

March 2012 • Issue #417

# AMSTATNEWS

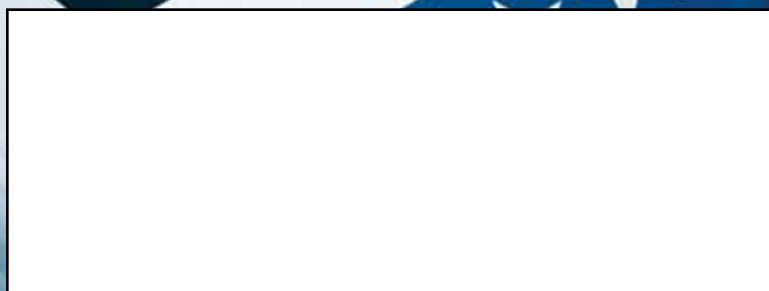
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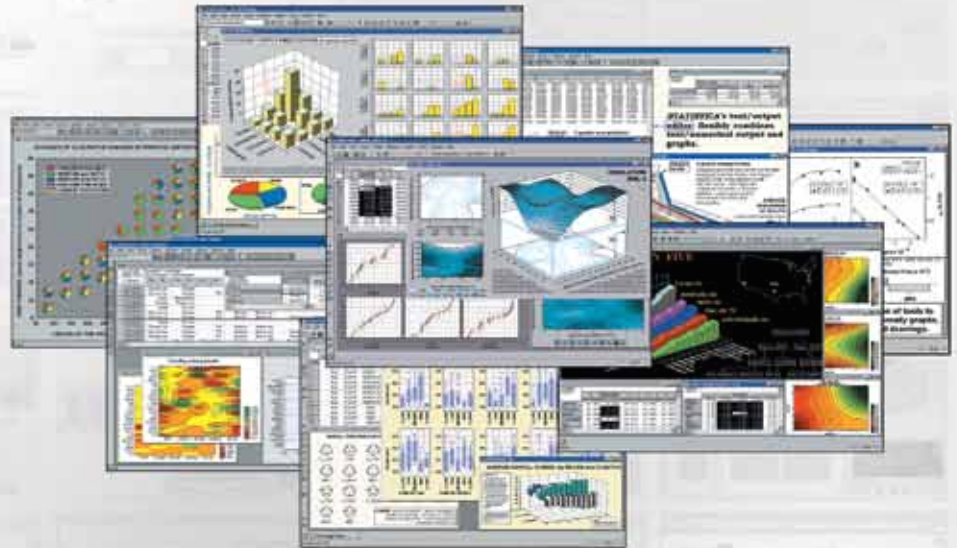
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American Statistical Association



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

# features

- 3 President's Corner
- 7 U.S. Delegation Discusses Statistics with Israelis
- 8 ASA Board of Directors Candidates
- 19 NSF Announces Education, Training Funding
- 20 Meet U.S. Census Bureau Director Robert Groves
- 21 SAMSI Announces New Partnerships, Initiative
- 30 Modeling Course Planned for Summer
- 31 2012 Poster and Project Competitions

# columns

## 23 SCIENCE POLICY Bring Statistics to Policy Through Internships

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](mailto:pierson@amstat.org).



Gray

Contributing Editor

*Mary Gray is a professor of mathematics and statistics at American University. As a lawyer and human rights activist, she encourages her students to share her interest in the role of statistics in formulating and implementing public policy.*

## 25 175 +25: Celebrating Our Past to Energize Our Future

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



Hulting

Contributing Editor

*Fred Hulting is the director of global knowledge services at General Mills, Inc. He holds a PhD in statistics from Iowa State University and has served the ASA in a variety of roles, including section, chapter, and committee chair.*

## 26 MASTER'S NOTEBOOK Navigating Work Force Trends in the Human Age

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



Kincaid

Contributing Editor

*Chuck Kincaid is the practice manager for the Experis Business Analytics Practice. He has a bachelor's in computer science and a master's and PhD work in statistics. His primary interests are in education, visualization, and analytics infrastructure.*

## Online Articles

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

**This year, the Indian Statistical Association and the *Journal of the Indian Statistical Association (JISA)* turn 50.** To celebrate, a special golden jubilee volume of the journal is being published. To learn more about JISA, visit <http://stats.unipune.ernet.in/jisa.html>. For details and celebration photos, visit *Amstat News* online at <http://magazine.amstat.org/blog/2012/03/01/isamar12>.

**The museum and exhibits committee of Mathematics of Planet Earth 2013 (MPE2013) is holding an open source exhibition of virtual modules competition.** The competition will be open until May 15. For details, visit *Amstat News* online at <http://magazine.amstat.org/blog/2012/02/22/mpe2013mar12> or the MPE2013 website at [www.mpe2013.org/competition](http://www.mpe2013.org/competition).

