, changepoint detection, multiple comparisons, selection and ranking, and surveillance. Areas of application will cover mathematical finance, quality control, reliability, clinical trials, and signal and image processing. This workshop will include plenary presentations, as well as invited lectures delivered by distinguished colleagues.

Visit *www.univ-rouen.fr/LMRS/RMR12* to learn more about the workshop activities and speakers.

1735 Neil Ave., Columbus, OH 43210; (614) 688-3519; *rebecca@mbi.osu.edu*.

16–20—27th International Workshop on Statistical Modeling, Prague, Czech Republic
For more information, visit *http://iwsm2012.karlin.mff.cuni.cz* or contact Arnost Komarek, Sokolovska 83, Praha 8, International 18200, Czech Republic; 00420221913282; *komarek@karlin.mff.cuni.cz*.

16–20—LinStat 2012 Conference and the 21st International Workshop on Matrices and Statistics, IWMS 2012, Bedlewo, Poland
For details, visit *http://linstat2012.au.poznan.pl/index.html* or contact Katarzyna Filipiak, Wojska Polskiego 28, Poznan, Non US/CAN Province 60637, Poland; *linstat@up.poznan.pl*.

16–24—Industrial Math/Stat Modeling Workshop for Graduate Students, Raleigh, North Carolina
For more information, visit *www.samsi.info/workshop/2012-industrial-mathstat-modeling-workshop-graduate-students-july-16-24-2012* or contact Karem Jackson, 19 T.W. Alexander Drive, RTP, NC 27709; (919) 685-9324; *admin@samsi.info*.

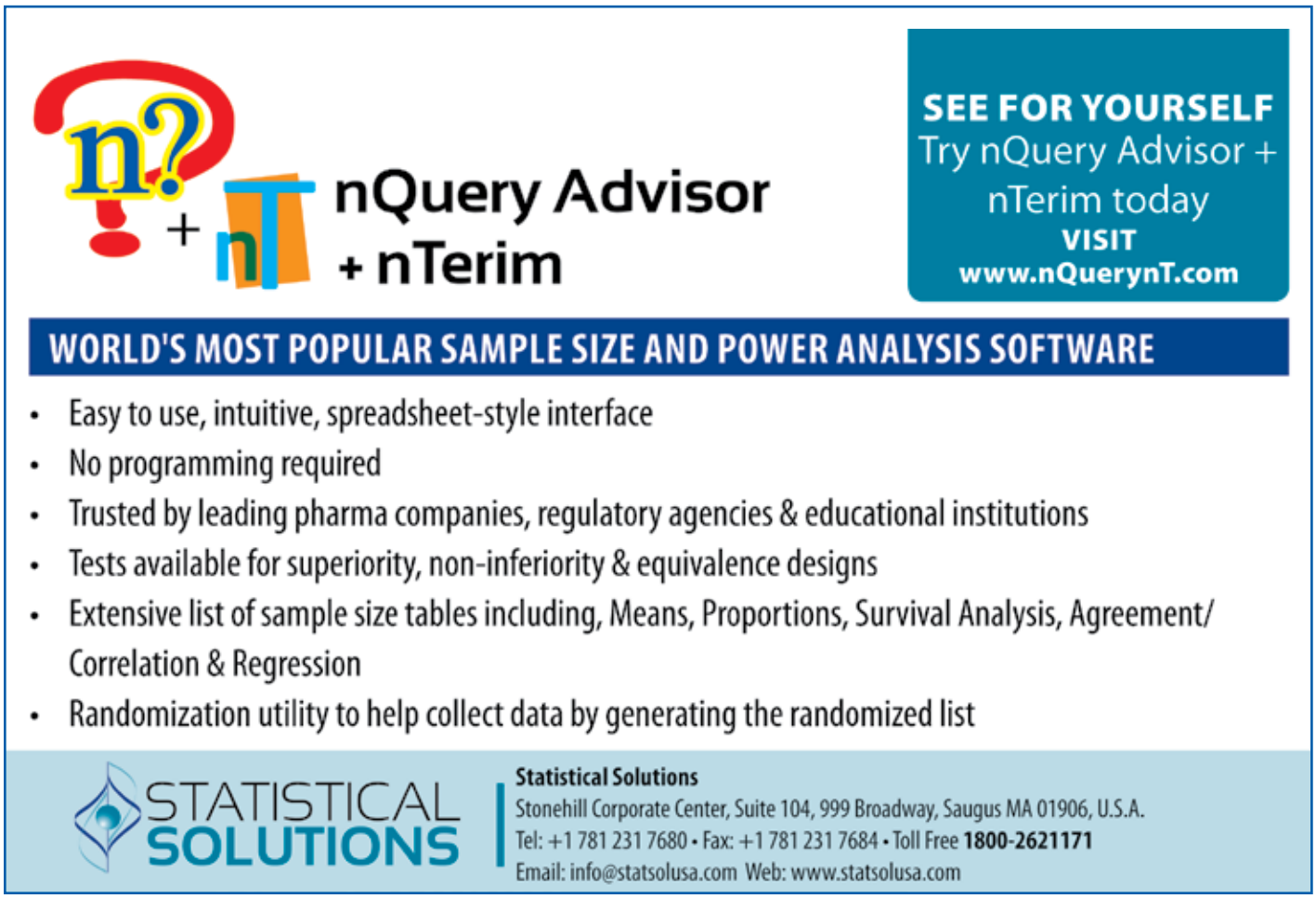
23–26—Joint Meeting of y-BIS and jSPE, Lisbon, Portugal
For details, visit *http://ybis-jspe.com* or contact Paulo Rodrigues, Department of Mathematics, Faculty of Sciences and Technology of UNL, Caparica, International 2829-516, Portugal; 00351936110338; *paulocanas@gmail.com*.

