

March 2011 • Issue #405

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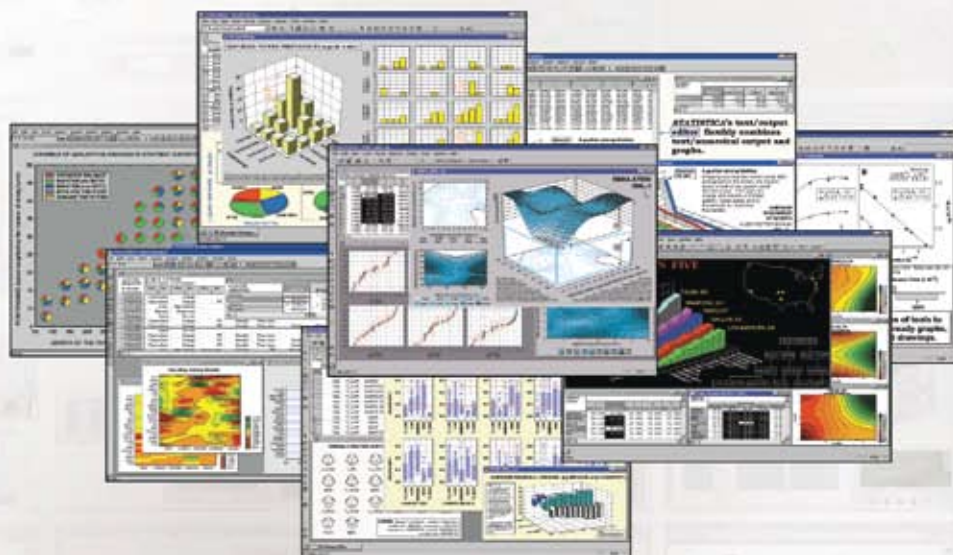
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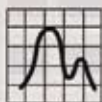
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The American Statistical Association is the world's largest community of statisticians. The ASA supports excellence in the development, application, and dissemination of statistical science through meetings, publications, membership services, education, 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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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.



Reamer

Contributing Editor

Andrew Reamer is research professor at the George Washington Institute of Public Policy, The George Washington University. He focuses on policies that promote U.S. competitiveness—areas of interest include innovation, regional economic and work force development, and economic statistics. He is chair of the Bureau of Labor Statistics Data Users Advisory Committee and past president of the Association of Public Data Users.

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Stimulating Economic Growth Through Technological Advance

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.

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Gordon Reikard is a statistician at Leap Wireless. His research interests include the economics of growth and application of statistical methods in the physical sciences.

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27 MASTER'S NOTEBOOK Clinical Trials and Academia: Goodness of Fit

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 Keith Crank, ASA research and graduate education manager, at keith@amstat.org.



Broadwater

Contributing Editor

Gloria Broadwater is a senior statistician in Duke Cancer Institute's Cancer Statistical Center. She earned her bachelor's degree in mathematics from Frostburg State University in Maryland and master's in statistics from Virginia Tech.

28 STATtr@k Recent Graduates Offer Advice to Undergraduates

STATtr@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.



Chance

Contributing Editor

Beth Chance is a statistics professor at California Polytechnic State University, San Luis Obispo. She earned a bachelor's degree from Harvey Mudd College and a master's and PhD in operations research from Cornell University. Her research interests include methods of enhancing student learning of statistics, particularly through technology and alternative assessment methods.

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Online Articles

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Graybill Conference Scheduled for June.

Cosponsored by the Nonparametric Section, the Graybill Conference on Modern Nonparametric Methods will be held in Fort Collins, Colorado, from June 22-24. The focus of the conference is on nonparametric and semiparametric modeling and functional estimation methods. Included are a short course, invited plenary talks, and a contributed poster session. The deadline to participate in the student poster competition is March 31. For more information about the poster competition, visit www.stat.colostate.edu/graybillconference. To read more about the conference, visit *Amstat News* online at <http://magazine.amstat.org/?cat=17>.

GW Statistics Department Celebrates 75th Anniversary.

Formed in 1935, the Department of Statistics at The George Washington University is the oldest statistics department within a school of liberal arts and sciences, and one of the oldest departments of statistics in the United States. The department recently celebrated its 75th anniversary with a one-day symposium featuring a number of distinguished speakers. To read more about the department, visit *Amstat News* online at <http://magazine.amstat.org/blog/2011/03/01/gwu-mar11>.

“I was delighted that this ESP paper was accepted in a mainstream science journal, because it brought this whole subject up again ...”

James Berger, a statistician at Duke University, *New York Times* article, "You Might Already Know This" <http://tinyurl.com/4kolg29>

What Do You Do as ASA President? 2011 Initiatives

After being elected, the president-elect proposes an annual operating plan for his (her) presidential year. The plan consists of a number of initiatives (usually three) that will define some of the accomplishments (s)he hopes to achieve as ASA president. Initiatives are discussed, refined, and approved by the board of directors. Prior to approval, the president-elect appoints a workgroup chair and members of the workgroup to carry out each of the initiatives. A budget for each is needed, perhaps for travel or awards, and that requires early planning. Chairing a workgroup entails a lot of responsibility, even with a great workgroup and the able assistance of ASA staff.

For the past three years, the initiatives have been tied to the current ASA strategic plan, which was approved in 2008. The strategic plan sets out eight areas of importance to the association: membership growth, public awareness, visibility and impact in policy-making, meetings, publications and information needs, education, financial status, and organizational efficiency. For details, see www.amstat.org/about/strategicplan.cfm. Although there is provision for updating the strategic plan annually, the eight areas continue to remain highly relevant. As a result, the ASA presidents have related their initiatives to one of these areas of importance.

For 2011, there are three initiatives, one pertaining to education, one to organizational efficiency, and one to public awareness.

The 2011 education initiative will lay the groundwork for a Summer Institute in Statistics (SIS) for undergraduates. It is

based on the Summer Institute for Training in Biostatistics (SIBS), which is sponsored by the National Heart, Lung, and Blood Institute and the National Center for Research Resources of the National Institutes of Health. This program funds summer programs that provide a memorable five- to seven-week experience for the students who participate. A large proportion of these students go on to study graduate biostatistics or a related field.

The goal of SIS is to provide a similar pipeline for other fields of application of statistics, such as economics, psychometrics, or engineering. Designing solicitation for the program and identifying sources of funding are the major workgroup tasks. Pam Arroway (who served on the 2010 Council of Sections Governing Board and is involved in SIBS) chairs this workgroup, with Jessica Utts (Council of Sections representative to the ASA Board) as vice chair. The membership is listed at www.amstat.org/committees/commdetails.cfm?txtComm=ABTORG06.

In last month's column, I wrote about some of the achievements of the Leadership Support Council (LSC) in its first year. (See <http://magazine.amstat.org/blog/2011/02/01/prescornerfeb11>.) The 2011 organizational efficiency initiative will prepare guidance for the functioning of the LSC based on the first year's experience. For example, timing of meetings, committee appointments, and communication with committee chairs will be more clearly specified. The goal is to make the LSC function in an efficient manner. This workgroup consists of several current members of the LSC. Janet Buckingham

(vice chair of the Professional Issues and Visibility Council) is the chair, and Christy Chuang-Stein (chair of the Membership Council and ASA vice president) is vice chair. The complete list of members can be found at www.amstat.org/committees/commdetails.cfm?txtComm=ABTORG07.

The 2011 public awareness initiative is a fun one, officially called the 2011 ASA "Promoting the Practice and Profession of Statistics" Video Competition, but known affectionately as "the YouTube initiative." The goal of this initiative is to portray statistics and statisticians in a positive light during a short film (and we are hoping some of them will go viral). Entries will be judged on quality of statistical content and entertainment value. URLs for sample videos, actually made by members of the workgroup (and therefore not eligible for prizes), and the rules can be found at www.amstat.org/youtube. The deadline is July 15, and we will announce the winners and show at least the winning entries at JSM.

Tom Short (Council of Chapters representative to the ASA Board of Directors) chairs this workgroup. Other members are listed at www.amstat.org/committees/commdetails.cfm?txtComm=ABTEDU04.

In closing, I note that you will soon have the opportunity to cast your vote for the 2012 president-elect and other ASA officers. See Page 8 for details and look for your ballot in your email or postal mail box.

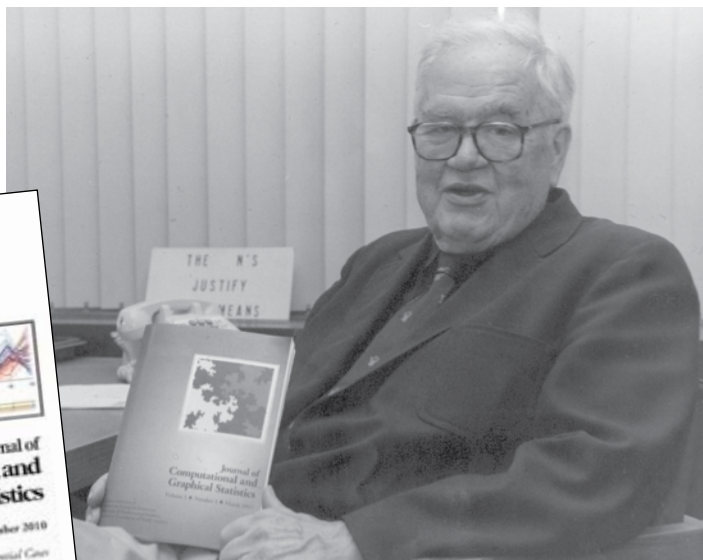


Nancy Geller

Nancy L. Geller

JCGS Turns 20

Rich Levine, *JCGS* Editor



Above: John Tukey holds the first issue of *JCGS*.
Left: The *JCGS* 20th anniversary volume



The *Journal of Computational and Graphical Statistics* (*JCGS*) is moving beyond its teenage years, riding the ever-growing wave of computational and graphical technological advances into the “Roaring Twenties,” an age of energy and fortitude mixed with growing maturity and enlightenment. To celebrate this volume, the symbols of a 20th anniversary—platinum and china—will grace the cover. Barring any delay in the production process, each issue will feature a piece highlighting the past and future of computational and/or graphical statistics, along with original research articles about a related and hot topic of the times.

The first issue features “Why Tables Are Really Much Better than Graphs,” by Andrew Gelman. The article plays off Gelman’s popular blog in a more formal journal setting, but, as the title

suggests, an equally tongue-in-cheek expository aimed to rile up the troops—eliciting elaborations by graphics researchers and the statistical community—on the power of well-designed graphics.

A lively discussion ensues, leading with a historical perspective by Howard Wainer and a “just the facts ma’am” modeling perspective by Matt Briggs. Two responses follow: “Graph People vs. Table People,” by Michael Friendly and Ernest Kwan, and “Charts v. Tables: A Rematch,” by Graham Wills.

The March issue rounds out with articles about the most prominent topic covered in *JCGS* during its 20-year history: Bayesian computing. These works focus on the timely topics of adaptive (Markov chain) Monte Carlo, sequential Monte Carlo, model averaging, and applications in Bayesian analyses, particularly nonparametric Bayesian methods.

The second issue will focus on graphical statistics with a spread from winners of the ASA Data Expo that was organized and arranged by Hadley Wickham. The issue will also include research articles about state-of-the-art visualization tools for functional and massive data and graphical innovations for complex model settings.

The third issue will feature a Shakespearean twist on a data augmentation scheme in “To Center or Not to Center: That Is Not the Question an Ancillarity-Sufficiency Interweaving Strategy (ASIS) for Boosting MCMC Efficiency,” by Yaming Yu and Xiao-Li Meng with discussion from the research groups of Jim Hobert, Gareth Roberts, Dongchu Sun, and Ying Nian Wu.

The fourth issue of Volume 20 will feature historical pieces about pervasive topics in computational and graphical statistics.

An additional high point of the 20th anniversary celebration will be an invited paper session at JSM in Miami Beach, Florida, titled “Teaching an Old Dog New Tricks: Parallel, Adaptive, and Automated Monte Carlo Methods Appearing in *JCGS*,” with talks by Radu Craiu, Tim Hanson, and Chris Holmes. The former two will bring to life clever manipulations of mixture models and Pólya trees, respectively, in the growing area of adaptive MCMC. The latter will highlight a recent *JCGS* “submission” of bringing graphics cards (GPUs) to mainstream statistical computing, an inexpensive means of performing massively parallel computing tasks—particularly simulation—right on your desk top, no supercomputer or computing cluster required. ■

Young Professionals Website Set to Launch

Melissa Muko, ASA Production Coordinator/Graphic Designer

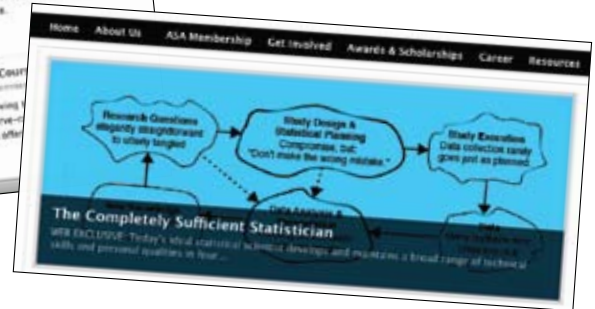
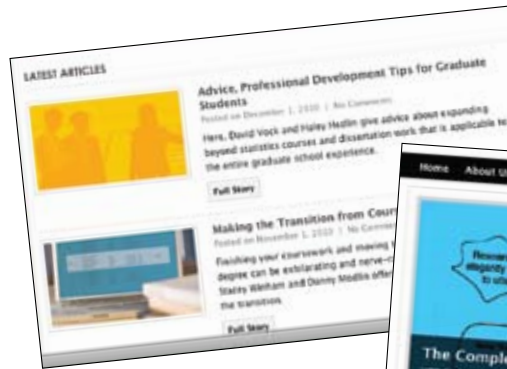
This month, the ASA launched STATtr@k, a website geared toward young professional statisticians (individuals who are in a statistics program, recently graduated from a statistics program, or who recently entered the job world). STATtr@k provides a central location to access career information and resources, as well as to learn more about the ASA and the statistics profession.