**The department of mathematics and statistics and the department of biostatistics at Boston University will host the 26th New England Statistics Symposium on April 21.** Students are encouraged to submit papers and an application for the student paper competition. The deadline for abstract submission for contributed talks (including those associated with the student paper competition) is March 31. Details are forthcoming at <http://math.bu.edu/ness12>. For more information, visit *Amstat News* online at <http://magazine.amstat.org/blog/2012/03/01/nessmar12>.

**Nancy Geller, past-president of the ASA, celebrated Paul Meier's life with family, colleagues, and friends during a memorial on November 20 in New York City.** Meier, who passed away on August 7, 2011, was known for the Kaplan-Meier estimator, which was published in the *Journal of the American Statistical Association* in 1958. To read more about Meier's life and memorial, visit *Amstat News* online at <http://magazine.amstat.org/blog/2012/02/22/paul-meiermar12>.

## columns

### 28 **STATtr@k** **The World of Applied Statistics: Where Do YOU Fit In?**

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](mailto:megan@amstat.org).

During the 2011 Joint Statistical Meetings, a group of leading statisticians gathered for a panel discussion, titled "The World of Applied Statistics: Where Do YOU Fit In?" This month's STATtr@k column features panelists' responses to the audience's discussion questions. Panelists include the following:

**Bob Rodriguez**, *president and senior director of statistical software R&D at SAS Institute*

**Christy Chuang-Stein**, *head of the statistical research and consulting center at Pfizer*

**Nathaniel Schenker**, *associate director for research and methodology at the National Center for Health Statistics*

**Todd Behrens**, *senior statistical analysis manager of the Retail Model Validation Group at Capital One*

**Amarjot Kaur**, *director of the clinical biostatistics and research decision sciences at Merck Research Labs*

## departments

- 32 **meetings**  
JSM 2012 Site a City with History  
Call for Proposals for Late-Breaking JSM Sessions

## member news

- 34 People News  
35 Awards and Deadlines  
36 Section • Chapter • Committee News  
39 Professional Opportunities



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# Statistical Leadership: Developing Leaders Through ASA Service

Last month, I discussed the shortage of leaders in our profession and described innovative courses that prepare students for future leadership roles. This month, I focus on ways in which ASA service offers opportunities for developing leadership potential.

All of us should participate actively in chapters, committees, and sections as a way to give back to our profession. And for students, who wonder about the benefits of ASA membership after graduation, we need to emphasize how participation can result in leadership skills and experience that they are unlikely to acquire elsewhere.

Career-minded students and younger statisticians often ask me questions about how to develop as leaders. Because their questions are so thought-provoking, I decided to pose them to a panel of four highly accomplished statistical leaders. Two of them, Nat Schenker and Stephanie Shipp, are candidates for president in this year's ASA election, and two of them, Roxy Peck and Jim Rosenberger, are candidates for vice president (see Page 8). Here, they explain how they became leaders and join me in encouraging younger colleagues to grow into leadership roles.

## *As a student and early in your career, did you envision yourself as a future leader?*

**Roxy Peck:** My graduate program was pretty traditional, and there was no course on

consulting or 'people' skills. One course that helped was a required seminar course. We had to present several colloquium talks and then everyone would tear them apart—commenting on everything from presentation style to handwriting! It was very traumatic! The department chair at the time was F. N. David, and she repeatedly told us that the reason for this class was that she was determined that we were not going to embarrass her when we went on job interviews. But, I did learn presentation skills, how to face a rowdy group, and how not to lose my cool even in antagonistic settings!

**Jim Rosenberger:** I was not actively involved in leadership positions as a student, but rather focused more on academic pursuits. One might now call me a nerd, spending more time in the library than the coffee shop, and also not actively involved in competitive sports. However, I was always motivated by my upbringing to try to leave the world a better place and contribute to the activities around me.

**Nat Schenker:** The short answer is "no," but I liked to interact with people, and I engaged in a few activities that gave me early leadership experience. As an undergraduate at Princeton, I organized and was captain of the statistics department basketball team (the Normal Deviates) in the intramural league. As a graduate student at The University of Chicago, I helped organize the statistics department's spring

picnics. And while in my first job after graduate school, at the U.S. Census Bureau, I organized a JSM invited paper session.

**Stephanie Shipp:** I joined the ASA early in my career and began to participate in ASA activities. My favorite part of being an ASA member is to meet and get to know statisticians and work with them on different activities. My energy comes from working with new people and leading new initiatives. Perhaps my curiosity just led to leadership. I have always been interested in the principles of leadership, believing that both leaders and followers need to understand what makes a good leader.