26–28—18th ISSAT International Conference on Reliability and Quality in Design, Boston, Massachusetts
For details, visit *www.issatconferences.org* or contact Conference Secretary, P.O. Box 1504, Piscataway, NJ 08855; *rqd@issatconferences.org*.

***28–8/2—2012 Joint Statistical Meetings, San Diego, California**
For more information, visit *www.amstat.org/meetings/jsm/2012/index.cfm* or contact ASA Meetings, 732 N. Washington St., Alexandria, VA 22314; (888) 231-3473; *meetings@amstat.org*.

August

5–8—IEEE Statistical Signal Processing Workshop 2012, Ann Arbor, Michigan
For more information, visit *www.ssp2012.org* or contact Clayton Scott, 1301 Beal Ave., Ann Arbor, MI 48109; *contact@ssp2012.org*. ■



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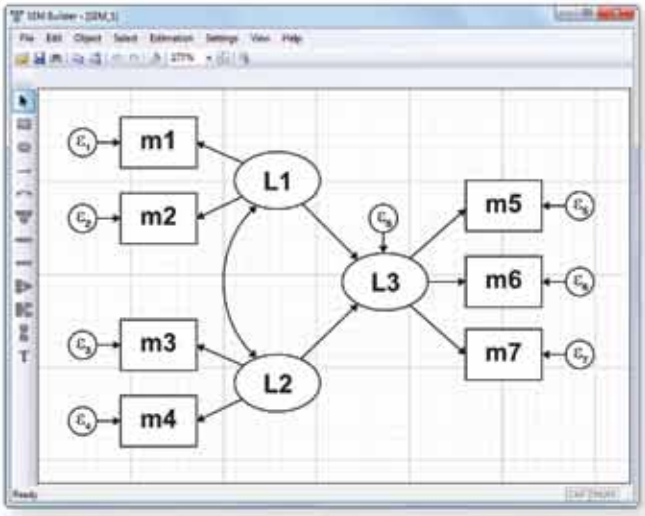