Based on the young professionals corner of *Amstat News*, STATtr@k features articles about such topics as how to apply for a job, how to be a successful graduate student, and how to make the transition from coursework to research. STATtr@k also offers information about career and mentorship sites, upcoming conferences, and awards and competitions. Students are encouraged to check the website monthly for the latest news and announcements.

STATtr@k also will provide information about becoming involved in the American Statistical Association and links to the ASA's JobWeb, Community, and publications.

With the launch of STATtr@k, the ASA is striving to involve students in all aspects of the association. "The ASA is delighted to introduce this new feature," said ASA Executive Director Ron Wasserstein. "Young professionals are the future of statistics, and the ASA hopes to support their development in every way it can."

If you have an idea for an article or an announcement you



would like to see on STATtr@k, email *Amstat News* Managing Editor Megan Murphy at

megan@amstat.org. And don't forget to visit the site today at <http://stattrak.amstat.org>. ■

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Report of the 2010 Education Workgroup on Degree Program Recommendations

Jessica Utts, Workgroup Chair

Are statisticians at all levels receiving the education they need to fulfill the roles expected of them in the 21st century? The ASA's 2010 Education Workgroup was appointed by 2010 ASA President Sastry Pantula and asked to "Facilitate a significant discussion among academic units, industry statisticians, and government statisticians about the preparation of statisticians." The goal

was to recommend a process by which the undergraduate statistics curriculum guidelines approved by the board in 2000 (www.amstat.org/education/curriculumguidelines.cfm) could be updated and a document to provide curriculum guidance for MS and PhD degrees in statistics could be created.

The initiative was motivated, in part, by a discussion with the Caucus of Academic Representatives, in which members recognized the need for sharing ideas and information about statistics degree programs across institutions. Recognizing the need for input from a broad spectrum, Pantula appointed representatives to the workgroup from a range of ASA committees.

Members of the workgroup sought information from academic, industry, and government statisticians, mostly through events held at JSM 2010. They found there was substantial interest in the development of the proposed guidelines in the form of desired learning outcomes, rather than a list of recommended courses. Individual departments with degree programs could then decide how best to align their curriculums with those learning outcomes, taking local resources, interests, and, possibly, local employment opportunities into account.

In addition to being used for developing and revising degree programs, the recommendations could be used by external reviewers as benchmarks for program reviews, by departments and programs to justify resource requests to their administration, and by programs that require the assessment of learning outcomes as part of accreditation reviews.

The needs expressed by government and industry representatives went beyond what statistics and math departments currently offer. More than once, they indicated the technical ("hard") skills will get you an interview, but the "soft" skills will get you the job (and allow you to keep it). Many times, members of the workgroup heard that learning outcomes for statistics degree programs should include the ability to communicate effectively to

Workgroup Members

Jessica Utts (chair), University of California, Irvine, ASA Board

Lori Thombs, University of Missouri, ASA Section on Statistical Education

Dalene Stangl, Duke University, ASA Caucus of Academic Representatives

Morteja Marzjarani, Saginaw Valley State University, SPAIG Committee

Nandini Kannan, The University of Texas at San Antonio, ASA Committee on Outreach Education

Devan Mehrotra, Merck Research Labs, ASA Career Development Committee

Eileen King, Cincinnati Children's Hospital Medical Center, ASA Advisory Committee on Continuing Education

Marlene Egger, University of Utah, ASA Committee on Applied Statisticians

Keith Crank and Rebecca Nichols, ASA staff representatives

nontechnical audiences, work as part of a team, integrate information from a variety of sources, and provide technical and nontechnical advice about a project from start to finish. At JSM 2010, Pantula and SAS CEO Jim Goodnight emphasized the need for a strong foundation in core, communication, and computational skills.

Workgroup members learned that the most diverse offerings among training programs in statistics are at the undergraduate level. That also may be the level for which curriculum guidelines are most useful, with the master's level next in importance. An option gaining in popularity and needing separate consideration is the professional science master's degree in statistics. This degree is popular among working professionals and often offered partially or fully online. It tends to have less training in mathematical statistics than a traditional master's degree and is usually a terminal degree. As more universities develop this degree, it would be helpful to have input from potential employers about what knowledge and skills are most useful to include.

PhD programs that train future faculty members tend to be the most focused, presumably because faculty are more familiar with how to train their own future colleagues than with how to train statisticians for industry and government employment. Few faculty members have experience in these sectors, especially at the level of jobs requiring a bachelor's or master's degree. Yet, many students who graduate with a PhD in statistics do not enter academic jobs, and guidelines produced from discussions with industry and government statisticians would benefit PhD programs as well.

The process of developing guidelines for programs at all levels should include obtaining feedback from government, industry, and academic employers, as well as former students who currently work for those employers. This latter group could provide feedback on what was missing in their training that would have been helpful in their jobs.

The current guidelines for undergraduate programs were developed through a lengthy process, including a three-day, in-person meeting involving approximately 30 participants. Members of the workgroup anticipate a similar lengthy process will be needed for updating these guidelines and developing new ones for other degree levels.

Recommendations were made to the ASA Board for how to proceed, including a multiyear timeline with a focus on different sectors each year. Anyone interested in getting involved in the development process should contact Jessica Utts, workgroup chair, at jutts@uci.edu. ■

Conference on Health Statistics to Take Place in Fiji



Sailboat on Mamanuca Group Resort beach, Tokoriki Island, Fiji

Statisticians from the ASA, Statistical Society of Australia, and New Zealand Statistical Association—as well as local statistics communities from the Pacific Islands—will come together in Suva, Fiji, for the International Conference for Health Statistics in the Pacific Islands (ICHSPI-2011) on July 5.

For many people outside the Pacific Islands, the mention of Fiji brings visions of cocktails by the pool, idyllic beaches, crystal clear ocean waters, and glorious sunsets. While these are all components of Fiji's identity, peaceful and fun-loving people who are working hard to tackle health problems faced by developing nations in the Pacific Rim also contribute to Fiji's identity. Statisticians play a pivotal role in the advancement of developing nations, as policymakers strive to characterize and understand the complex challenges their countries face.

“The American Statistical Association is delighted to support the Friends of Australasia

and this important international conference,” said Ron Wasserstein, ASA executive director. “The ASA's mission is to promote the practice and profession of statistics. Part of doing so is to work closely with our colleagues in developing nations to demonstrate together how statistics leads to better-informed public policy and improved human welfare.”

“The work of ASA's Friends of Australasia to establish an annual conference on health statistics in the Pacific Islands is important and commendable,” said Steve Pierson, ASA director of science policy. “This conference will bring attention to important health issues there and help build statistical capacity to address those issues. I hope the statistics community embraces this effort.”

For more information about this conference, visit www.stat soc.org.au/PacificHealth or contact Mark Griffin, organizing committee chair, at m.griffin@uq.edu.au or James J. Cochran, program chair, at jcochran@cab.latech.edu. ■



ASA Board of Directors Candidates

The ASA announces the selection of candidates for the 2011 election. The winning candidates' terms will begin in 2012. Make sure to look for your ballots in your email inbox and to vote early. Voting begins at midnight EST on March 15 and ends at 11:59 p.m. PST on May 3. Paper ballots will only be mailed to those without email addresses on file with the ASA.

Complete candidate biographies can be read at www.amstat.org/candidatebios/index.cfm?fuseaction=viewbios.

President-elect



Pendergast

Jane Pendergast

Professor of Biostatistics and Director of the Center for Public Health Statistics, University of Iowa

What does the ASA mean to you? I am reminded of an old story where two bricklayers, working side-by-side, were asked the question, "What are you doing?" The first responded in great detail about the process of setting the mortar, laying each brick, and making adjustments to ensure a strong and level wall. The second replied, "I'm building a cathedral." Each of us is, in a sense, a brick layer, and, collectively, we are building our profession, one day at a time. How we choose to develop and apply our statistical knowledge defines what it means to be a member of this professional community. Statistical practice arose out of a social need to make good, data-based decisions and the related realization that we can discover and learn from data. Surely, we live in a time when the world could use more and better help than ever! How can we capitalize on these ever-increasing opportunities for statistics, and do so in partnership with others?

The ASA exists to support the professional development of its members; to support excellence in the development, application, and dissemination of statistical science; and to serve as an advocate for the profession. Historically, the focus has been on publications, meetings, educational activities, member services, and, more recently, on outreach and advocacy. The need for statistical expertise is strong and growing, yet our membership is dropping. What would make membership more attractive?

I envision the ASA of the future as a stronger professional home, where statisticians have better access to a wider range of support throughout their professional lives. Yes, we need a variety of ways to build our statistical knowledge, but what else? What would help you be more successful? Perhaps more information and training on some of the so-called "soft" skills (e.g., communication skills, developing successful collaborations, time management, budgeting, managerial skills, grantsmanship, professional writing), vendor discounts outside of meetings, and more networking and career advice opportunities would be useful to many ASA members. How can we partner with others to strengthen the support for statisticians, build more interest in our profession, and develop new opportunities? Should we offer web-based short courses and training targeted to nonstatisticians? Should we pursue more partnerships with other statistical associations to further our common missions?

I am confident that, together, we will continue to rethink how the ASA can adjust to today's world and become a stronger professional home that is financially viable. I encourage you to join the conversation. Where should we be headed? What is working well? Where do you think more efforts are needed? Collectively, through the ASA and other avenues, let us build the future of our profession, brick by brick, with a strong vision for the future.



President-elect

Marie Davidian

William Neal Reynolds Distinguished Professor of Statistics, North Carolina State University

These are exciting times for the statistical sciences and our profession. Society is increasingly dependent on the collection and interpretation of data, to which we—statisticians—and the principles of statistics are indispensable, ensuring that sound, objective evidence and analysis underlie the decisions, policies, and initiatives that affect us all, locally, nationally, and globally. The opportunities statisticians have to contribute to the discoveries that will shape the future make our profession a rewarding career choice.

We know this. The ASA is uniquely positioned to ensure that those who need to know it—the public, government officials, business leaders, fellow scientists, students seeking exciting careers—understand the importance of what we do. The ASA is also well equipped to provide statisticians—and anyone interested in the collection and analysis of data—assets we need to enhance our expertise, grow professionally, and address challenges posed by new technology and innovation.

Recent ASA leaders have developed a bold strategic plan, which has catalyzed initiatives that are making our association more effective at fulfilling these objectives. I am honored to be a candidate for ASA president and am committed to continuing these efforts and spearheading new ones, with the overarching goal of cementing the ASA's place as a central "go-to" resource for members and the public regarding everything related to statistics. I will focus on four areas:

Furthering the ASA's impact and raising public awareness

Through presidential visits to Capitol Hill, statements on issues of public importance, and efforts of our director of science policy and volunteers from various committees, the ASA has elevated its voice in the public forum. We must pursue even more aggressively opportunities to communicate with decisionmakers and ensure that statisticians are involved in policy debates. We must enhance our responsiveness to issues arising in government and the media on which our input is critical. We must implement creative ways to represent our discipline to the public, solo or in partnerships with sister organizations. I will work vigorously to highlight the ASA as the national focal point for statistical leadership.

Encouraging statistical education and attracting the next generation

The ASA must continue to promote innovation in statistical education and the need for the public to have statistical skills to navigate our data-centric world. We must inspire talented, diverse students to embrace sta-

tistical careers. Since 2004, I have codirected an NIH-funded Summer Institute for Training in Biostatistics (SIBS) program to encourage U.S. undergraduates to pursue graduate training in our discipline and have witnessed them alter their career aspirations. I will summon this experience and my two-plus decades of teaching, mentoring, curriculum development, and outreach to work with our education council and other ASA leaders to keep the ASA at the forefront of advances in statistical training.

Enhancing the value of ASA membership

The ASA can provide leadership only if membership yields benefits that attract and retain the diverse constituencies who study, practice, and use statistics. We must offer enhanced educational opportunities in traditional and emerging topics through frequent, accessible courses, webinars, and other media; more novel forums for interaction, such as the upcoming Conference on Statistical Practice; and opportunities for networking and professional development for targeted groups such as newly minted and isolated statisticians. The ASA can foster stronger, mutually beneficial relationships among industry, government, and academic statisticians and provide infrastructure for formation of new advocacy groups. The ASA website, *Amstat News*, and *Significance* offer unlimited possibilities for communication and outreach. Drawing on my experience as a continuing education presenter, cofounder of professional development opportunities such as the ENAR Junior Researcher Workshop, and co-organizer of several thematic conferences, I will strategize with key constituencies to conceive new ways for the ASA to serve its members.

Promoting the interests of our profession

As various stakeholders debate open access to research, implications for the ASA's outstanding publications are unclear. My decade of experience with Biometrics, during which I was involved in negotiating two publishing agreements, has kept me abreast of the changing landscape of scholarly publication. I will work with members of our Committee on Publications to ensure that ASA journals maintain their robust stature, quality, and income. Current uncertainty regarding federal funding comes at a time when investment in our discipline would yield substantial payoff. I will use my understanding of federal funding mechanisms to advocate for increased support for statistical research and training.

As the ASA approaches its 175th anniversary, we are poised to achieve these aims. I would be honored to work with you toward "Promoting the Practice and Profession of Statistics."



Davidian



Vice President



Morganstein

David Morganstein

Vice President, Director of Statistical Group, Westat, Inc.

I deeply appreciate the invitation to be a candidate for the position of vice president of the association. It would be an honor to serve ASA in this role. My many years of participating in the ASA in a number of positions have brought me in contact with a wide variety of very fine colleagues, with whom I've shared much and from whom I have learned much. It would be a distinct pleasure to broaden these opportunities even further.

If elected, I would look forward to assisting the president and the board in any way I can in furthering the goals of our association. As a personal goal, recognizing that the ASA is a multicultural, diverse organization with many special and diverse interests, I will seek to expand my understanding of the various and possibly conflicting concerns of our members and bring this understanding to our consideration of the future of the ASA. As a survey statistician, I am particularly pleased that the association has chosen to engage its membership through soliciting their views and thoughts before arriving at its decisions. Having served on two accreditation committees, I had the opportunity of working with our executive director on a member survey regarding this topic. The feedback from the members provided the committee with valuable information that helped the committee greatly in developing the current plan for the accreditation process.