## *In your work as a statistician, what was your first significant leadership responsibility?*

**Jim Rosenberger:** My first work as a statistician was at NYU Medical Center, working as a data analyst, a job I acquired based mostly on my skills as a computer programmer after my bachelor's degree. I earned respect in this work by my commitment to accuracy and integrity about what could be inferred from the data. This position convinced me to return to graduate school at Cornell to pursue the PhD degree in statistics.

**Nat Schenker:** Perhaps it was teaching biostatistics as a faculty member at UCLA. Teachers lead students in learning, and many skills that are important for teaching—communicating



Robert Rodriguez

well, motivating students, creating good learning environments, treating students equitably, “delegating” by encouraging students to figure things out on their own, and evaluating students’ performance—are similar to skills that are important for leadership in other jobs. Some of those skills came naturally to me, and I’d also developed some of them as a graduate student (e.g., as a TA). Others had to be learned on the job, and I found advice from more senior faculty members to be helpful.

**Stephanie Shipp:** In one of my first jobs as a research assistant at the Federal Reserve Board, I was asked to organize and execute a project to track the history of economic indicators. I remember being given broad guidance but also the freedom to complete the task as I thought best. I learned from this assignment that leading is about creating an environment where a person owns the project, yet has sufficient guidance and resources to move forward—something I have tried to emulate during my government career and in leadership positions at the ASA.

**Roxy Peck:** Early in my career, I was appointed to a lot of university committees. There weren’t many women on the faculty at Cal Poly at the time, but the administration believed every committee needed to include at least one woman. And I was too naïve to realize I could say no! But all this committee work did lead to visibility at the university, and my first significant leadership role was when I was asked to become chair of the statistics department. I was chair for six years and then became the associate dean for the College of Science

and Mathematics. To be successful in these positions, things that were important were to listen, to be open to changing your mind, and to be organized and set priorities. These skills aren’t necessarily ones that can be taught, but rather things to be conscious of—I discovered I wasn’t always doing these things well at first and that these were things I needed to work on. I practiced saying, “That’s a really good idea that I hadn’t thought of. Maybe I should rethink this!”

### *Tell us about your first leadership position in the ASA.*

**Nat Schenker:** While at UCLA, I’d been an associate editor for *JASA Applications and Case Studies* for a year or so when Cliff Clogg (A&CS editor) and Don Guthrie (Review editor) asked me to be editor for a *JASA* special section (published in 1993) on census undercount, a topic on which I’d worked in my Census Bureau job. This was a major project (e.g., I had seven associate editors), involving a lot of work, but I found it rewarding in many ways. For example, the special section helped to disseminate statistical science and publicize an important contribution of statistics to society. Moreover, I learned a lot about statistics, editing, organization, management, and especially diplomacy.

**Stephanie Shipp:** Eva Jacobs introduced me to the Caucus for Women in Statistics when I first joined the ASA. The caucus leadership asked me to be the editor and produce a quarterly newsletter, which I agreed to do. This stretched me and took time, but was an important start in my evolution as a leader within

the ASA. From that experience, I would advise anyone starting a new career to take advantage of these opportunities. As a result of this introduction, I have met and worked with many interesting and wonderful statisticians.

**Roxy Peck:** One of my first leadership roles at ASA was as JSM program chair for the Statistics Education Section. This introduced me to many people that have since had a big impact on my professional life, including the folks in the ASA Center for Statistics Education.

**Jim Rosenberger:** My first involvement with ASA was as a council member in 1983–1984. However, of more significance was volunteering in 1993 to co-edit the Statistical Computing and Statistical Graphics Newsletter, which was the first step toward a series of leadership positions in the Statistical Computing Section of the ASA: program chair-elect/chair in 1996–1997 and section chair-elect/chair in 1998–1999. My colleague Cliff Clogg was most encouraging of my stepping into these roles and demonstrated, by his own dedicated life, how much one can contribute to the world by volunteering in a wide variety of ways to the profession and society.

### *How has your leadership ability evolved and grown by serving in a variety of ASA positions?*

**Stephanie Shipp:** Having served in a variety of ASA positions, I learned about leadership from leading and being led. I often think about what motivates me. I believe that I learned many things from these experiences and

that good leaders set the stage to try new ideas, celebrate progress, get to know and understand their colleagues, and provide others with opportunities to lead.

**Roxy Peck:** Because I enjoy working with the ASA and think that the association serves an important function, I have served the ASA in a variety of positions on committees, sections, and councils. Through this service, I have learned a lot about how to work effectively with volunteers that have many other demands on their time and who are rarely in the same place at the same time. This taught me how to ‘lead from a distance’ and has helped me to improve my electronic communication skills.