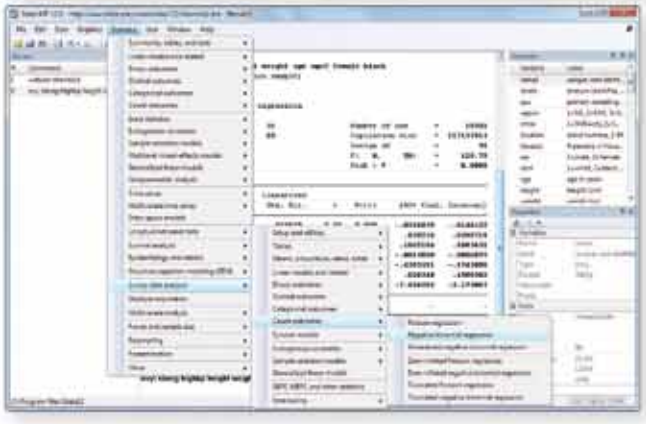

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Alabama

■ The University of South Alabama Department of Mathematics and Statistics invites applications for a tenure-track faculty position starting August 15, 2012. Applicants should possess an earned doctoral degree in statistics, biostatistics, or a related field, but ABDs near completion of degree will be considered. Details are available at *www.southalabama.edu/mathstat*. Review of applications will begin on March 1, 2012, and continue until the position is filled. The University of South Alabama is an Equal Opportunity/Equal Access Employer.

Colorado

■ Assistant professor—biostatistics. University of Colorado Denver, Anschutz Medical Campus (Aurora), Colorado School of Public Health (*http://publichealth.ucdenver.edu*), Colorado Biostatistics Consortium (*http://cbc.ucdenver.edu*). Collaborate with The Children's Hospital, the Linda Crnic Institute for Down Syndrome, and other medical researchers, particularly in

Professional Opportunity listings may not exceed 65 words, plus equal opportunity information. The deadline for their receipt is the 20th of the month two months prior to when the ad is to be published (e.g., May 20 for the July issue). Ads will be published in the next available issue following receipt.

Listings are shown alphabetically by state, followed by international listings. Vacancy listings may include the institutional name and address or be identified by number, as desired.

Professional Opportunities vacancies also will be published on the ASA's website (*www.amstat.org*). Vacancy listings will appear on the website for the entire calendar month. Ads may not be placed for publication in the magazine only; all ads will be published both electronically and in print.

Rates: $320 for nonprofit organizations (with proof of nonprofit status), $475 for all others. Member discounts are not given. For display and online advertising rates, go to *www.amstat.org/ads*.

Listings will be invoiced following publication. All payments should be made to the American Statistical Association. All material should be sent to *Amstat News*, 732 North Washington Street, Alexandria, VA 22314-1943; fax (703) 684-2036; email *advertise@amstat.org*.

Employers are expected to acknowledge all responses resulting from publication of their ads. Personnel advertising is accepted with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual orientation.

Also, look for job ads on the ASA website at *www.amstat.org/jobweb*.

A Spectrum of Short-Term Research Opportunities in Statistics

Graduate Intern Program *(No Application Deadline)*: Primarily for individuals being trained as statisticians and related professionals who have completed the first year of a master's or Ph.D. degree program.
- Collaborative research for the 12-week to 1-year period is conducted at the U.S. Census Bureau.
- Details: <http://www.census.gov/hrd/www/jobs/stu_temp.html>.

Dissertation Fellowship Program *(Application Deadline—February 28)*: Primarily for doctoral candidates in statistics or related areas who propose for their dissertation to investigate research topics of primary interest to the U.S. Census Bureau.
- Research is conducted and completed at the selected fellow's university/institution.
- Details: <www.census.gov/srd/www/DissertationFellowshipTopics.pdf> or contact <tommy.wright@census.gov>.

Postdoctoral Research Program *(Application Deadline—January 31)*: Primarily for statisticians and related professionals who have held their Ph.D. (or equivalent) no more than 6 years before the commencement of work as a postdoctoral researcher.
- Collaborative research for the 2-year appointment is conducted at the U.S. Census Bureau.
- Details: <http://www.census.gov/hrd/www/jobs/prp.html> or contact <tommy.wright@census.gov>.

ASA/NSF/Census Research Fellowship Program *(Application Deadline—December 10)*: Primarily for statisticians and related professionals who have recognized research records and considerable expertise in their areas of proposed research.
- Collaborative research for the 6–12 month period is conducted at the U.S. Census Bureau.
- Details: <www.census.gov/srd/www/fellweb.html> or contact <tommy.wright@census.gov>.

United States Census Bureau

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genetics. Develop original methods. Teach introductory workshops. Provide general consulting in medical data collection and analysis."Research track," not tenure-eligible. Apply online *www.jobsatcu.edu* Posting 815860.