The association's strategic plan focuses on a number of areas that are both of personal and of professional interest—namely statistical practice, organizational efficiency, and accreditation—to which I believe I could contribute.

The ASA continues in its efforts to balance our profession's critical aspects of sound theory with good practice. Statistical practice is to be the subject of a new ASA conference to be held in 2012, a meeting that will attract many of the association's

members. Having worked in and consulted to industry and government most of my career, I hold the view that sharing best practices, an issue closely related to statistical ethics, is an invaluable part of professional growth. As became clear to me in chairing the deliberations of the ISI ethics committee, there is more to be discussed and shared on ethical principles and best practices, and I look forward to contributing to efforts to make this new conference a great success. Hopefully, we can make it the first of many such conferences.

Beginning in the early '80s, when I first became involved in teaching and consulting on statistical process control, I quickly realized the important contribution of the statistician to good management principles in improving organizational efficiency. Starting in industrial applications, I subsequently had the privilege of applying these principles and practices in many service organizations, including government statistical agencies and the ASA office. The practice of making sound data-based decisions is quite simply about improving organizational efficiency.

Over the past two years, I have had the opportunity to work on several accreditation committees in planning and now bringing to fruition this new opportunity for members. The process has only begun, and I have joined the ranks of a few dozen members who have gone through the carefully designed review process to become accredited. I expect to continue working on expanding, implementing, and fine-tuning this program, particularly since it was of such keen interest to a significant portion of the membership.

Finally, in recent years, the ASA office has taken many very proactive steps to find new ways to serve members. I look forward to continuing to help the executive director and the board in any way I can be of service.



Vice President

Fred L. Hulting

Director, Global Knowledge Services, Innovation Technology & Quality Division, General Mills, Inc.

It is an honor to be nominated as the next vice president. If elected, I look forward to working with all of you—the members of ASA—to strengthen the association and shape its future as we approach ASA's 175th year in 2014.

As an association, we are a prominent, global, professional community drawn from varied backgrounds and the interdependent sectors of industry, academia, and government. We play an important role in our society and economy, making a positive impact through statistical practice, interdisciplinary research and outreach, and enhanced statistical literacy. And we are supported by our staff and valued volunteers, who deliver a mix of programs and services that benefit members, enhance outreach, and ensure financial stability.

My work mirrors the ASA's in many respects. I manage a worldwide team that serves an international client base; collaborates on interdisciplinary research projects; and builds academic, industry, and government partnerships. I see the value of increasing statistical literacy among our stakeholders and the impact of statistics on our company's success. Finally, working within my budget constraints, I am challenged to develop the right mix of knowledge, information, and statistical services that benefit our clients and our consumers.

This professional experience, coupled with my experience on other nonprofit boards, will enable me to serve the association effectively. I accepted this nomination because I am excited by the potential for ASA to impact society and support its diverse membership by strengthening collaboration and sharpening its portfolio of programs and services. The ASA is doing well, but it can do even better.

The challenges facing the ASA as it looks to the future are clearly outlined in the ASA's 2008 strategic plan. That plan provides context and strategies for eight inter-related areas and guides the annual process of developing initiatives and providing resources. I fully support the strategic plan and its objectives and will partner with the presidents to drive successful outcomes for their strategic initiatives.

Within the strategic plan framework, there are several areas I would emphasize, including membership growth, with outcomes focused on attracting applied and consulting statisticians; education, with outcomes focused on increasing statistical literacy; and public awareness and visibility/public policy, with outcomes focused on issue response, integrity of government statistics, and collaboration among professional associations.

There are existing initiatives in each of these areas that we can build on, including accreditation, the Conference on Statistical Practice, support for our director of science policy, and the development of resources to further statistical literacy efforts. I look forward to aiding the implementation of current initiatives and to ensuring these areas remain under consideration as I collaborate with all of you in developing the next "big ideas."

As an ASA member since 1984, I have served in chapter, section, committee, and publication leadership roles and seen the value the association can deliver. I am honored to accept this nomination and, if elected, to focus my energy and leadership on ensuring the ASA benefits each of you while it also addresses larger societal and policy issues requiring statistical leadership.



Hulting



Council of Sections Board Representative



Buckingham

Janet P. Buckingham

Staff Analyst, Southwest Research Institute

The Council of Sections is a vibrant and active organization within the ASA focused on serving its section members with guidance, communication, and collaboration. Sections play such a vital role in the career growth and professional development of

statisticians. I would be honored to represent the Council of Sections on the ASA Board to keep the communication and interests between these two groups working to achieve common goals in helping statisticians.



Photo Unavailable

Margaret A. Nemeth

Lead, Statistics Technology Center, Monsanto Company

In large organizations, communication is always a challenge. The sections and their members serve an important role in defining/impacting ASA policy, and it is important to have a direct connection from the sections to the board of directors (BOD). By serving as a liaison between the Council of Sections

and the BOD, I will work to not only increase the communication, but to ensure that important issues/resolutions/decisions are addressed and transmitted to both groups. I appreciate the opportunity to serve in this critical role.

Council of Chapters Board Representative



Horton

Nicholas Horton

Associate Professor of Statistics, Smith College

The ASA is increasingly concerned with promoting the profession and the value that the discipline can bring to bear on important societal problems. To this end, chapters provide a key structure to both enlist the talents of members and to serve their professional needs. They provide a local connection to many outreach, education, and professional development opportunities and facilitate in-person contact for members otherwise isolated in their

workplaces. At a time when people are increasingly busy and pressed for time, we need to continue to find ways for the national office to support chapters in their efforts to help advance the profession by, for example, encouraging chapters to share successes with other chapters. I would welcome the opportunity to represent the interests of chapters and further integrate chapter members and officers in ongoing ASA activities.



Krotki

Karol Krotki

Senior Research Statistician, Research Triangle Institute International

ASA is one of the main reasons for the healthy state of our profession and the insatiable demand for statisticians and statistical expertise. My objective is

to help ASA continue helping the profession grow, increase the supply of statisticians, and satisfy the consumer demand for this expertise.

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CONTRIBUTORS: J. F. C. Kingman, David J. Aldous,
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Publications Representative

David Banks

*Professor, Department of Statistical
Science, Duke University*



Banks

The ASA is moving into a new era of publication. Our journals face fresh challenges as we attempt to exploit Internet technology to increase access and provide new functionality. We have also partnered with a new publisher, which may create some transitional issues. I intend to help shape the outcome so that the results best serve the needs of our members and our profession.

John Stufken

*Professor and Head, Department of
Statistics, University of Georgia*



Stufken

To maintain its status as the preeminent professional society in the statistical sciences, nothing is more important for the ASA than a portfolio of vibrant and prestigious journals. Improving and judiciously expanding the portfolio will have to take place in a rapidly changing publishing landscape, where technological innovations have opened doors to novel means of faster electronic forms of communication that offer exciting options not available under the traditional publishing model. I would be excited and honored to serve the association as the publications representative on the board of directors and to help its portfolio evolve by taking advantage of technological innovations and modern developments in the world of publishing, while also maintaining the highest standards of quality for the journals and building on the reputation that the ASA has established over many years.

Don't Forget to VOTE!

Wait for your ballot to arrive by email.*

Voting begins at midnight EST on March 15 and ends at
11:59 p.m. PST on May 3.

*Those with email addresses not on file with the ASA will be sent a ballot
by mail.



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Workshop Provides Real-World Experience



The Seventeenth Industrial Mathematical and Statistical Modeling (IMSM) Workshop for Graduate Students is set to take place at North Carolina State University from July 7–15.

The workshop exposes graduate students in mathematics and statistics to real-world problems from industry and government. Issues raised by the

problems typically require fresh insight for both the formulation and solution. Often, the biggest challenge is figuring out what the real question is. Students learn how to do this and work out a usable result under a tight deadline.

Additionally, students gain 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. Students also work together to produce an oral presentation and written report of their results, which occasionally leads to later journal publication. The teams often come up with useful solutions to a company's problem. Moreover, projects presented at the workshop have led to long-term collaboration between students, faculty, and the companies involved.

Local and travel expenses are paid for students from U.S. institutions. Applications for the workshop are due by April 15. More information is available at www.samsi.info/ism11, and questions can be directed to ism11@ncsu.edu. ■

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Good News or Bad News?

Academic jobs for statisticians and biostatisticians

Keith Crank, ASA Research and Graduate Education Manager

Graduation is fast approaching for many statistics and biostatistics students and, with it, the desire/need to find a job. This is especially true for PhD students. (Presumably, bachelor's and master's students could continue their schooling.) This month, I want to give my perceptions of the academic (faculty) job market for PhDs in statistics and biostatistics. And I encourage those of you involved in this process to give me your feedback.

The ASA maintains an email list of representatives from academic statistics and biostatistics groups. Many academic job postings are circulated to this email list, so I went back and counted the number of such postings over the past few years. I found that, from mid-July through the end of December 2008, there were emails advertising 29 academic jobs in statistics/biostatistics for the 2009–2010 school year. For the same period in 2009, there were emails advertising 25 jobs for the 2010–2011 school year. And for the same period in 2010, there were emails advertising 56 jobs for the 2011–2012 school year. These numbers would suggest this is a good year to be looking for a job in academia, but the reality is probably a bit more complicated.

The American Mathematical Society in Their Data on the Profession

Preliminary Report on the 2009–2010 New Doctoral Recipients—by Richard Cleary, James W. Maxwell, and Colleen Rose—(www.ams.org/notices/201102/rtx110200291p.pdf) shows 374



PhDs awarded by statistics and biostatistics departments between July 1, 2009, and June 30, 2010. Of these new PhDs, 77 took jobs at PhD-granting departments of mathematics, statistics, or biostatistics. An additional 88 took jobs in other departments or at research institutes; 16 took jobs at colleges and universities that do not grant PhDs; 10–13 were still looking for a job; and 40–43 had an unknown status. (The numbers for 2008–2009 are similar.)

With such a small number of academic job ads being distributed (in statistics and biostatistics), one has to wonder whether a large number of these recent graduates took temporary jobs or jobs that were not what they wanted. And will they be back on the job market again this year?

Another issue is whether some students delayed completion of their degree because of concerns about the job market. If there are a substantial number of such students, there may be a larger than usual number of PhD degrees awarded this year, and that also would increase the number of people looking for jobs this year.

It's also possible that the increase in the number of jobs

sent to this email list is because more department chairs are aware of it. And some of these jobs could disappear because of the lack of funding before anyone gets hired into them. Still, overall, it looks like a positive situation for those on the academic job market this year.

If you are one of the people in the job market—either a soon-to-graduate PhD student or a recent graduate—or one of the people involved in hiring this year, let me know how things are going.

Finally, here is a piece of more general information for PhD statisticians in the work force. The National Science Foundation just released a report indicating the 2008 unemployment rate for PhDs in math and statistics was 1.0%, well below the overall unemployment rate in the United States, and the point estimate is the lowest among the science disciplines. (For details, see www.nsf.gov/statistics/infbrief/nsf11308?WT.mc_id=USNSF_178.)

To contact me, send an email to keith@amstat.org. Questions or comments about this article, as well as suggestions for future articles, are always welcome. ■



Keith Crank earned a BS in mathematics education and an MS in mathematics from Michigan State University and a PhD in statistics from Purdue University. Prior to joining the ASA as research and graduate education manager, he was a program officer at the National Science Foundation, primarily in the probability program.

Dhaka University Statistics Department Celebrates 60 Years



From left: M. Ataharul Islam, convener; Kazi Saleh Ahmed, conference chair; Abul Kalam Azad, chief guest; Arefin Siddique, vice chancellor and special guest; Mir Masoom Ali, international committee chair

The American Statistical Association sponsored a probability and statistics conference to celebrate the 60-year anniversary of the Dhaka University Statistics Department. The conference, held December 26–28, 2010, was organized by the Dhaka University Statistics Department Alumni Association.

The department of statistics, biostatistics, and informatics (formerly the department of statistics) boasts a distinct association with R. A. Fisher, who visited the department in 1950 in response to an invitation by his friend and founder of the department, Qazi Motahar Husain.

The conference kicked off with an opening ceremony, and S. P.

Mukherjee of Calcutta University delivered the Qazi Motahar Husain Memorial Lecture, titled “Panorama of Measurements.” There were several keynote and plenary speakers, including Mir Masoom Ali, Rahul Mukerjee, Partha Lahiri, M. Ahsanullah, and Nilanjan Chatterjee.

A special session, “Classical Design of Experiments,” was held in honor of Husain. Rahul Mukerjee of the Indian Institute of Management, Kashinath Chatterjee of Visva-Bharati University, and Shahriar Huda of Kuwait University spoke during the session.

More than 100 invited talks and 70 contributed talks were presented by researchers from around the world. Four workshops on cutting-edge areas of statistics also were held.

For more information about the conference or to view the program, visit www.dusdaa.org/conference2010/program. For questions about the conference or workshop or conference materials, contact M. Ataharul Islam at mataharul@yahoo.com, Jafar A. Khan at jkhan66@gmail.com, or AHM Mahbub Latif at mlatif@isrt.ac.bd. ■

Meeting Planned in Memory of Julian Besag

A meeting to celebrate the life and work of the late Julian Besag will take place April 1–2 in Bristol, United Kingdom. All are welcome to attend.

There will be a memorial gathering for Besag, preceded by refreshments and followed by a reception and early evening dinner on April 1.

On April 2, a symposium covering some of the areas of statistical science to which Besag made contributions will take place. Speakers include Peter Diggle, Stephen Duffy, Leo Held, and Debashis Mondal. A poster session also is planned, to which contributions are welcome.

There is no charge to attend the meeting, other than for the cost of meals, which must be ordered in advance. To attend, send an email to sustain-admin@bristol.ac.uk requesting details be sent when available. Also, make a note if you wish to contribute a personal reminiscence and/or poster.

Updates to the program will be posted at <http://sustain.bris.ac.uk/JulianBesag/memorial>.

SCIENCE POLICY

Putting Americans to Work: The Essential Role of Federal Labor Market Statistics

Andrew D. Reamer, The George Washington University

In one of two science policy columns this month relating to jobs and economic growth, Andrew Reamer discusses why a strong federal statistics system is needed to enable labor market participants and policymakers to make well-informed decisions in today's difficult job market. Reamer provides practical steps to address disconnections between labor market demand and supply that add to unemployment, underemployment, and unfilled jobs.