**Jim Rosenberger:** Serving on and chairing various committees (e.g., Management Committee of the *Journal of Computational and Graphical Statistics*, ASA Publications Management Committee, and the ASA E-Publications Task Force) was useful for developing leadership skills. Working with other seasoned leaders (e.g., Fred Mosteller and Marvin Zelen) during a postdoc year provided great mentoring for me in my early years. Beyond the ASA, my leadership role as department head at Penn State provided many opportunities to shape the development of our department. And from 1998–2000, I served as a statistics program director at the NSF, during which I chaired the NSF Working Group for the Mathematical Sciences, an initiative that contributed to doubling the budget of the Division of Mathematical Sciences over the next five years.

**Nat Schenker:** ASA service has helped to develop my leadership ability in many ways. In

addition to the types of skills mentioned in my answer to the previous question, I’ve become better at leading meetings and creating assignments for people (e.g., by chairing committees and other groups). Working with volunteers who already have full-time jobs has also helped me to be more patient and considerate of people’s workloads. Finally, as I’ve progressed to higher-level positions such as ASA vice president, I’ve learned how to think broadly and strategically without becoming too bogged down in details. This has been helpful in my current position as a senior staff member at the National Center for Health Statistics.

*What advice would you give students or younger statisticians who are interested in statistical leadership, but don’t think of themselves as born leaders?*

**Roxy Peck:** The best advice I can give students or early career statisticians who are interested in statistics leadership is to volunteer. This is especially important for folks who may be isolated geographically or professionally. Seek out people who are doing the things you would like to do and ask them what you can do to get involved. Pick one ASA committee or section that interests you and let them know you want to get involved. Be visible!

**Jim Rosenberger:** I like to encourage students to volunteer for positions in which they can contribute to the life of their fellow students. At the undergraduate level, this has been the Stat Club, which requires officers and volunteers to plan events. At the graduate level, our department, like many, has student-organized

## Voting: Your Contribution to Statistical Leadership

Please cast your vote in this year’s ASA election and remind others to do so. It is easy to vote electronically, and you will receive instructions by email. By voting, you not only help select our leaders, but you ultimately encourage many members to serve in leadership positions.

Voter participation is an important measure of the health of our association. The participation rate has doubled since we introduced electronic voting in 2008 (see table). This year, let’s set a new record!

**Voter Participation 2002–2011**

Election Year	Eligible ASA Voters	Percent Who Voted
2011	18598	33.2
2010	17817	36.9
2009	17618	34.1
2008	18009	33.9
2007	17211	15.8
2006	17835	18.6
2005	16874	18.4
2004	16865	16.9
2003	16393	16.9
2002	15765	22.4

seminars, which are planned by graduate students, and a variety of social events so important to a supportive community that each year brings in new members who need to learn and contribute to the culture of the department.

Most recently, I have run for elective office at the local level and find that, as a statistician, I have a useful perspective to add to the discussion and resolution of public policy issues. Being data focused and empirical in

orientation is helpful in balancing the often competing interests that need to be resolved in setting public policy and budgets. I find it satisfying to be able to contribute to my local community in this way, similar to how I have contributed in my professional life.

**Nat Schenker:** Early in your career, volunteer for some smaller projects, such as organizing a session for a conference or helping with activities in your local chapter. If you're diligent in those projects, don't be surprised if you're asked to take on more major roles later. That's what happened to me, and as I 'moved

up the ladder,' I found it helpful to observe and evaluate the leadership methods and styles of others, to learn both what to do and what to avoid. Serving as a volunteer leader can be time consuming, but it adds stimulating variety to what I do as a statistician and it's been one of the most rewarding aspects of my career.

**Stephanie Shipp:** Get involved with the statistics community. This can be at the local or national level. Attend seminars and meetings and introduce yourself. Organize a session for the Joint Statistical Meetings on a topic of interest to you. This gives you a reason to get

to know experts in your field as well as improve your leadership and organizational skills.

Always be learning. Whether reading or taking classes or talking with colleagues, make the time and effort to learn. Two pivotal events changed my focus—taking a course on quality assurance (by Deming himself!) and going back to school for a doctorate degree at mid-career, which led to new opportunities at multiple agencies and now the Science & Technology Policy Institute.

Seek input from others. Often, those who are most skeptical or critical are your best teachers and your best sources of new ideas. And when you do seek input or others seek your ideas, focus and listen carefully. As a younger (and wise) colleague reminds me, to listen carefully is to lead.

## Summary

I want to thank Jim, Nat, Roxy, and Stephanie. Their stories illustrate three points about the path to statistical leadership that are especially helpful for students and younger statisticians. First, the skills you need can be developed along the way—you don't need to be a born leader. Second, diligence in ASA service will increasingly reward you with valuable skills, advice, and visibility that complement your work experience. And third, the way to get started is to volunteer!

Next month, I will conclude this series on statistical leadership by sharing the perspectives of several past ASA presidents.

*Robert W. Rodriguez*

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# U.S. Delegation Discusses Statistics with Israelis

Nancy Geller

The 2011 People to People trip to Israel was a fine mix of sightseeing and professional visits. We spent most of our time in the vicinity of Tel Aviv, Haifa, and Jerusalem.