Massachusetts

■ MS Biostatistician. Collaborate with medical and basic science researchers in design, analysis, and publication of cancer clinical trials and translational research. Requirements: strong background in statistical principles, data analysis, computing (especially SAS and R), communication skills, and 1–2 years of experience. Send CV, names of three references to *bcb.search@jimmy.harvard.edu*, or MS Biostatistician Job Search, CLSB 11007, Dana-Farber Cancer Institute, 450 Brookline Ave., Boston, MA 02215. Dana-Farber Cancer Institute is an AA/EOE.

■ Tufts Clinical and Translational Science Institute (Tufts CTSI) is recruiting for a senior statistician to direct the Tufts CTSI Research Design Center (RDC), located in downtown Boston. Responsibilities include providing leadership for the RDC staff, research consulting, mentoring, and collaborating with researchers. Candidates should have a PhD degree, an understanding of biostatistics and study design, and be eligible for associate or full professor appointment. It is the policy of Tufts Medical Center, consistent with federal and state law, to provide equal opportunity to all applicants for employment and all employees with respect to the administration of personnel policies and practices, including recruitment, hiring, training, promotion, transfer, compensation, benefits, disciplinary action, layoff, termination and other terms and conditions of employment, without regard to an individual's actual or perceived race, color, religion, sex, pregnancy, sexual orientation, gender identity or gender expression, national origin, age, disability, veteran status, marital status, genetic traits and any other classification protected by law; and ensure that all employment decisions are based on valid job requirements.

New Hampshire

■ Dartmouth College. Statistical analyst: Assist clinical researchers and statistics faculty in clinical research center. Statistical consulting/computing/data management/methodologic research; graduate degree

KU Medical Center

THE UNIVERSITY OF KANSAS CANCER CENTER

ASSOCIATE OR FULL PROFESSOR DIRECTOR OF BIOSTATISTICS AND INFORMATICS SHARED RESOURCE

The University of Kansas Medical Center is seeking an Associate Professor within the Department of Biostatistics. This recruitment is joint with the University of Kansas Cancer Center (KUCC) and will be expected to direct the biostatistics and informatics shared resource (BISR) that resides within the department and supports the cancer center. This position will play a crucial role in collaborating with research faculty within KUCC, the School of Medicine and the University. The priority will be to focus on supporting the BISR but will also have teaching and other duties within the department. This position is expected to engage in collaborative research with other faculty from programs and departments within the School and University. Expertise within the department includes linear, nonlinear, and longitudinal modeling, clinical trial and experimental design, survival analysis, categorical data analysis, and Bayesian methodology.

Why should you take advantage of this promising opportunity?

- As an institution, the School of Medicine ranked 60th among all medical schools in the country. Among public medical schools, we ranked 32nd.
- KU is committed to recruiting new physician scientists and fostering an interdisciplinary structure with the basic science programs with the goal of building integrated research programs that will generate new knowledge about pathogenesis and treatment of human diseases and ultimately translating these findings into pioneering initiatives to study and treat disease.
- Extremely stable work environment; strong state resources and support
- University of Kansas ranked among large university in the top **five** of "2008 Best Colleges to Work For"

Required Qualifications: Ph.D. in Statistics or Biostatistics or related field. Collaborative research experience in oncology. At least 5 years collaborative research experience in supporting grant applications as a co-investigator.

Preferred Qualifications: Experience at an NCI-designated cancer center. Experience at running core or shared resource facilities. Statistical methodological skill set that is complementary to the current department expertise.

To view the complete position description and apply on-line go to http://jobs.kumc.edu and search for position M0203380. The Department of Biostatistics supports the mission of the University of Kansas Medical Center "To create a positive environment for instruction, research and service."

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EOE

University of Connecticut Health Center

Assistant Professor of Biostatistics

The Connecticut Institute for Clinical and Translational Science (CICATS) at the University of Connecticut Health Center (UCHC) invites nominations and applications for a full-time, tenure track, faculty position at the Assistant Professor level in the newly formed Biostatistics Center and will hold a faculty appointment in the Department of Community Medicine.