- Steve Pierson, ASA Director of Science Policy

Since the onset of the Great Recession, the American labor market has struggled to regain its footing. Between late 2007 and late 2009, the national unemployment rate more than doubled to 10%, remained close to that level throughout 2010, and recently has begun to decline only because a significant number of people have stopped looking for work. While the civilian noninstitutionalized population aged 16 years and older grew 13% between January 2000 and December 2010, total jobs fell slightly. Private-sector employment is at a level last seen in mid-1999.

Large U.S. businesses have rebounded from the recession far more quickly. The *Wall Street Journal* reports that “fourth-quarter profits for the biggest U.S. corporations have been exceptionally strong and 2010 is poised to deliver the third-best full-year gain since 1998.” Major businesses have been buoyed by access to low-priced capital, a capacity to take advantage of workers and markets across borders, and technology-driven increases in productivity (and equivalent reductions in work



force needs). They also report difficulties in finding certain types of high-skilled workers.

While supporters of the recent tech and housing booms promoted “new normals” that never came to be, the real “new normal” is the increasing disconnection between the fate of the nation’s work force and that of its major corporations.

For U.S. workers to gain and sustain decent jobs, it’s become clear they must have skills and knowledge attractive to U.S. and

foreign businesses and not easily obtained in lower-wage nations. To a substantial extent, gaining an occupation and a job that provide a middle-class income now requires workers to have at least one postsecondary credential (e.g., a certificate from a community college) and to regularly upgrade their skills in response to changing products, processes, and markets.

This means that the nation’s 140 million job holders, 39 million working-age students, and

14.5 million unemployed must regularly make intelligent choices about occupations, career path, education and training, and jobs. It means that 24,000 education and training organizations need to figure out the programs, curricula, and number of seats to offer. It means that the nation's 6 million businesses, to be competitive enough to offer decent jobs, need to make good decisions about business location, hiring, and training. And it means that federal, state, and local work force policymakers need to wisely invest public funds.

Intelligent decisionmaking, in turn, requires access to accurate statistics on labor market conditions and characteristics. In particular, good data show the occupational, employment, and educational trends and projections that allow labor market

participants and policymakers to see truths and understand the likely consequences of irreversible expenditures of time and money.

Unfortunately, labor market participants and policymakers do not have access to the statistics they need. The lack of current, accurate, detailed data enables disconnections between labor market demand and supply, which adds to unemployment, underemployment, and unfilled jobs.

Limitations of the Existing Federal Statistical System

The federal government has a major role in providing labor market information, including statistics, to facilitate decisionmaking. Only the federal government has the capability

to offer current, accurate, objective, relevant data at all levels of geography, consistent over time and space, and available to labor market participants regardless of ability to pay.

The federal labor market statistics system is decentralized and idiosyncratic. There are six sets of actors—the Bureau of Labor Statistics (BLS), the Employment and Training Administration, the National Center for Education Statistics, the U.S. Census Bureau, the state labor market information (LMI) agencies, and the state education agencies.

While offering a large volume of valuable data sets, the federal statistical system does not meet labor market participant and policymaker needs with regard to the availability of current, accurate, geographically detailed data on education and training, occupations and skills, employment, and population; easy accessibility and usability of data sets; availability of web-based data analysis tools; and adequate access to technical assistance for data analysis.

The system does not meet user needs for the following reasons:

- Appropriations requested by departments and OMB and approved by Congress have been inadequate. Top federal funding decision-makers do not sufficiently appreciate that the return on a small investment in federal labor market data (under \$1 billion annually) is nearly infinite.
- To varying degrees, individual statistical agencies are not sufficiently responsive to the data needs of labor market participants and state and local policymakers, despite the mandate of the Wagner-Peyser Act for a “national employment statistics system” that addresses such needs.

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- A common vision is lacking among federal and state agencies for a more effective federal labor market statistics system. The Workforce Information Council (WIC) created to fulfill the requirements of Wagner-Peyser has served primarily to manage the BLS-LMI portion of the system and not provided the inclusive planning and coordination process needed.

At the same time, the following elements are present around which to build a strong labor market data system:

- Wagner-Peyser provides the legal basis for creating a data system that serves labor market participant and policymaker needs.
- Early-stage innovative data efforts that rely on administrative records and analysis of web-based job ads have the capacity to transform understanding of national and regional labor markets.
- The WIC is taking first steps toward wider participation and the development of a common vision for the labor market statistics system.

A New Federal Approach

In light of persistently high unemployment, the need for postsecondary training and continuing education to sustain a decent income, and ever-changing technologies and markets, the mission of the federal labor market statistics system should be to provide the data needed by labor market participants and policymakers to make well-informed decisions. Fulfilling this mission requires that the administration request and Congress approve adequate appropriations for the statistical system, that the system

be responsive to data user needs, and that the system have mechanisms to coordinate among its federal and state participants.

Consistent with these principles, the federal government should embark on a major effort to improve the effectiveness of its labor markets statistics system. Priority actions include the following:

1. White House commitment to a strong federal labor market statistics system that meets labor market participant and policymaker needs
2. Expansion of federal funding for labor market information—in this time of budget constraints, the commerce, education, and labor departmental budget offices, the Office of Management and Budget, and Congress should recognize that better statistics are a low-cost, highly effective means for reducing “labor market frictions” and unemployment
3. Assessment of the economic and fiscal impacts of labor market statistics—determining the value of labor market statistics to the economy and the public purse should provide evidence that supports investment in the statistical system
4. Determination by the secretary of labor that the provision of labor market information is a priority—to achieve well-functioning labor markets, it is imperative that the secretary fulfill responsibilities mandated by Wagner-Peyser
5. Establishment of an inter-agency forum for coordinating the labor market statistics system, one in which all federal and state participants are represented—the White House should see that the WIC is either reorganized or replaced ■

Editor's Note: This article was adapted from “Putting America to Work: The Essential Role of Federal Labor Market Statistics,” Brookings Institution, October 2010 (www.brookings.edu/papers/2010/1029_labor_reamer.aspx).



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SCIENCE POLICY

Stimulating Economic Growth through Technological Advance

Gordon Reikard, Statistician, Leap Wireless

In one of two science policy columns this month relating to jobs and economic growth, Gordon Reikard explores the connection between investment in technology and economic growth, a topic brought to the forefront by President Obama's State of the Union address that focused on "winning the future" through investment in research, development, and technology. Reikard explains how research and development once dominated the contributions to technological advance and how information technology has become a greater influence in the last few decades.

- Steve Pierson, ASA Director of Science Policy



As the economy moves from initial recovery to more sustained expansion, one of the key policy issues is whether more investment in technology will boost the growth rate. The issue takes on increased importance because the expansion has been anemic so far. Looser fiscal and monetary policies successfully stimulated a recovery from the 2008–2009 recession, but an increase in the rate of technological advance is needed to propel the economy into a more lasting expansionary phase.

It is only recently that policymakers have recognized the relationship between technology and growth; President Obama's State of the Union speech

explicitly mentioned it. Historically, many of the policy debates in Washington have been about taxes and regulation, and these debates have often been phrased in terms of the implications for growth. Unfortunately, these debates have tended to sidestep the more fundamental issue. Removing regulatory barriers and cutting taxes will, in general, result in a one-time increase in the level of gross domestic product (GDP), but not necessarily influence its long-term rate of change, which depends critically on the rate of technological progress.

One of the most significant findings in the last 50 years is that a large share of economic growth—more than one-third—is driven by technological advance. This originated with a seminal 1957 paper by Robert Solow titled "Technical Change and the Aggregate Production Function" that was published in *Review of Economics and Statistics*. Solow demonstrated that capital and labor accounted for less than two-thirds of growth. The remainder was technology.

Recent estimates indicate that, since the late 1940s, about two-fifths of growth can be attributed to technology. The standard, broad measure of technological advance is total factor productivity

(TFP), which is the residual calculated by subtracting the contributions of labor and physical capital from GDP. In the short run, TFP is volatile, but the fluctuations average out over long periods of time. At lower frequencies or over longer periods, the trend in TFP measures the rate of technological advance. Using the Bureau of Labor Statistics' estimates, technical advance has contributed to 38% of growth since 1948.

But there were obvious problems with the Solow model. TFP is, by construction, a residual, rather than a direct measure of technology. In principle, it can encompass everything from new products or better products to process improvements, reallocation of resources, and increases in efficiency. So, since the 1950s, there has been a great deal of empirical work—much of it by economic statisticians—linking TFP to observed measures of technology. These studies have ascertained that TFP is highly correlated with patents and indexes of scientific knowledge.

There was a major new theoretical development in the 1980s, when Paul Romer of Stanford argued that technological advance depended on investments in research, or human capital. Romer's model implied

that rates of technical advance could fluctuate over longer periods, which was confirmed by Romer and statisticians George Evans and Seppo Honkapohja in "Growth Cycles," published in *American Economic Review*. Decades such as the 1960s and 1990s were prosperous because they enjoyed faster rates of technological progress.

The strongest empirical evidence, however, was for research and development (R&D), although even the highest estimates indicate R&D can account for only a fractional ratio of technological advance. More specifically, R&D contributed as much as 75% of technical advance from roughly 1948–60, and much of this was propelled by government-funded defense research. By the 1960s, however, process improvements in the private sector had largely displaced R&D as the major source of technical advance. During the second wave of high productivity, beginning in the 1990s, R&D contributed only about one-fourth of technological advance and private sector R&D was increasingly more important than government-funded research.

The estimated elasticities of R&D in the production function support this. Over the last decade, the elasticity of industry-funded R&D has risen to 0.064, while the elasticity of government-funded R&D has declined to 0.049. So while the combined elasticity for all R&D works out to 0.112, industry-funded research is having a greater impact. Given this, governments can realistically expect to raise long-term growth rates through policies such as tax credits for R&D.

In the early 1990s, many economists were pessimistic about the ability to raise growth, but by the middle of the decade, productivity was achieving gains not seen since the 1960s. Clearly, technological advance was

speeding up. The causes had to do with computers and software.

The reason computers and software had such a powerful influence was that their effect was not limited to a single industry. Information technology (IT) could generate substantial spillover effects into other sectors. Examples include local area networks, computer-aided design (CAD-CAM), electronic banking, Internet retailing, statistical quality control, computerized inventory control, and faster communication of ideas. Industrial firms could use computers to reduce cycle times, achieve fewer defects, control inventory, and do specialized production runs tailoring manufacturing to demand. Computers not only made industrial processes more efficient, they made research itself more efficient, since R&D could now be performed with advanced

software, leading to faster development and better products.

In sum, the role of technology in growth is large—about two-fifths—and will continue to increase in coming years. While R&D has historically comprised a significant share of technical advance, an increasing share is now coming from computers and software. Therefore, a two-pronged approach is needed. The government should adopt a permanent and, preferably larger, tax credit for R&D. It also should allow first-year expensing of all computers and software and exempt both the R&D credit and depreciation deductions from the alternative minimum tax.

In essence, the current period of slow growth can be overcome. If the country commits itself to investing in technology, the coming decade could be much like the 1990s. ■

2011 ASA Quality and Productivity Research Conference

The conference will be held at the Hotel Roanoke and Conference Center, in Roanoke, VA from June 8-10, 2011.

At the conference, Dr. A. Blanton Godfrey, Dean of the College of Textiles at North Carolina State University, will be honored for his many contributions in the fields of quality management and business statistics, and for service to the statistical community.

Check the conference web site at
<http://www.qprc2011.org/>

for additional information on the conference program, student scholarships, registration, accommodations, and short courses.

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MASTER'S NOTEBOOK

Clinical Trials and Academia: Goodness of Fit

Gloria Broadwater, Duke Cancer Institute

The role of a statistician in Duke Cancer Institute's Cancer Statistical Center is to analyze and interpret clinical trial data with the goal of publishing results in professional medical journals. Reaching this goal involves several steps in which statisticians are actively engaged.

The process typically begins when medical investigators consult with me to discuss the goals of a clinical trial. I may meet with the investigators alone or receive guidance from a PhD statistician. In addition to educating the investigators about good research practices, I assist the investigators in writing the protocol by translating their objectives of the clinical trial into formal statistical hypotheses. Then, I develop a statistical design for the trial with statistical justification to test the hypotheses, including power calculations and sample size estimates. A statistical analysis plan, including interim monitoring guidelines, if necessary, also is incorporated.

I aid the investigators and data managers in determining which clinical data elements are required to address the hypotheses of the trial. This process may involve creating and reviewing data entry forms. After the trial opens and begins to accrue patients, I extract the data stored in study databases and provide an interim monitoring report per protocol guidelines. During this phase of the trial, I provide quality assurance and resolve any data discrepancies.

The next phase of the process occurs when the trial meets its accrual goal. Providing a

comprehensive statistical report to the investigators, which includes statistical methodology as well as results and graphical displays of the data, is one of the tasks I relish. I extract data from databases, use statistical code in either SAS or S-Plus, and document statistical programs. Finally, I assemble the results and write a comprehensive statistical report with interpretation of statistical analysis. This report includes the statistical methods and results sections, to be included in the draft manuscript. The results presented in the statistical report are explained to the investigators and act as the foundation for the conclusions in the manuscript.

After the investigators prepare the full draft manuscript, I review it to ensure the conclusions accurately reflect the statistical results and critique the entire draft for internal consistency and quality.

My affection for mathematics began in the third grade. Some time during my middle-school years, I decided I would major in math when I attended college. As an undergraduate, I took several statistics courses and decided I wanted to pursue a master's degree in statistics. I was doing what I loved: learning and statistics.

I enjoy working as a statistician in a cancer center for several reasons, including unveiling innovative medical advances to people in the community who are battling cancer and allowing them and their doctors make informed decisions concerning treatment, the opportunity to work with brilliant PhD-level statisticians who are willing to provide guidance and take time to teach me

new statistical procedures, and participating in a wide variety of tasks each day. In addition, I'm fond of the sense of respect and appreciation the Duke investigators express for my work.