The professional visits were a key component of the program, covering a wide variety of statistical activities. We met with groups from academic statistics departments at the University of Tel Aviv and Hebrew University, Jerusalem; with several members of the Consulting Laboratory of the Technion; with a statistics group within the Gertner Institute, a nonprofit epidemiology and health policy institute; with the CEO and chief statistician of Technostat, an international biostatistics consulting firm that deals with medical devices and pharmaceuticals; with a group from Teva Pharmaceuticals, a large pharmaceutical company joined by the president of the Israeli Statistical Association; with the executive director of the United States-Israel Binational Science Foundation; and with a group from the Israeli Central Bureau of Statistics, including the government statistician.

The purpose of the trip was to discuss matters of common interest to statisticians. The topics included statistical literacy and general statistical education for various majors in college, training problemsolvers for all sectors (academia, industry, and government), professional development, continuing education, and roles of statisticians in official statistics.

One big difference between studying in Israel as compared

to the United States is that Israeli students tend to be older than American students, because most high-school graduates spend two to four years in the military before enrolling at a university. This implies that students are several years older when they earn their degrees and, perhaps, more mature. University applicants apply to a particular program, rather than choosing their majors while at the university. Statistics students often have a joint major, with computer science and mathematics being the most popular majors combined with statistics. On the whole, statistics graduates obtain employment in Israel. The shortage of well-trained statisticians to fill applied positions was noted often. On-the-job training in the industrial sector was common.

Other themes that entered many of our discussions were the public perceptions of statistics and statisticians and education and training on all levels. As in the United States, statisticians in Israel need to improve their public image. Statistics groups in academic settings all provided some kind of continuing education for nonstatistical colleagues such as short courses or other tutorials. Consulting with others who had applied problems was common in the academic setting.

Delegates spent a morning with representatives from the Israeli Central Bureau of Statistics (CBS), which functions independently of the government although it is the government's statistical arm. The CBS's role is to collect, process, and publicize statistical information about the

## Next Up

ASA members have already been invited to participate in the next ASA People to People Delegation, which will travel to Russia September 6–14 and be led by ASA President Bob Rodriguez. For additional information, see [www.peopletopeople.com/OurPrograms/CAP/Pages/ASA.aspx](http://www.peopletopeople.com/OurPrograms/CAP/Pages/ASA.aspx) or contact Ron Wasserstein, ASA executive director, at [ron@amstat.org](mailto:ron@amstat.org).

population, economy, and society in Israel. In addition, the bureau is responsible for coordinating statistical activity of government institutions and advising them on statistical issues. The CBS supplies data, but does not make policy. Since Israel's founding in 1948, data have been collected via censuses and administrative records, which may be linked because each resident has a unique identification number.

Delegates were warmly welcomed everywhere with fine hospitality—always sweets and cold drinks. If you have never tasted “rugalach,” that alone is worth the trip!

You can read our journal, which provides details and includes several photos, on the People to People website at [www.peopletopeople.com/OurPrograms/CAP/Pages/Journals.aspx](http://www.peopletopeople.com/OurPrograms/CAP/Pages/Journals.aspx) under Science and Technology. For a heavily detailed and personal report, see Rob Easterling's blog at <http://tuzigoot.blogspot.com/2011/11/israel-1.html>.

We do hope you'll join the 2012 delegation to Russia, which promises to be another stimulating and interesting experience. ■



## ASA Board of Directors Candidates

The ASA announces the selection of candidates for the 2012 election. The winning candidates' terms will begin in 2013. Make sure to look for your ballots in your email inbox and to vote early. Voting begins at midnight EDT on March 15 and ends at 11:59 p.m. PDT on May 3.

Complete candidate biographies can be read at [www.amstat.org/candidatebios/index.cfm?fuseaction=ViewBios](http://www.amstat.org/candidatebios/index.cfm?fuseaction=ViewBios).

# President-elect

## Nathaniel Schenker

*Associate Director for Research and Methodology, National Center for Health Statistics, Centers for Disease Control and Prevention*



Schenker

The ASA, as the largest community of statisticians in the world, and with its efforts to support the development, application, and dissemination of statistical science, is a key organization in our field. I have been involved in a wide variety of activities to serve the ASA (recently as vice president), and it was a highlight of my career to receive the Founders Award for distinguished service in 2011. Moreover, the ASA has given me the opportunity to meet, make friends with, and work with hundreds of wonderful colleagues. Therefore, I feel honored and excited to be a candidate for ASA President, and it would be a once-in-a-lifetime experience to be president in 2014, as we celebrate our association's 175th anniversary.