Biostatistics faculty will help develop the CICATS Biostatistics Center that will facilitate and support the proposed growth of clinical and translational science across CICATS, which includes the University's Schools of Medicine and Dentistry, the Storrs campus, and local area hospitals. In addition to original research and research collaborations, they will be actively involved in the operations of the CICATS Research Design, Epidemiology and Biostatistics cores. CICATS investigators will include trainees and both junior and senior faculty members from multiple disciplines. The Biostatistics faculty, in collaboration with a team of epidemiologists and master's level staff, will provide guidance to transdisciplinary teams for the development of clinical and translational research studies. He/she will also be active in teaching biostatistics courses in the new Master of Science in Clinical and Translational Research, with teaching opportunities available in other university health-related degree programs.

The successful candidate must hold a doctorate in biostatistics or a closely related discipline and have demonstrated potential for success with self-initiated research, extramural funding and published scholarship, and have the ability to work in collaboration with clinical, translational and/or basic scientists, and to assist with the function of a biostatistics academic unit including students, postdoctoral fellows, master-level staff, and other faculty.

Applicants should apply using the Health Center's applicant tracking system at **https://jobs.uchc.edu**, search No. 2010-1076. This position is available in the 2012-13 academic year. A curriculum vitae and a cover letter in pdf files should be uploaded through this site. Questions regarding this search should be sent to Dr. James Grady, Director, CICATS Biostatistics Center at **jgrady@uchc.edu**.

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biostatistics/statistics required. SAS programming skill a requirement. SPLUS/STATA preferred. Full Dartmouth benefits. Please apply online at *http://jobs.dartmouth.edu,* position #1000994. Dartmouth College is an equal opportunity/affirmative action employer and has a strong commitment to diversity. Women, minorities, persons with disabilities, and veterans are encouraged to apply.

New York

■ Memorial Sloan-Kettering Cancer Center has an opening for a master's-level biostatistician. Collaborative projects involve the design/analysis of clinical, laboratory, and cancer genomic research with emphasis on high-throughput studies (array CGH, next-generation sequencing, and gene expression). Qualifications include a master's degree in biostatistics or statistics, excellent programming skills in R/SAS, and good verbal and written communication skills. Please email cover letter and CV to *EPIBIOSTATS@mskcc.org.* MSKCC is an equal opportunity and affirmative action employer committed to diversity and inclusion in all aspects of recruiting and employment. All qualified individuals are encouraged to apply.

Pennsylvania

■ The statistics department at Temple University invites applications for a tenure-track, associate professor position. Candidates in any area of statistics must have a PhD in statistics, publications in top-tier journals, teaching excellence, and strong theory/application background. Apply electronically to Sanat Sarkar, *stat.recruiting@temple.edu*, with cover letter, CV, teaching evidence, and three recommendation letters. For more information, visit *www.fox.temple.edu/dept/statistics.* Temple University is an Equal Opportunity/Affirmative Action Employer.

■ Possible tenure-track, lecturer, visiting positions. Collegial environment emphasizing disciplinary and cross-disciplinary research and teaching. All areas of statistics welcome. Joint appointments possible with other units in the Pittsburgh area. See *www.stat.cmu.edu* (email: *hiring@stat.cmu.edu*). Send CV, research papers, relevant transcripts, and three recommendation letters to Faculty Search Committee, Statistics, Carnegie Mellon University, Pittsburgh, PA 15213, USA.

Application screening begins immediately, continues until positions closed. Women and minorities are encouraged to apply. AA/EOE.

South Carolina

■ Medical University of South Carolina Advanced Level Psychometrician/ Statistician. Healthcare Simulation South Carolina (HCSSC) is seeking a psychometrician/statistician to direct the educational research agenda for the state-wide network of integrated medical simulation centers. Interested applicants in this novel opportunity for healthcare educational research across the State of South Carolina should apply at *www.jobs.musc.edu* with a CV and three references. Please reference requisition identification number 047659. AA/EOE.

Texas

■ The department of mathematics and statistics at Texas Tech University seeks applicants for two open-rank positions in statistics. For more information and

www.westat.com EOE

Survey Sampling Statistician

Westat is an employee-owned corporation headquartered in the suburbs of Washington, DC (Rockville, Maryland). We provide statistical consulting and survey research to the agencies of the U.S. Government and to a broad range of business and institutional clients. With a strong technical and managerial staff and a long record of quality research, Westat has become one of the leading survey research and statistical consulting organizations in the United States.