The skills needed to succeed as a statistician in this academic environment include having a solid understanding of statistical methods and the ability to solve problems. One also must be accurate, organized, efficient, responsible, and self-motivated. Having the flexibility to work both independently and as part of a team also is valued.

Shortly after graduating with my master's degree, I interviewed for my current job and thought it would be a good match for my interests and career goals. Now, 16 years later, I'm positive it's an outstanding fit for me.

The highlights of my career include having the opportunity to use my strengths and interests to specialize in specific types of cancer, to use an array of statistical methodologies, to provide cutting-edge cancer treatment information to the community through medical journal publications, and to work with distinguished colleagues in both the medical and statistical fields, which broadens my knowledge every day. ■

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Recent Graduates Offer Advice to Undergraduates

Beth Chance, Statistics Professor, Cal Poly, San Luis Obispo



Cal Poly is a public, primarily undergraduate university on the central coast of California. It has a separate statistics department with approximately 40 majors, as well as minors and double majors, which allows undergraduates to prepare for a variety of careers. Here, three recent graduates offer their advice to students as they consider graduate study in statistics, a job in industry, and a teaching credential program.

Wade Herndon: Getting Ready for Graduate School



Wade Herndon is a graduate student in statistics at Colorado State University. He earned his bachelor's degree in statistics from Cal Poly in 2008. His research focuses on analysis of complex surveys such as semiparametric models for survey data under informative sampling.

Take as Many Advanced Math Classes as Possible

The best advice I can give an undergraduate in statistics looking to pursue a graduate degree in statistics is to take as many advanced math classes as possible. Most statistics graduate students I've encountered have a background in math.

Take a Combination of Applied and Theoretical Statistics Courses

The most useful statistics classes, in my experience, have been probability theory, estimation and sampling theory, mathematical statistics, and applied regression analysis. A solid background in applied statistics enables you to confidently tackle future applied statistics problems encountered in school or even while consulting in industry.

Gain as Much Programming Experience as Possible

I believe it is also important to take advantage of every opportunity to gain programming experience—in any language—whether during an internship, working on a project, or in a class.

Have the Right Attitude

Like everything else, you get out of it what you put into it, so a willingness to work and a good attitude are indispensable.

Saba Abuhay: Want versus Need in Consulting



Saba Abuhay began work in business analysis in information systems at Amgen after graduating from Cal Poly in 2010. Her job responsibilities include gathering and communicating business requirements prior to production.

Keep Developing Your Nontechnical Skills

How to have the conversation that defines the wants and needs of a client was one of the most important things I learned in my undergraduate program. I was fortunate that my program required me to take a consulting course designed to teach me how to integrate my technical knowledge with communication techniques to assess the underlying reason for a client's needs. By effectively using the "want versus need" conversation techniques I learned, I have been able to reduce frustration caused by misunderstandings and to provide higher quality work to my clients. Consequently, having an effective communication style in addition to a technical background has made me a more valuable employee.

While technical knowledge is important, having the ability to relate to people and communicate effectively is also critical. Most importantly, relax and don't forget to have some fun occasionally as you pursue your career goals.

Michelle Shaffer: Preparing to Teach



Michelle Shaffer is enrolled in the teaching credential program at Cal Poly. She earned her bachelor's degree in statistics from Cal Poly in 2010 and looks forward to teaching high-school and AP statistics.

Tutor, Grade, Observe, Reflect on Introductory Statistics Classes

By tutoring and grading, you will gain a better understanding of how students learn, recognize common misconceptions, and practice using various methods for explaining statistical ideas. Look back at your own introductory statistics classes. Think about how you learned, what activities helped you, and what concepts you struggled with. If available, do your classroom observations in a high-school class. It's good



to go back and see from a new perspective the different ways introductory statistics is being taught.

Be Familiar with the History of Statistics and Statistics Education

Read David Salsburg's *The Lady Tasting Tea*. This book outlines the story of statistics and will enhance your passion for the discipline. If not already an option, talk to your professors about starting a seminar for students and any interested faculty to read and discuss research articles about teaching statistics. ■

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2012

A Note from the Director, Division of Mathematical Sciences at NSF

Sastry G. Pantula

It is an exciting time to be at DMS [Division of Mathematical Sciences] at NSF [National Science Foundation]. It is a great place to work, and a place where research and diversity THRIVE! Here, I would like to focus on three items: my goals, new opportunities, and the budget at DMS.

My Goals

My first goal is to see that mathematical, statistical, and computational sciences THRIVE, not just simply survive, at DMS. Second, I would like to diversify our work force and broaden the participation at all levels of training. Finally, I would like DMS to be the best place to work for a diverse group of energetic researchers and program assistants.

THRIVE, here, is an acronym. I hope that: **TH**ematic (core) and multidisciplinary **R**esearch is well funded and that our research has a high **I**mpact, is very innovative in solving major societal issues, and is highly **V**isible. Finally, we want to **E**ducate future researchers, problemsolvers, and critical thinkers. Our communities can help in making our excellent contributions visible to the public and show how we are the backbone for innovation. Articles written to news media and magazines in other sciences, Math Awareness Month, Mathematical Moments, and Statistical Significance are some examples of activities that help with the visibility of our professions. Also, we eagerly await the reports from a NAS [National Academy of Science] study called Math Sciences 2025. Please visit www8.nationalacademies.org/cp/projectview.aspx?key=49237 to provide feedback on this project.

I hope to work with our communities to diversify our work force (students, postdocs, faculty, and leadership) and support broadening participation at all levels. Hopefully, with your help, DMS panels and program officers represent diversity, as well. Finally, I hope to be remembered as someone who was fair to all our programs and valued the contributions of each person in all divisions at NSF. I plan to build on the harmony that exists and make DMS an attractive place for a diverse group of folks who love to come to DMS to serve our professions. DMS (www.nsf.gov/dir/index.jsp?div=DMS) has several positions open in various programs now.

New Opportunities

A recent MPS [Mathematical and Physical Sciences] Advisory Committee (MPSAC) working group made a strong case for support for basic research and provided several examples of how basic research from the past helped develop many useful inventions (like laser, GPS, cell phone, PET scans, ...). The working group report states, "Support for basic research is an essential part of the NSF mission." Also, "A successful innovation strategy requires significant investments across NSF core programs." DMS intends to continue its significant support for basic research in core areas of mathematics and statistics. In addition to the basic research, data-enabled science (DES), computing science, grand challenges in cyberinfrastructure, and multidisciplinary research play a very important part of DMS activities. Prior to my arrival at NSF, our previous NSF director signed a memo from which I quote: "NSF should create a program in Computational and Data-Enabled Science and Engineering (CDS&E) ..." and "CDS&E is now clearly recognizable as a distinct intellectual and technological discipline lying at the intersection of applied mathematics, statistics, computer science, core science, and engineering disciplines. It is dedicated to the development and use of computational methods and data mining and management systems to enable scientific discovery and engineering innovation." Massive and complex data are here to stay and [to] provide [a] diverse set of opportunities for both theoretical and applied areas of computational, mathematical, and statistical sciences.

In March 2010, an MPSAC working group on DES wrote in its report that, "Mathematics and statistics lie at the intersection of all quantitative fields engaged in DES, through the power of their abstractions, and they swiftly convey breakthroughs in one field into related ones." The working group recommended obtaining significant funds to support DES research through CAREER awards, work force development in understanding and inference with massive and complex data, and provide REU supplements for DES training. See www.nsf.gov/dir/index.jsp?org=MPS and "A Report of the NSF Advisory Committee for Cyberinfrastructure Task Force on Grand Challenges" to learn more about CDS&E. This task force report recommends support for research programs

This article was originally written for *Notices*, the membership journal of the American Mathematical Society, and will appear there in the April 2011 issue.

in “advances in discretization methods, solvers, optimization, statistical methods for large data sets, and validation and uncertainty quantification” and training of “the next generation of data-scientists who can work in a multidisciplinary team of researchers in high-performance computing, mathematics, statistics, domain-specific sciences, etc.”

In addition to the above, multidisciplinary activities related to research at the intersection of biological and mathematical and physical sciences (BIO-MaPS), math-bio initiatives with NIGMS, threat reduction with DTRA, math and geosciences (CMG), energy and sustainability (SEES), data and visualization (FODAVA), and Cyberinfrastructure for 21st Century (CIF21), among many others, provide opportunities for our communities. In order to surf the data tsunami and work in multidisciplinary teams, we need to train our students in core, computational, and communication skills.

Budget at DMS

Typically, DMS invests 70% of its budget to support disciplinary research, predominantly through individual grants. Of this, about 10% is invested in multidisciplinary activities. About 15% is invested in work force-related activities, 10% in math sciences institutes, and 5% on other activities. We are

looking forward to the outcomes of the solicitations on research networks and for institutes. In spite of receiving a large number of high-quality proposals, success rate for research funding is below 30%. Thus, we are unable to fund many excellent proposals. On the other hand, we can't fund proposals that are never submitted! It is encouraging to see our communities' hard work, in getting more of our students to apply to NSF Graduate Research Fellowships, is yielding positive results. We also encourage applications from a diverse group of students from every institution, not just from a select few, to apply for math sciences post-doctoral research fellowships.

We are under continuing resolution for FY11 budget until March 4, 2011, and we remain optimistic about both FY11 and FY12 budgets. Investment in research is a key to innovation and for economic competitiveness. It has no political boundaries. Statistical, mathematical, and computational sciences have an impact on all other sciences, and other sciences in turn have an impact on our basic research.

Thank you in advance for your support to achieve our common goals. As you advance the frontiers of our disciplines, please also take advantage of opportunities to solve our future societal challenges in health, climate, energy, sustainability and security, among many others. Keep up the great work! ■

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

April 1, 2011

ASA Gertrude M. Cox Scholarship

Pam Craven

pamela@amstat.org

April 1, 2011

ASA Outstanding Statistical Application Award

Nominations: Pam Craven

pamela@amstat.org

Questions: Petrutza C. Caragea
pcaragea@iastate.edu

April 1, 2011

ASA Edward C. Bryant Scholarship

Nominations: Pam Craven

pamela@amstat.org

Questions: Kimberly S. Weems
weems@stat.ncsu.edu

April 1, 2011

ASA Excellence in Statistical Reporting Award

Nominations: Pam Craven

pamela@amstat.org

Questions: Denise A. Lievesley
denise.lievesley@kcl.ac.uk

April 1, 2011

ASA Samuel S. Wilks Memorial Medal

Nominations: Pam Craven

pamela@amstat.org

Questions: Daniel Zelterman
daniel.zelterman@yale.edu

Excellence in Statistical Reporting Award

The Excellence in Statistical Reporting Award is given to encourage and recognize members of the communications media who have best displayed an informed interest in the science of statistics and its role in public life. The award can be given for a single statistical presentation or for sustained worthy contributions.

Visit www.amstat.org/careers/excellenceinstatisticalreportingaward.cfm for information and a nomination form. If you have questions, contact Denise Lievesley, committee chair, at denise.lievesley@kcl.ac.uk.

Nominations should be sent to Pam Craven in the ASA office at pamela@amstat.org or 732 N. Washington St., Alexandria, VA 22314, attention Award Nominations. The nomination deadline is April 1.

Mu Sigma Rho

Mu Sigma Rho, the national honor society for statistics, would like to invite academic institutions to nominate their outstanding teaching faculty for the 2011 Mu Sigma Rho Statistical Education Award.

The recipient must have evidence of excellence in classroom teaching in statistics and a lifetime devotion to statistics education. Each academic institution is allowed one nomination per year. In the event that more than one nomination is received from a single institution in a year, only the first will be considered. Any college or institution may nominate a potential recipient, regardless of whether the institution has an active Mu Sigma Rho chapter.

Each nomination should include a cover letter, the nominee's curriculum vitae, a

Edward C. Bryant Scholarship

Members of the Edward C. Bryant Scholarship Committee are accepting applications for the Edward C. Bryant Scholarship award, which is given to an outstanding graduate student studying survey statistics to help support his or her education.

The committee chooses the recipient using the following criteria:

- Potential to contribute to survey statistics

- Applied experience in survey statistics
- Performance in graduate school

The award recipient will be presented with a certificate and \$2,500 at the August Joint Statistical Meetings in Miami Beach, Florida.

Applications and letters of recommendation must be received by April 1. Visit www.amstat.org/education/ecbryantscholarship.cfm or email awards@amstat.org for an application.

summary of the nominee's teaching and educational activities, and at least three letters supporting the nomination. At least two of these letters should come from present or former students and at least one should come from a colleague of the nominee.

The deadline for submission of nominations is May 1. In the event that a nominee is not selected for the 2011 award, the nomination will remain active for three years after the initial submission, unless the institution chooses to put forward another nominee.

Nomination materials can be sent to Lynne Seymour, University of Georgia, 204 Statistics Building, 101 Cedar St., Athens, GA 30602.

The recipient of the award will be notified on or before June 15 and will be presented a plaque during JSM in August.

Questions regarding this award can be emailed to Seymour at Seymour@stat.uga.edu.

Outstanding Statistical Application Award

The Outstanding Statistical Application Award was established to recognize the authors of papers that demonstrate an outstanding application of statistics in any substantive field. Visit www.amstat.org/careers/outstandingstatisticalapplicationaward.cfm for nomination information.

Questions may be sent to Petrutza Caragea, committee chair, at pcaragea@iastate.edu. Nominations should be sent to Pam Craven in the ASA office at pamela@amstat.org or 732 N. Washington St., Alexandria, VA 22314, attention Award Nominations. The nomination deadline is April 1.

Samuel S. Wilks Memorial Medal

The Wilks Memorial Award is bestowed upon a distinguished individual who has made statistical contributions to the advancement of scientific or technical knowledge, ingenious application of existing knowledge, or successful activity in the fostering of cooperative scientific efforts that have been directly involved in matters of national defense or public interest.

Visit www.amstat.org/careers/samuelwilksaward.cfm for nomination information.