Each ASA president pursues initiatives in line with the association's strategic plan during his/her presidential year. See, for example, President Bob Rodriguez's column in the January 2012 issue of *Amstat News*. If elected, I would look forward to receiving input from the ASA's leadership, subgroups, and members as I plan my initiatives. Some areas of current focus for me are outlined below.

### **Emphasize value for ASA members**

The ASA must offer services and opportunities that make people want to be members, which will help keep the association and our profession strong. This was my foremost guiding principle while serving two terms on the ASA Board, during which the ASA introduced many benefits (e.g., new publications, online access to publications for all members, a new conference, and optional accreditation). We must keep working on how to best provide value to our members while keeping membership affordable, with particular consideration to people who are early in their careers and those who became statisticians through nontraditional, interdisciplinary paths, for whom the benefits of ASA membership might not be obvious.

### **Improve JSM and develop other conferences and mechanisms for interaction**

Meetings are a particular passion of mine. For example, I was the program chair for JSM 2002 and

introduced late-breaking sessions, and I chaired the meetings workgroup that proposed the Conference on Statistical Practice. JSM is a wonderful conference, whose large size is a plus. However, we must consider how to improve JSM, such as by enhancing poster sessions, organizing submeetings and satellite meetings, modifying formats, and developing opportunities for small gatherings. We also must nurture smaller, more focused conferences and consider how to use technology to facilitate access to conferences and enhance the ability of statisticians to interact.

### **Maintain the ASA's tradition of high-quality publications while continuing to introduce innovations**

Publications are another area of experience and interest for me. For example, I was an associate editor for *JASA* (both Theory and Methods and Applications and Case Studies) and a member of the Electronic Journals Task Force. The ASA maintains an excellent portfolio of journals and other publications, which helps to heighten the status of the association and benefits the profession. We must consider carefully whether and how our portfolio of publications might be changed and what new formats and technology can be used to improve access and functionality.

### **Publicize the importance of statistics to society**

Such publicity, both external and internal, enhances our profession's standing and encourages statisticians to work toward the betterment of society. We must develop ideas and venues for publicizing achievements in statistics, the application of statistics to important problems, and the fine work of members of our profession.

I would welcome the opportunity to serve as ASA president. Although I have worked in government for several years, I have also worked in academia and industry, and I would lead with sensitivity to the needs of the different components of our membership. Thank you for your consideration. Best wishes to all of the candidates, and please remember to vote!



## President-elect



Shipp

### Stephanie Shipp

*Research Staff Member, (Institute for Defense Analyses) IDA Science and Technology Policy Institute*

As ASA president, my top priority would be to ensure that the ASA and the statistics profession is the acknowledged navigator, leader, and intellectual gatekeeper of the “Big Data Revolution.” This revolution presents us with an unparalleled opportunity that must not be lost. Our discipline is unique in having a sound grounding in the art and science of extracting information from the tsunami of data that is being created from all aspects of our lives.

Data captured from social networks, business transactions, health care systems, biology, geospatial systems, and particle physics will shape the nation’s economic competitiveness and scientific dominance. These data must be analyzed accurately, efficiently, and meaningfully—making knowledge of statistical principles paramount.

The ASA president must strive to drive this message home to the public, media, business, industry, and government. My agenda, if elected ASA president, is to work toward this goal and ensure the ASA leads the data revolution.

My career has spanned multiple, data-intensive government agencies, the private sector, and positions advising international organizations. Currently, at the IDA Science and Technology Policy Institute, I provide a statistical and economic perspective as we assist our sponsors. These sponsors include the Office of Science and Technology Policy (the White House Science Advisors) and other federal agencies, such as the National Institutes of Health and the National Science Foundation. Throughout my career, I have showcased the importance of statistical analyses, worked to improve access to data, helped to create new data infrastructures, and mentored younger statisticians.

As ASA president, I would continue the ASA’s tradition of embracing the collaboration of multiple disciplines and lead the ASA in three areas directly related to the ASA’s strategic plan.

#### **1. Lead in the development and use of large data systems**

My goal is for the ASA and statisticians to lead in the design and use of large data systems, from compilations of electronic medical records to data collected for national security. My vision is that the ASA will guide the development of an infrastructure

(including improved cyberinfrastructure) to move the big data revolution forward. We need to create the new statistical tools and approaches to access, use, and protect these data.

#### **2. Make statisticians integral to public policy decisions**

The ASA’s visits to Capitol Hill and policy briefs have increased the visibility of statisticians. We can also advocate for a statistical adviser to the president, similar to the president’s science adviser; forge stronger relationships with international statistical organizations such as the International Statistical Institute; and establish linkages with nonstatistical agencies that use large data, such as defense agencies.

#### **3. Train the next generation of statisticians and develop statistical talent in all professions**

As the nation seeks to increase graduates in science and mathematics, we need to interest those who have the potential to become statisticians, starting at the early years of their education. I have a long history of recruiting and mentoring younger statisticians and will take pride in leading ASA initiatives in this area.