Our company was founded in 1961 by three statisticians. The current staff of more than 2,000 includes over 60 statisticians, as well as research, technical, and administrative staff. In addition, our professional staff is supported by data collection and processing personnel situated locally and in field sites around the country. The work atmosphere is open, progressive, and highly conducive to professional growth.

Our statistical efforts continue to expand in areas such as the environment, energy, health, education, and human resources. Westat statisticians are actively involved in teaching graduate-level courses in statistical methods and survey methodology in collaborative arrangements with area colleges and universities.

We are currently recruiting for the following statistical position:

Survey Sampling Statistician
Job Code 4130BR

Responsibilities include: developing sample designs (determining stratification and allocation to strata; determine sample size based on differences and power; determine optimal clustering; and select sample); selecting and/or constructing appropriate sample frame; developing and documenting weighting plan which includes non-response adjustment and bench-marking; developing and conducting imputation for item non-response and estimating sampling errors using appropriate software; writing specifications for programmers; and preparing reports on sample design, weighting procedures and other methodological issues. Candidates would benefit from knowing SAS and other statistical software packages; although candidates are not required to do programming. A master's or doctoral degree in statistics is required with 3 or more years of relevant experience. Coursework in sample survey design is highly desirable.

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Statistical Analyst: Assist clinical researchers and statistics faculty in clinical research center. Statistical consulting/computing/data management/methodologic research; graduate degree biostatistics/statistics required. SAS programming skill a requirement. SPLUS/STATA/ preferred. Full Dartmouth benefits. Please apply online at http://jobs.dartmouth.edu, position #1000994.

Dartmouth College is an equal opportunity/ affirmative action employer and has a strong commitment to diversity. Women, minorities, persons with disabilities, and veterans are encouraged to apply.

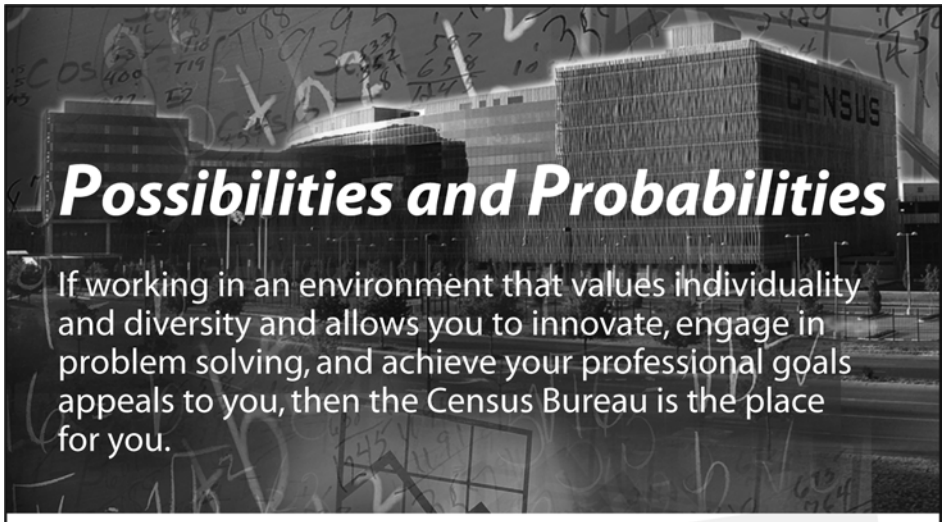
UNC GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH

Director of the Collaborative Studies Coordinating Center Department of Biostatistics

The Department of Biostatistics at The University of North Carolina at Chapel Hill is seeking applications for Director of the Collaborative Studies Coordinating Center (CSCC). The academic appointment will be in the Department of Biostatistics in UNC's Gillings School of Global Public Health. A doctoral degree in Biostatistics or a closely-related field is required. The Director will have extensive experience in managing multi-disciplinary scientific research. Evidence of success in competing for grants and/or contracts for coordinating center projects is highly desirable. The academic rank (associate or full professor) and track (tenured, research, clinical, or practice) will depend on the qualifications and research focus of the applicant.