Questions may be addressed to Daniel Zelerman, committee chair, at daniel.zelerman@yale.edu. Nominations should be sent to Pam Craven in the ASA office at pamela@amstat.org or 732 N. Washington St., Alexandria, VA 22314, attention Award Nominations. The nomination deadline is April 1. ■



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 Survey Research Center, Institute for Social Research, University of Michigan
 For more information: Phone (734) 764-6595, Toll-Free (877) 880-9389





Cochran

Submitted by Roxy Peck

Mu Sigma Rho, the National honor society for statistics, presented its 11th Statistical Education Award to **James J. Cochran** of Louisiana Tech University. This award recognizes excellence in undergraduate or graduate statistical education at the institutional, regional, or national level.

Cochran has been recognized nationally and internationally as an outstanding teacher, creative and innovative educator, and leader in efforts to enhance the quality of statistics education at all levels. He founded the INFORMS International Teaching Initiative and has chaired teaching effectiveness colloquia through this initiative in Uruguay, South Africa, and Colombia.

Several of Cochran's former students wrote letters in support of his nomination. Typical of these letters, one student wrote, "I have seen a great many teachers who feel that it is their job to merely present information to their students and view it essentially as a one-way communication. Professor Cochran sees his role as more of an enabler. He possesses the knowledge, and he does whatever he can, using every resource at his disposal, to provide his students with the tools to achieve understanding. Professor Cochran has that rare combination of technical expertise and the ability to express it in terms that his students can comprehend. He is truly a gifted individual in this respect." ■

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

Obituaries

Ronn A. Andrusco

Submitted by Velma Andrusco

Ronn Andrusco, 61, passed away December 18, 2010, in Houston, Texas.

Andrusco was born in Winnipeg, Manitoba, Canada, on March 15, 1949. He earned his bachelor's of science in mathematics, master's degree in statistics, and teaching certificate from the University of Manitoba. Of parallel interest and achievement was his career as a professional freelance violist, performing with the National Ballet of Canada, Kitchener Waterloo Symphony Orchestra, Hamilton Philharmonic Orchestra, Edmonton Symphony Orchestra, Brantford Symphony Orchestra, and many other southern Ontario orchestras. He was often invited to be a clinician and staff member at summer music camps. He also was an avid sports fan, particularly of baseball, hockey, and football.

Andrusco's interests in both baseball and statistics led him to make many close friendships with the baseball community in Wheeling, West Virginia. After many years as a statistician with the Government of Ontario Health Department, he pursued a teaching career with the Toronto District School Board, culminating with four complete years of service with the Houston Independent School District at Westside High School. It was in Houston that he found his greatest fulfillment, enjoying to the fullest its people, food, culture, and politics.

Bea Shube

Submitted by Tom Ryan

Beatrice (Bea) Shube was born April 13, 1921, and passed away on December 5, 2010. She was a New York City native.

Bea began working for John Wiley and Sons, Inc. shortly after graduating from Brooklyn College and retired in 1988. She was the editor of the statistics series and guided the publication of such books as Draper and Smith's *Applied Regression Analysis* and Box, Hunter, and Hunter's *Statistics for Experimenters*.

Googling "Beatrice Shube" brings up entries of her name preceded by words such as "indefatigable," "the patient encouragement of," and "we are deeply indebted to." She was a hands-on editor and the only one who's told me to be sure to let her know if I encountered any problems when putting my book into production.

Shube was elected a Fellow of the ASA and American Association for the Advancement of Science.

She was fond of telling a story about how a Nobel Prize winner once dusted off a chair for her before she sat down. Having known her for 25 years, I would say that such consideration was well-deserved. I was in regular contact with her during the last few years of her life and, although she had a painful health condition, she generally sounded upbeat. She was a good friend whom I will miss.

sectionnews

Biometrics

The Biometrics Section is pleased to support a new initiative by Jane Monaco and Amy Herring, titled “Raising Interest in Biostatistics Careers Among Miami High-School Students.” A component of the project is the development of an online “base” presentation that explains the field of biostatistics, including the educational expectations and job opportunities. The project capitalizes on the presence of many leading biostatisticians at the 2011 ENAR Spring Meeting in Miami, Florida, March 20–23.

The section also needs volunteers to be session chairs during JSM. If you are interested in chairing a session, contact Tianxi Cai, 2011 JSM Biometrics Section program chair, at tcai@hsph.harvard.edu.

For detailed information about the section’s activities, visit the section news department online at <http://magazine.amstat.org/?cat=17>.

Quality and Productivity

March 28 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 at the Quality and Productivity Research Conference in Roanoke, Virginia, June 8–10. Application is open to full-time students currently 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. Information about the conference is available at www.qprc2011.org.

For more about the section, visit the section news department online at <http://magazine.amstat.org/?cat=17>.

Statistics and the Environment

The ASA Section on Statistics and the Environment (ENVR) is seeking nominations for the ENVR Distinguished Achievement Award and for the ENVR Young Investigator Award. Both awards are given in recognition of outstanding contributions to the development of methods, issues, concepts, applications, and initiatives of environmental statistics. Successful nominees will receive their awards during the ENVR business meeting and reception at the Joint Statistical Meetings in Miami, Florida, in August. Nominations must be received by March

15. The nomination may be submitted via email as a PDF document (preferred) or as a Word file. If submitted in hard copy, send the original and five copies. Submit nominations to Ron McRoberts, U.S. Forest Service, 1992 Folwell Ave., St. Paul, MN 55108; rmcroberts@fs.fed.us. For detailed information and to read the criteria for these awards, visit the section news department online at <http://magazine.amstat.org/?cat=17>.

Survey Research Methods

The webinar series brought to you by the ASA Survey Research Methods Section and the American Association for Public Opinion Research is going strong for its second year. In April, the webinar “Reconsidering Mail Survey Methods in an Internet World” will be given by Don Dillman of Washington State University. Dillman is recognized internationally as a major contributor to the development of modern mail, telephone, and Internet survey methods.

Past webinars are available at <http://eo2.commpartners.com/users/amstat>. For more information about the program, visit www.amstat.org/sections/srms/webinar_archive.cfm. For details about Dillman’s webinar, visit the section news department online at <http://magazine.amstat.org/?cat=17>.

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

chapternews

Chicago

The Chicago Chapter is hosting a short course, titled “Regression Modeling with Many Correlated Predictors,” presented by Jay Magidson of Statistical Innovations and Tony Babinec of AB Analytics on April 8 at the Rush University Medical Center in Chicago, Illinois. For more information and to register, visit www.chicagoasa.org/Workshops/e040811.htm.

San Francisco Bay Area

The San Francisco Bay Area Chapter is hosting a short course, titled “Bayesian Inference, Prediction, and Decision-Making II,” presented by David Draper on April 16 at the Airport Marriott Waterfront in San Francisco, California. For more information and to register, visit www.sfasa.org. ■

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

2011

March

25–26—2011 Conference of Texas Statisticians, College Station, Texas

For information, visit www.stat.tamu.edu/cots2011/index.html or contact Elaine Washington, Department of Statistics, Texas A&M University, College Station, TX 77843-3143; (979) 845-3143; elaine@stat.tamu.edu.

May

23–27—Journées de Statistique, Tunis, France

For details, visit <http://jds2011.tn.refer.org> or contact Avner Bar-Hen, 11 rue Pierre et Marie Curie, Paris, International 75006, France; +33 1 44 27 66 60; avner.bar-hen@mi.parisdescartes.fr.

June

22–24—Spring Research Conference on Statistics in Industry and Technology, Evanston, Illinois

For more information, visit <http://src2011.iems.northwestern.edu> or contact Bruce Ankenman, Department of Industrial Engineering and Management Sciences, Evanston, IL 60208; (847) 491-5674; ankenman@northwestern.edu.

July

5–8—2011 International Conference for Health Statistics in the Pacific Islands (ICHSPI-2011), Suva, Fiji

For details, visit www.statsoc.org.au/PacificHealth or contact Mark Griffin, University of Queensland, Brisbane, International 4006, Australia; +61 448 176 926; m.griffin@uq.edu.au.

August

1—Call for Interested Experts: Kauffman Roundtable on Establishment Surveys, San Antonio, Texas

For details, visit www.kauffman.org and look for the January 2011 Data Maven blog post or contact E.J. Reedy, 4801 Rockhill Road, Kansas City, MO 64110; (816) 210-9461; ereedy@kauffman.org.

21–25—32nd Annual Meeting of the International Society of Clinical Biostatistics (ISCB), Ottawa, Ontario, Canada

For more information, visit www.iscb2011.info or contact Marie Lanouette, 1200 Montreal Road, Building M-19, Ottawa, Ontario K1A 0R6, Canada; +1 613-993-9228; ISCB2011@nrc-cnrc.gc.ca.

30–9/2—Designed Experiments: Recent Advances in Methods and Applications, Cambridge, United Kingdom

For details, visit www.newton.ac.uk/programmes/DAE/daew04.html or contact Dave Woods,

Southampton Statistical Sciences Research Institute, University of Southampton, Southampton, International SO17 1BJ, UK; +44 2380595117; doe@southampton.ac.uk.

November

7–11—18th Annual Biopharmaceutical Applied Statistics Symposium (BASS XVIII), Savannah, Georgia

For information, visit <http://bass.georgiasouthern.edu> or contact Ruth Whitworth, P.O. Box 8015, Jiann-Ping Hsu College of Public Health, Georgia Southern University, Statesboro, GA 30460-8015; (912) 478-7904; bass@georgiasouthern.edu.

December

4–9—67th Annual Deming Conference on Applied Statistics, Atlantic City, New Jersey

For more information, visit www.demingconference.com or contact Walter Young, 16 Harrow Circle, Wayne, PA 19087-3852; (610) 989-1622; demingchair@gmail.com.

2012

July

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, Canada

For details, visit www.iss-2012-stjohns.ca or contact Brajendra Sutradhar, Elizabeth Ave., St. John's, Newfoundland A1C5S7, Canada; (709) 864-8731; bsutradh@mun.ca. ■

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

District of Columbia

■ Small biostatistical firm (www.statcollab.com) involved in medical research and consulting seeks a biostatistician to perform project coordination, data analysis, SAS programming, and report writing. Applicants should send cover letter (include Ref: ASA-BIO-1101), résumé, writing sample, a sample computer program, and transcripts (both graduate and undergraduate) by email (office@statcollab.com), fax (202) 247-9701, or snail mail: Statistics Collaborative, Inc., 1625 Massachusetts Ave., NW, Suite 600, Washington, DC 20036. www.statcollab.com. EOE.

Florida

■ University of Florida, IFAS - Statistics, opening for assistant/associate professor, starting as early as July 1, 2011. PhD in statistics or related field with teaching and applied collaborative research interests required. Review began February 15, 2011, and continues until filled. Apply online at <https://jobs.ufl.edu> and submit application, cover letter, and vita. Send transcript and three recommendation letters to: P.O. Box 110339, Gainesville, FL 32611-0339. EOE.

Kansas

■ The University of Missouri-Kansas City School of Medicine seeks a highly qualified candidate in biostatistics to join the department of biomedical and health informatics. We are seeking an individual with interest in translational research, clinical trials, health outcomes, genomics, and/or bioinformatics. This is a full-time faculty appointment (1.0 FTE) with rank commensurate with experience. Send requests for information to tufsj@umkc.edu. UMKC is an equal opportunity/affirmative action institution.

Iowa

■ ACT, Inc. in Iowa City, IA, is seeking a principal research associate to independently perform or lead validity and/or statistical research, propose and develop innovations to support ACT products and services, and advise ACT management on technical issues. Requires a PhD 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.



UNC
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GLOBAL PUBLIC HEALTH

The Department of Biostatistics and the Translational and Clinical Sciences Institute (TRACS) at the University of North Carolina at Chapel Hill are seeking a **non-tenure track Research Assistant or Research Associate Professor**. This individual will collaborate with biomedical researchers on diverse projects spanning clinical trials, observational studies, and population science research and will engage in independent methodological research. TRACS is funded by an institutional grant from the NIH and provides campus wide support to researchers pursuing innovative interdisciplinary studies, including but not limited to the UNC Medical, Nursing, and Dental Schools. Applicants should hold a PhD in biostatistics or statistics, and possess good communication skills.

To apply, use the electronic submission website at <http://jobs.unc.edu/2500791> 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 at bseagrov@bios.unc.edu and subsequently in hard copy to:

Betsy Seagroves
Department of Biostatistics
CB #7420, McGavran-Greenberg Hall
The University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-7420

This position will remain open until filled.

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.

statistics or educational research and 7 years of related statistical research experience. Please view the complete posting and apply online at www.act.org. EOE.

Massachusetts

■ The University of Massachusetts Amherst has a tenure-track position in biostatistics starting September 2011. Minimum requirements are terminal degree (PhD, DrPH) and evidence of research and teaching potential. Review of applications began February 15. Send curriculum vitae, research and teaching statements, and three letters to Carol Bigelow, #R40642, 402 Arnold House, 715 North Pleasant St., University of Massachusetts, Amherst, MA 01003-9304. cbigelow@schoolph.umass.edu. EOE.

Mississippi

■ Biostatistician II. The University of Mississippi Medical Center. Collaborate with clinical and scientific investigators in design, analysis, and publication of

FACULTY/STAFF POSITIONS

Department of Biostatistics

Vanderbilt University School of Medicine

The Department of Biostatistics at Vanderbilt University, School of Medicine invites applications for the positions of assistant, associate and full professor. The Department is also seeking applicants for staff biostatisticians. We are particularly interested in experienced candidates with expertise in the following:

- Cancer Research
- Data coordinating center leadership
- Leading and managing a center for statistical collaboration

Vanderbilt University is located in beautiful Nashville, Tennessee and has been a leader among academic medical centers in its growth of NIH funding. We seek faculty and staff biostatisticians with excellent communication skills, outstanding collaborative ability, and desire for developing innovative statistical methods.

Candidates who have skills in managing and leading collaborative centers and have experience in supervising and mentoring junior biomedical researchers, are urged to apply.

Interested Faculty applicants should email a cover letter & CV to biostat@vanderbilt.edu. More information is available for staff positions at biostat.mc.vanderbilt.edu/JobOpenings. Vanderbilt University is an affirmative action EEOC employer.