In addition, the ASA has an opportunity to create a data- and statistics-savvy population. If we are serious about the statistical literacy of the country (including policymakers), we must fashion statistics as the anchor training credential across all disciplines. We need to advocate for bringing data to the general public via data visualization and other media to bridge the statistical literacy divide.

As the ASA embarks on its future, we must ensure that the nation’s citizens, especially our political and business leaders, recognize the important role the ASA plays in driving solutions for critical societal challenges. With a government career spanning several well-known and respected government agencies, I have the experience and desire to lead our big data challenges and promote the ASA as a leader in this arena.

The ASA has been my professional home since joining 25 years ago. I’ve had the opportunity to serve the ASA in many capacities on various committees, programs, and sections. I am honored to ask for your vote for ASA president as we make the 21st century the Century of Statisticians.

# Vice President

## Roxy Peck

*Professor of Statistics, Emerita, Cal Poly, San Luis Obispo*

This is a wonderful time to be a statistician, and an exciting time for the ASA, as we prepare for our 175th anniversary and look to the future. I feel privileged to have been asked to be a candidate in the upcoming ASA election, and I am enthusiastic about the prospect of serving the ASA as a vice president.

Over the years, ASA has played a major role in my development as a statistician and educator. I accepted a teaching position at Cal Poly right out of graduate school. San Luis Obispo is a great place to live and work, but it is geographically isolated. Connecting to the ASA through JSM and the ASA's chapters, sections, and committees allowed me to expand my professional circle of friends and provided me with invaluable opportunities that would not have been available to me otherwise. Taking advantage of these opportunities presented a win-win situation, as I was able to grow and develop professionally and, at the same time, help the association further its goals and objectives.

As an ASA vice president, I would be particularly interested in contributing to the ASA's "in-reach" programs in ways that would help early career statisticians see all that the association has to offer.

Looking to the future, the ASA will be focusing on serving the profession and its members in new ways that reflect the great diversity of its members. I believe my work in statistics education at both the K–12 and university levels and my administrative experience as statistics department chair and as associate dean of the College of Science and Mathematics at Cal Poly will enable me to serve the association in productive ways as ASA addresses key areas of its strategic plan, including membership growth, education, and public awareness.

As I said at the beginning of this statement, these are exciting times. Over the last few years, we have seen greater recognition of the value of statistics and the contributions of statisticians. A place for statistics and the development of statistical thinking has also been recognized in the Common Core State Standards in Mathematics that have been adopted by more than 40 states, and the K–12 landscape for statistics education is poised to change quickly and dramatically. I would welcome the opportunity to serve the ASA as a vice president and work with the board of directors and ASA staff to continue the good work already in progress and explore emerging new opportunities to promote the field of statistics.



Peck

## James L. Rosenberger

*Professor of Statistics, Penn State University, and Director, Outreach and Online Programs, Department of Statistics*

The profession of statistics continues to make important contributions to the advancement of science, public policy, business, and industry. As the principal professional society for the promotion of statistics, we need to ensure that we advocate for the appropriate use of the statistical sciences wherever it can make a contribution. Since the beginning of the previous century, statistics has opened the world to understanding complex phenomena and participated in the advancement of science and society in many ways. Our responsibility as members of this profession is to be stewards of our resources, and pursue initiatives in which we can most effectively improve society. We can provide guidance in the production of quantitative information through promotion of ethical standards and integrity in

our professional standards. I bring to this position at the ASA my experiences as an academic administrator, serving as department head for 15 years and developing our consulting center for training statisticians. More recently, we developed the professional Master of Applied Statistics graduate program in residence and online to increase the work force supply of trained statisticians to meet the rapidly increasing demands in business and government. During my service at the National Science Foundation as a program director, I was liaison with other disciplines to develop cross disciplinary programs and worked to build the foundation for increased funding of the mathematical sciences through interdisciplinary programs that involved statistical scientists as key partners.



Rosenberger



## Council of Sections Board Representative



Grady

### James Grady

*Currently directing the biostatistical activities at the University of Connecticut Health Center and new biostatistics center in the Connecticut Institute for Clinical and Translational Science*

I have attended every JSM since 1991, the first few while still in graduate school. I can safely say that had I not been involved with the ASA, my career might be very different. At my first job, my university was fairly remote and being a part of the ASA made me feel connected to a larger group of statisticians. Being involved in the ASA has helped to keep me current, fostered professional and personal friendships with other statisticians, and given me opportunities for leadership. When I went up for tenure and changed universities last year, it was people I met at the ASA who wrote letters. The ASA often feels big, but it

offers opportunities within the sections for more intimate pursuits and professional relationships.