Established in 1971, the CSCC is the longest-running NIH-funded Coordinating Center, with a portfolio of studies spanning various disease areas. The University of North Carolina is among the nation's top public research universities, with dynamic programs in biostatistics, epidemiology, statistical genetics, bioinformatics, public health, and medicine. This position is an excellent opportunity for a senior-level leader seeking to play a major role in a dynamic and growing group with a highly multidisciplinary focus in a leading academic department. This position will remain open until filled.

To apply, use the electronic submission website at http://jobs.unc.edu/2502217 and upload PDF versions of your CV, cover letter, and research and teaching statements. Candidates must also arrange for three letters of recommendation to arrive via email to Betsy Seagroves at bseagrov@bios.unc.edu. Inquiries may be directed to Professor Amy Herring, Chair of the Search Committee at aherring@bios.unc.edu . The Gillings School of Global Public Health is actively committed to diversity. We strongly encourage applications from women, minorities and individuals with disabilities. The University of North Carolina at Chapel Hill is an Equal Opportunity Employer.



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■ The Seattle VA Biostatistics Unit and the University of Washington Department of Biostatistics are jointly searching for a full-time (100% FTE) Core Investigator/Research Assistant Professor to contribute to biostatistics research as part of a VA HSR&D Center of Excellence. Applicants must hold a PhD in biostatistics, statistics, or a related field. Position open until filled. Complete text of advertisement can be found at *www.biostat.washington.edu/employment/faculty.* The Department of Veterans Affairs and the University of Washington are affirmative action, equal opportunity employers.

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■ The University of Wisconsin-Platteville Mathematics Department has an opening for at least one tenure-track position for a statistician beginning August 2012. A doctorate in statistics must be completed with a transcript provided by January 1, 2013. Preference will be given to an applicant interested in the actuarial field. To learn more, visit *www.uwplatt.edu/pers/employ.htm*. ■

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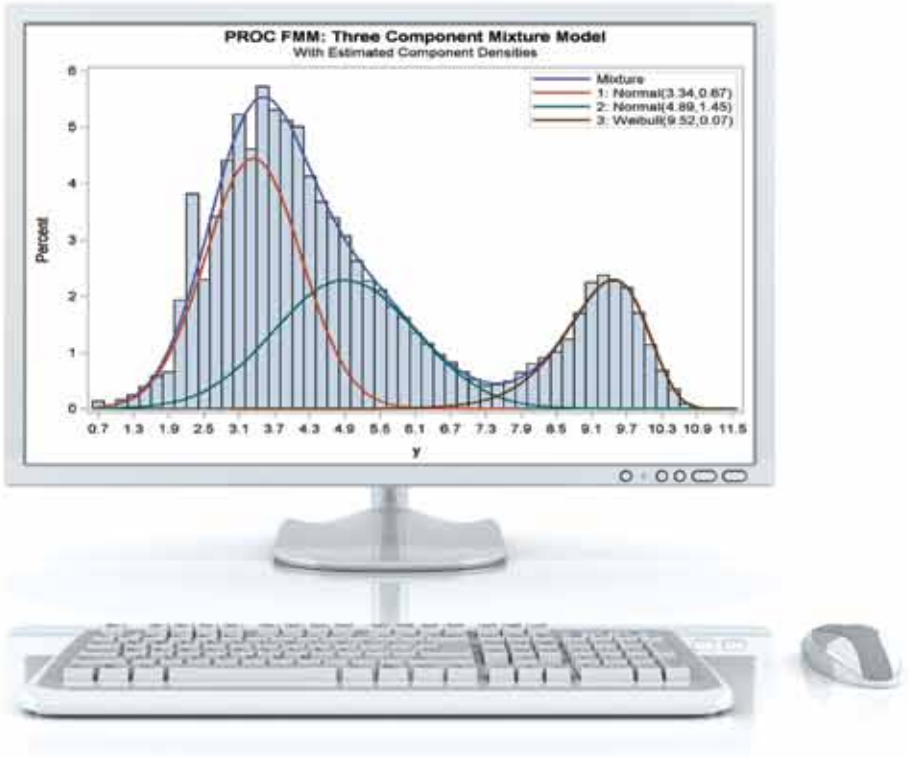

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