VANDERBILT  School of Medicine

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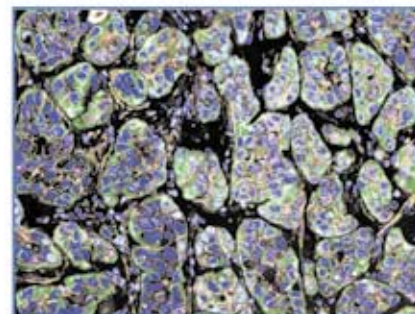
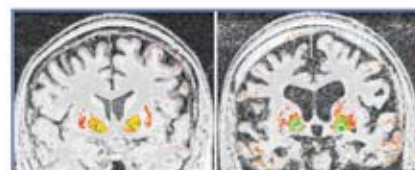
As a biostatistician at GE, you will participate in the definition and design of prognostic and predictive studies, developing multivariate algorithms for predicting patient outcome and drug response stratification, and leading validation of these prognostic and predictive profiles with internal and external collaborators. We are looking for experts in biostatistical analysis techniques and tools to work on creative, multidisciplinary teams. The ideal candidate will have a Ph.D in biostatistics or medical statistics and at least five years of post-graduate experience.

To find out more, visit www.ge.com/research and search for job # 1287717 in the Careers section.

GE Global Research is a hub of technology development for all of GE's businesses. Our scientists and engineers redefine what's possible, finding answers for some of the world's toughest challenges.



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School of Public Health

The Department of Epidemiology and Biostatistics at the Drexel University School of Public Health is seeking to expand its program in biostatistics. Drexel is a top-50 private research university and, for 2011, has been ranked as the second “up-and-coming school” in the nation by *U.S. News & World Report*. The School of Public Health is the only accredited school of public health in Philadelphia and the Department, which now includes 13 tenured or tenure-track faculty, has recently added a Biostatistics Service Center and an MS degree program in Biostatistics. The following positions are available:

Full or Associate Professor in Biostatistics

Candidates should be proven scholars with strong publication records and substantive research experience as well as seasoned educators who have taught a variety of statistics courses and mentored graduate students. Individuals with a range of applied and methodological areas of interest and expertise will be considered. The successful candidate will be expected to provide direction and leadership to biostatistics research and training in the Department. The position is a tenured or tenure-track faculty line.

Assistant Professor in Biostatistics (two position openings*)

Candidates should have a doctoral degree in biostatistics or statistics, a publication record in their field, and some teaching experience. The positions involve scholarship through applied and/or methodological research. Collaboration with Department and School faculty as well as researchers throughout the University will be encouraged. Candidates with a variety of applied and methodological areas of interest will be considered. The positions are tenure-track and also involve teaching and academic advising in support of the School’s graduate degree programs.

Apply online at www.drexeljobs.com. Use “biostatistics” as a key word in the Search Postings area and select the appropriate position. Please complete the short on-line application and also submit your C.V. and a cover letter describing your interests, background, and qualifications online.

Questions/inquiries can be addressed to:

Craig J. Newschaffer, Ph.D.

Chair, Department of Epidemiology & Biostatistics
cnewscha@drexel.edu

* One position is pending final approval.

Drexel University is an equal opportunity/affirmative action employer.

publichealth.drexel.edu

biomedical research. Minimum requirements: master's degree in statistics, biostatistics, or directly related field and three (3) years of data analysis experience using STATA, SAS, or R platforms, or PhD in statistics, biostatistics, or directly related field. No other equivalents. Additional information, apply online, see www.umc.edu. The University of Mississippi Medical Center is an EOE, M/F/D/V.

Missouri

■ The School of Medicine and the Center for Applied Statistics at Washington University invite applications for a post-doctoral position supporting an NCI-supported project. Candidates should possess a PhD in statistics, biostatistics, or the equivalent and have good communication, interpersonal, and organizational skills. Submit a CV, letter, and three letters of reference to Sue Tuhro (stuhro@artsci.wustl.edu). We especially encourage applications from women and members of under-represented minority groups. Washington University is an equal opportunity employer. Employment eligibility verification required upon hire.

New Jersey

■ Supervisor Respiratory OverRead-ERT does technology with a purpose - to improve and save lives by setting the industry standard in cardiac safety drug research. Managing daily operations of the Respiratory OverRead department, will lead clinical specialists performing analysis on pulmonary function data in accordance with contracted process for each study. Minimum 5+ years pulmonary function testing/related experience. Apply online at www.brightmove.com/ATS/PortalViewRequirement.do?reqGK=175534. Educational Testing Service is an EOE.

New York

■ The schools of business at Fordham University invite applicants for a tenure-track assistant professor position in managerial decisionmaking for fall 2011. Candidates must have received an earned doctorate in statistics, decision sciences, or a related field or expect the PhD by start date. All applications should be sent to Robert Wharton at robert-wharton@comcast.net.



Biostatistician

At H. Lee Moffitt Cancer Center & Research Institute in Tampa, Florida, every member of our team is focused on our lasting commitment to the prevention and cure of cancer. Moffitt is a Comprehensive Cancer Center as designated by the National Cancer Institute and is the home of the largest Blood and Marrow Transplant Center in the Southeast United States.

The Biostatistics Core at Moffitt Cancer Center seeks a full-time Biostatistician to provide statistical support to Cancer Center researchers, analyze and interpret statistical data, especially for clinical trials, epidemiological and bioinformatics-related research, summarize the results for manuscripts, support Biostatistics Core faculty research and collaborations, and perform statistical programming and database consulting.

A Masters degree in Biostatistics, Statistics, or a related degree is required. One to five years of statistical experience in a medical research background is preferred. Previous experience in cancer research, advanced knowledge of SAS, and knowledge of S-Plus, R or MATLAB is highly desirable.

As a Moffitt employee, you will receive personal rewards including competitive salaries, an outstanding lifestyle benefit package, flexible scheduling, on-site child care, educational assistance and more. Our employees also take advantage of all that Tampa Bay has to offer - picturesque Gulf beaches, family-friendly attractions, professional sports teams, cultural events, and no state income tax!

Please visit www.moffittcareers.org to apply online for Biostatistician, Req ID#7013.



Moffitt Cancer Center provides a tobacco-free work environment, is an Equal Opportunity, Affirmative Action employer and a drug-free workplace.

TRAVELERS

Statisticians play a major role in Travelers' core business by identifying pricing and redistributing risk. They also lead major work in general business functions such as marketing and operations.

Statistician Career Opportunities

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Fordham University is located in New York City and is AA/EOE.

North Carolina

■ The UNC Department of Biostatistics is seeking applications for one nontenure-track research assistant or research associate professor to collaborate with cancer researchers on grants, cancer genomics, clinical trials, population science research, and other cancer-related research and to engage in independent methodological research. Applicants should hold a PhD in biostatistics or statistics, and possess good communication skills. For more information, visit <http://jobs.unc.edu>. University of North Carolina is an AA/EOE.

Ohio

■ Product Management Analyst - Independence, OH. 3–5 years experience, four-year college degree—preferably in statistics, mathematics or finance—required. Master's preferred. Responsible for obtaining and evaluating information that supports revenue growth and profitability. Analyzes information using data manipulation, correlation, and statistical analysis. SAS and analytical experience a must. Please apply to www.farmers.com JOB ID 24020. Farmers Insurance Company is an equal employment opportunity employer committed to the strength of a diverse work force.

■ Biostatistician. Cleveland Clinic is hiring a biostatistician for quantitative health sciences for the Lerner Research Institute. This position will provide statistical expertise in study design and data analysis to investigators/researchers interested in conducting clinical or experimental studies. Master's degree in biostatistics, statistics, or related field required. For more information, visit www.clevelandclinic-jobs.com/job/Cleveland-Biostatistician-Job-OH-44101/944614/EOE. EOE.

■ Assistant Associate Professor Statistics. An earned PhD in biostatistics or statistics, or an earned doctorate in a closely related field with significant course work in biostatistics or statistics at time of appointment. Also requires demonstrated experience in biomedical related collaborations involving such areas as the analysis, study design, and the supervision of

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Chief, Surveillance Systems Branch Surveillance Research Program Division of Cancer Control and Population Sciences

The National Cancer Institute, located within the National Institutes of Health (NIH), Department of Health and Human Services (DHHS) is accepting applications for the position of Chief, Surveillance Systems Branch (SSB) to provide leadership for this program that researches and reports public health data. SSB manages the Surveillance, Epidemiology, and End Results (SEER) Program, an authoritative population-based system of cancer data collection and reporting. The Branch conducts research and developmental activities related to the surveillance of cancer patterns in the United States in order to monitor progress against cancer. It also conducts analyses, and provides interpretation of the data. SSB actively consults with other government, private, and public organizations; prepares regular reports, geographical summaries, and journal articles; and responds to many requests for information on national cancer statistics. The Branch includes a Quality Improvement team that conducts studies to evaluate the quality and completeness of registry data, and promotes adherence to national and international standards.

SEER has served as a premier resource for decision-making related to cancer for over 30 years. The challenges of the next decade include changes in infrastructure, resources, and policy. For example, we anticipate expansion of information technology systems for data management and eHealth applications and continued development of a national cancer surveillance enterprise, working through partnerships with both public and private organizations.

The successful candidate must have experience in biostatistics, management of multi-center research studies, and organization of collaborative biomedical research. Of particular interest are the candidate's achievements within professional or other collaborative organizations through participation in and leadership of goal-oriented groups and committees. Experience in epidemiology, operations research, and cancer research is not mandatory but desired. Analytic skills are required, as demonstrated by published articles in peer-reviewed journals. Knowledge of computer systems and software development is desirable, but not required. This position is subject to a background investigation and U.S. citizenship is required. Salary \$123,000 - \$155,500. Located in Rockville, MD, near Washington, DC. Excellent benefits. DHHS and NIH are equal opportunity employers. Please send a cover letter briefly summarizing your experience and interests along with your CV to Judith Swan at js60y@nih.gov, Surveillance Research Program, National Cancer Institute, 301-435-4958.

<http://seer.cancer.gov/>

<http://surveillance.cancer.gov/>





Interdisciplinary Assistant/ Associate Professor (Biostatistics) - Department of Health Sciences and Pharmacy Practice

The Bouvé College of Health Sciences at Northeastern University invites applications for a new interdisciplinary faculty position in biostatistics with a primary appointment in the Department of Health Sciences, starting in September 2011. The College is recruiting a biostatistician at the Assistant or Associate Professor level to contribute to research and other scholarly activities with faculty in the Departments of Health Sciences and Pharmacy Practice, and to teach in the Master's of Public Health and other academic programs. This position may be either tenure-track or nontenure-track, depending on the qualifications of the candidate and the extent to which the candidate desires to focus on an independent research agenda. Outstanding tenured faculty will also be considered with the option of obtaining tenure upon entry.

We are seeking enthusiastic candidates with extensive experience in both independent and/or collaborative public health research, in epidemiologic and/or intervention research. The Department is conducting cutting-edge research on chronic disease and obesity, physical activity, mental health, health disparities and urban health with funding from both the NIH and foundations. The candidate should be able to work with a diverse group of faculty having varying proficiency of research design and statistical methods. The candidate should have experience and strong qualifications to teach graduate courses in biostatistics. In addition to collaborative work with Bouvé College faculty, the candidate will have access to colleagues in the Tufts University Clinical and Translational Science Institute (Tufts CTSI). The Tufts CTSI is an NIH-funded collaboration across nine New England hospitals, three universities and Boston area community groups. Staffed by scientists, including biostatisticians and epidemiologists, the Institute provides core support for investigators at participating institutions in development and implementation of their research projects.

Responsibilities include:

- 1) Pursuing an independent research agenda.
- 2) Participating in collaborative interdisciplinary research teams.
- 3) Teaching graduate courses in biostatistics and developing new courses as needed.

Qualification requirements:

The candidate will be expected to have: a doctorate in biostatistics or a closely related field from an accredited institution; record of independent and collaborative research including grantsmanship and peer-reviewed publications (commensurate with experience); and graduate teaching experience in biostatistics. Research and program/policy experience in community, public health or other nonacademic settings is also desirable.

Institutional environment:

Bouvé College is one of six colleges at Northeastern University and is housed in the new Behrakis Health Sciences Center. The College, comprised of three schools, Nursing, Pharmacy and Health Professions, prepares students for health science careers in nine undergraduate and 29 graduate majors. The comprehensive array of skills, expertise and professions present in the Bouvé College of Health Sciences are only found at few other institutions. The Bouvé College has a strong affiliation with the Tufts University Clinical and Translational Science Institute.

The Department of Health Sciences is home to Northeastern's new Master's in Public Health program in Urban Health. This exciting new program is growing and seeks a biostatistician to complement the excellent interdisciplinary faculty. In addition the Department consists of an undergraduate program in Health Sciences and a Master's program in Exercise Sciences. The Department is enhanced by the presence of the Institute on Urban Health Research and the Center for Community Health Education Research and Service (CCHERS) – a network of 15 academic health centers in Boston. The School of Pharmacy is home to a Doctor of Pharmacy (Pharm.D.) program. Faculty in the Department of Pharmacy Practice perform pharmacy services and outcomes research and other scholarly activities in collaboration with a number of acute and ambulatory care health facilities throughout the Boston area, including major teaching hospitals and a network of Community Health Centers (CHCs).

Applications must be submitted on-line by visiting the Provost website at <http://www.northeastern.edu/provost/faculty/positions.html> and clicking on 'Access Faculty Positions'.

Applications will include a cover letter, a statement of current and future research interests, curriculum vitae, and contact information for at least three references.

More information regarding this position may be obtained by contacting Search Chair Professor Dolores Acevedo-Garcia at d.acevedogarcia@neu.edu.

Northeastern University Equal Employment Opportunity Policy

Northeastern University is an Equal Opportunity/Affirmative Action, Title IX, and an ADVANCE institution. Minorities, women, and persons with disabilities are strongly encouraged to apply. Northeastern University embraces the wealth of diversity represented in our community and seeks to enhance it at all levels.



Northeastern University
Bouvé College of Health Sciences

<http://www.neu.edu>

data management. Complete details available at www.uakron.edu/jobs. Requisition #006089. University of Akron is an EEO/AA.

Pennsylvania

■ 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: hire@stat.cmu.edu). Send CV, research papers, relevant transcripts, and three recommendation letters to Faculty Search Committee, Statistics, Carnegie Mellon University, Pittsburgh, PA 15213. Application screening begins immediately, continues until positions closed. www.stat.cmu.edu. Women and minorities are encouraged to apply. AA/EOE.

■ University of Pittsburgh, tenure-track joint assistant professor position in department of statistics and department

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NORC conducts high quality social science research in the public interest from its headquarters at the University of Chicago and from its offices in Chicago, IL, Washington, DC, Bethesda, MD, and Berkeley, CA.

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NORC is actively seeking statisticians, survey methodologists, statistical programmers, data managers, survey directors, and social scientists with advanced training or experience in survey research or survey operations. New staff will be based in our Chicago, IL or Washington, DC offices. To learn more about NORC and to apply for employment, visit our website at:

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of psychiatry (primary in department of statistics). Involves statistical research, collaboration with psychiatric researchers, and teaching in department of statistics. Need strong research, consulting, teaching, and computing skills. Send CV, transcripts, 3 recommendation letters: Search Committee (SP), Statistics, 2717 CL, University of Pittsburgh, Pittsburgh PA 15206, or statfac@pitt.edu. Review until filled. The University of Pittsburgh is an affirmative action, equal opportunity employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.

Utah

■ The department of mathematics at Utah Valley University seeks applicants for a tenure-track position beginning fall 2011. Statisticians in all specialty areas are encouraged to apply; however, applicants whose area of emphasis is biostatistics will be given special consideration. A PhD is required. Screening will begin mid-March. Detailed information on application procedures can be found at www.uvu.edu/employment. Utah Valley University is an Affirmative Action/ Equal Opportunity/ Equal Access Employer.

Washington

■ Senior biostatistician to provide clinical trial services for the Northwest's leading CRO. Responsibilities: reviewing protocols, case report forms, performing sample size calculations, writing statistical analysis plans, developing and producing interim and final reports, overseeing

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Statistician, Tenure-Eligible or Tenure-Track Investigator Position, National Cancer Institute (NCI), National Institutes of Health (NIH), Department of Health and Human Services (DHHS)

The Radiation Epidemiology Branch (REB, <http://dceg.cancer.gov/reb>, Chief, Dr. Martha Linet), a component of NCI's intramural Division of Cancer Epidemiology and Genetics (DCEG), is recruiting a statistician to develop an independent research program focusing on development of statistical models that incorporate dose uncertainties, that provide cancer risk projections for low-dose exposures, that can be used to estimate radiation-induced lifetime risks, that quantify the effect of key modifiers on radiation-related cancer risks, or that provide mathematical formulations of biological models for radiation carcinogenesis.

Current REB research includes studies of late effects of radiological diagnostic examinations, radiotherapy, occupational exposures, or nuclear fallout from above-ground tests, military sources (Japanese atomic bomb survivors) or radiation accidents (Chernobyl). REB is also evaluating late health effects of new radiation technologies in medicine including the estimation of doses, extremely low-frequency and radio-frequency electromagnetic field exposures, and ultraviolet radiation. In addition, REB studies are examining gene-radiation interaction in studies of breast and thyroid cancer, etiologic and genetic studies (including genome-wide association studies) of brain tumors and thyroid cancer, and the development of various strategies for reconstructing historical radiation doses of medical radiation workers and populations exposed to environmental, military, and accidental sources of radiation exposure. Challenges for the statistician include modeling the excess relative and absolute risk as a function of dose, evaluating the modifying effects of dose-rate and type of radiation, addressing effects on risk estimates of uncertainties from complex dosimetry systems, developing appropriate analytic approaches for special study designs, identifying and describing gene-environment interaction, and developing strategies to identify true associations in genome-wide scans for disease-producing genetic variants. REB investigators are encouraged to collaborate with scientists in other parts of the DCEG, including members of the Biostatistics Branch and the Human Genetics Program.

Candidates must have a doctorate in biostatistics, statistics, mathematics or a related discipline (with additional post-doctoral experience in statistics). They must have at least two years of post-doctoral research experience and an established record of publications that demonstrates their ability to apply cutting edge, appropriate statistical models and analyze and interpret data from radiation epidemiology studies. They should also have knowledge of and demonstrated capacity to apply state-of-the-art statistical and epidemiologic methods in at least one of the following areas of research: risk assessment, measurement (dosimetry) errors, genetic susceptibility in relation to radiation carcinogenesis, or mechanisms of radiation carcinogenesis. Collaboration with epidemiologists, dosimetrists, health or medical physicists, radiologists, and laboratory investigators is central to the success of our research. Candidates must document the strong verbal and written communication skills that will be required to write effective research papers, present work at scientific meetings, and convey information clearly to staff, collaborators, consultants and contractors. Candidates must also be sufficiently experienced to function independently, both in the development of their own research efforts and in the mentoring and supervision of less experienced investigators. Appropriate office space and resources will be provided.

Salary is competitive and commensurate with research experience and accomplishments, and a full Civil Service package of benefits (including retirement, health insurance, life insurance, and a thrift savings plan) is available. Candidates may be eligible for the NIH Loan Repayment Program (<http://www.LRPNIH.gov>). This position is not restricted to U.S. citizens. Interested individuals should send a cover letter, curriculum vitae, brief summary of research interests, experience and future plans, copies of no more than 5 selected publications and three letters of reference to:

Ms. Judy Schwadron
Division of Cancer Epidemiology and Genetics
National Cancer Institute
6120 Executive Blvd., Room EPS 8073
Rockville, MD 20852-7242
Email: schwadrj@mail.nih.gov

The closing date of the advertisement is April 15, 2011. A completed package of your application is required in order to be considered for this position.

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Survey Sampling Statistician

EOE

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 DRM/3233BR

Position available for a survey sampling statistician with 3 or more years of relevant experience. Responsibilities include sample design and selection, power calculations, frames development, weighting including nonresponse adjustment and benchmarking, imputation, and variance estimation. Must have a master's or doctoral degree in statistics and have very good writing skills. Coursework in sample survey design is highly desirable.

Westat offers excellent growth opportunities and an outstanding benefits package including life and health insurance, an Employee Stock Ownership Plan (ESOP), a 401(k) plan, flexible spending accounts, professional development, and tuition assistance. To apply, go to www.westat.com/jobs and enter **3233BR** in the space provided.



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International

■ The department of mathematics and actuarial science invites applications for a full-time, tenure-track position at an assistant or associate professor level in the field of statistics or actuarial science, beginning September 2011. The candidate is expected to teach and conduct research in statistics or actuarial science and play an active role in the department, the school, and university service activities. Apply URL: <https://aucegypt.interviewexchange.com/candapply.jsp?JOBID=22878>. American University in Cairo is an EOE. ■

UNIVERSITY of LOUISVILLE

Chair, Department of Bioinformatics and Biostatistics
School of Public Health and Information Sciences

Candidates are invited to apply for Chair of the Department of Bioinformatics and Biostatistics (BB) in the School of Public Health and Information Sciences (SPHIS) at the University of Louisville (UofL). The department currently has eleven full- and part-time faculty and offers graduate programs in biostatistics.

We seek candidates with nationally recognized scholarly accomplishments in biostatistics or statistical bioinformatics, including strong methodological research and PI-level extramural funding. A strong background in statistical bioinformatics, such as computational biology, deep sequencing analysis, proteomics, microarray analysis and statistical genetics, is especially desirable. Experience in mentoring doctoral students is essential. Applicants should hold an earned doctoral degree; have advanced training or professional experience in biostatistics, bioinformatics or a related discipline; and be qualified for appointment to a tenured position as Full Professor.

BB offers a concentration in Biostatistics in the school-based Master of Public Health program, MS degree in Biostatistics-Decision Science, and PhD in Biostatistics with optional emphases on Bioinformatics and Decision Science. Faculty are engaged in methodological and collaborative research with other departments within SPHIS; Schools of Medicine, Dentistry and Nursing; and Brown Cancer Center and the Louisville Medical Center.

The successful candidate will provide strong departmental leadership in the growing educational mission of SPHIS, enhance departmental research activities with appropriate mentoring programs, increase research funding, foster greater collaboration and integration with the UofL community and actively engage in finding resources for BB graduate programs.

Interested candidates should apply online at <http://www.louisville.edu/jobs/> Job ID #26395. Please include your curriculum vitae, three letters of reference and a letter describing background and relevant experience. Letters should be addressed to Dr. David Tollerud, Chair, Department of Environmental and Occupational Health Sciences, University of Louisville, Louisville, KY 40292.

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Open Rank Faculty Positions

Department of Biostatistics

The University of Texas MD Anderson Cancer Center

The Department of Biostatistics within the Division of Quantitative Sciences at MD Anderson Cancer Center is seeking candidates for one or more open rank tenured or tenure-track faculty positions. The department invites applications from individuals who have made outstanding contributions in the development of statistical methodology and its applications to biomedical research. We are particularly interested in attracting candidates who have strong interests in cross-disciplinary and collaborative scientific research. A Ph.D. in statistics, biostatistics or a related field is required.

The Department of Biostatistics has 23 faculty members, 33 master's-and doctoral-level researchers and 10 post-doctoral fellows. Faculty members are actively involved in collaborative and methodological research in diverse areas such as clinical trial design, Bayesian methodology, cancer screening, bioinformatics, functional data analysis, survey sampling, survival analysis, image analysis, decision models and health services research, etc. Faculty members also have opportunities to participate in the affiliated biostatistics doctoral programs at The University of Texas, Texas A&M University and Rice University. The department is supported by a strong and active database and programming team. Information about the department and programs offered can be found at <http://www3.mdanderson.org/depts/biostatistics/>. Further questions regarding the positions may be directed to Prof. J. Jack Lee at (jjlee@mdanderson.org).

MD Anderson offers competitive salaries and excellent benefits. Houston is one of the world's most innovative and diverse cities, nurturing great neighborhoods, competitive private and public schools, an exceptional music and theater scene, highly acclaimed museums, international cuisine and year-round outdoor recreational activities.

Consideration of applications will continue until the positions are filled. Initial review of applicants will begin on March 1, 2011. Interested applicants should email (or send) a copy of their CV, a statement of research interests, PDF versions of 3 top publications or, for junior candidates, excerpts from dissertations, and the names, addresses (including email) and phone numbers of three references to:

**Faculty Search Committee
Department of Biostatistics
The University of Texas MD Anderson Cancer Center
1400 Pressler Street, Unit 1411
Houston, TX 77030-4095**

Email: biostat-search@mdanderson.org.

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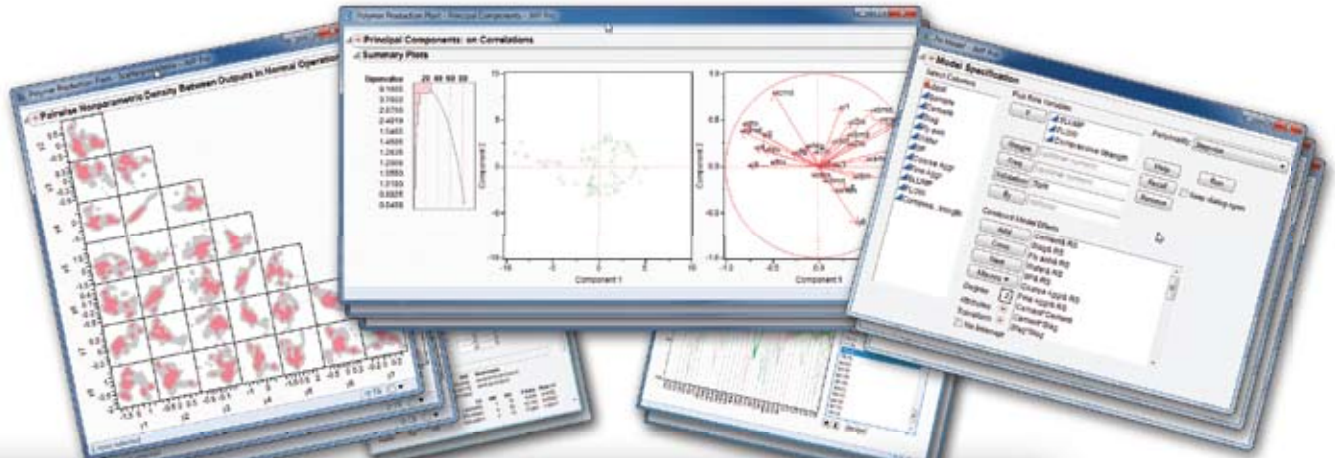
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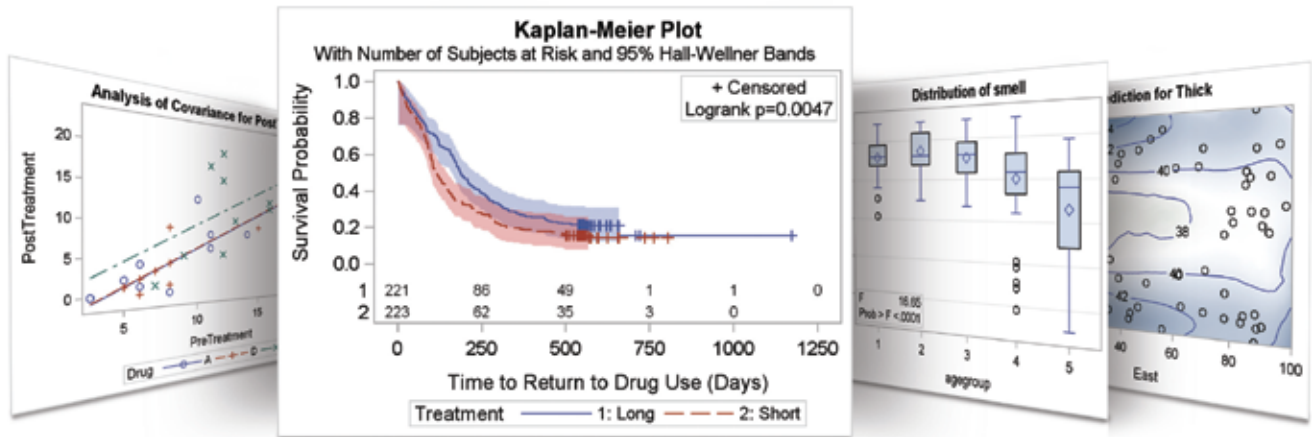
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