My experience as past section chair makes me well suited to represent the sections to the board of directors. My goal as representative would be to foster practices and policies that allow sections to remain independent and encourage a focused and friendly setting for those with a common interest, which we sometimes don't feel at the ASA and JSM. I will also work with the board to make improvements to JSM in an effort to make it the most rewarding and enjoyable experience possible.



De Veaux

### Richard D. De Veaux

*Professor, Williams College, Department of Mathematics and Statistics*

I am honored to have the opportunity to stand for the Council of Sections Governing Board Representative to the ASA Board of Directors election. I believe the ASA sections are the nucleus of our organization, representing interests within statistics that help serve our ever-diverse and growing membership. I have been fortunate to serve as program chair for the Section

on Physical and Engineering Sciences, as a founding officer of SLDM, and as program chair for JSM 2001 in Atlanta. I would work to help communicate the ideas that flow to and from the sections to the board of directors as we strive to serve our membership more effectively.



## Council of Chapters Board Representative

### Mary J. (Morrissey) Kwasny

*Assistant Professor, Northwestern University*

The ASA is a wonderful organization, with such diversity in statistical methods and applications. I have been lucky to be part of a very active local chapter, and as a chapter representative to the Council of Chapters, recognize the variety of needs and activities of other chapters. As a Council of Chapters Board

Representative, I see the opportunity to learn more about the inner workings of the ASA and share my experiences and ideas about how sections, chapters, and individuals can learn about, and take advantage of, the opportunities the ASA provides.



Kwasny

### Jerry Moreno

*Emeritus Assistant Professor, John Carroll University*

The ASA chapters are the heart of statistical outreach to professional communities. Although it is more difficult these days because of increasing workplace pressures and demands for members to participate in chapter activities, it is important for chapters to be active. I would encourage and advise them on how to conduct a local poster or project competition, organize a workshop or conference for colleagues (practitioners of statistics and professional statisticians) or teachers (particularly in light of the

impressive amount of statistics in the new Common Core Standards for school mathematics curriculum), take advantage of what the ASA has to offer in professional development such as the traveling course, judge in science fairs, and visit schools to give talks about careers or encourage the offering of non-AP and AP Statistics courses. We need to continue our efforts in statistics outreach, particularly in education, if we ever will be successful in creating a statistically literate citizenry.



Moreno



## ASA 2012 Election Candidates List

### **Council of Chapters Governing Board (COGCB)**

#### *Chair-elect*

Ananda Jayawardhana, Pittsburg State University  
John Stevens, Utah State University

#### *Vice Chair District 3*

Alex Hanlon, University of Pennsylvania  
Peter Hovey, University of Dayton

#### *Vice Chair District 4*

Kendra Schmid, University of Nebraska  
Medical Center  
Morteza Marzjarani, Saginaw Valley State University

### **Council of Sections Governing Board (COSGB)**

#### *Chair-elect*

John Czajka, Mathematica Policy Research, Inc.  
Cynthia Long, Palmer Center for Chiropractic  
Research

#### *Vice Chair*

Stephen Cohen, National Science Foundation  
Thomas Short, John Carroll University

### **Section on Bayesian Statistical Sciences (SBSS)**

#### *Chair-elect*

Raquel Prado, University of California at  
Santa Cruz  
Brad Carlin, University of Minnesota

#### *Program Chair-elect*

Keying Ye, The University of Texas at San Antonio  
and The University of Texas Health Science Center  
Sudipto Banerjee, University of Minnesota

#### *Council of Sections Representative*

Susan Paddock, Rand Corporation  
Carlos Carvalho, The University of Texas at Austin  
McCombs School of Business

### **Biometrics Section (BIOM)**

#### *Chair-elect*

Michael Daniels, University of Florida  
Amita Manatunga, Emory

#### *Secretary/Treasurer*

Yu Shen, MD Anderson Cancer Center  
Mariza de Andrade, Mayo Clinic

#### *Council of Sections Representative*

Yan Li, The University of Texas at Arlington  
Limin (Lin) Clegg, U.S. Department of  
Veterans Affairs

### **Biopharmaceutical Section (BIOP)**

#### *Chair-elect*

M. Matilde Sanchez, Arena Pharmaceuticals  
Mani Lakshminarayanan, Merck & Co, Inc.

#### *Program Chair-elect*

Heather Thomas, Watson Labs  
Ivan Chan, Merck & Co., Inc.

#### *Publications Officer*

Yongming Qu, Eli Lilly and Company  
Venkat Sethuraman, Novartis Oncology

#### *Council of Sections Representative*

Veronica Taylor, HHS/FDA/CVM  
Jeff Maca, Novartis Pharmaceuticals

### **Business and Economic Statistics Section (B&E)**

#### *Chair-elect*

James Spletzer, Bureau of Labor Statistics  
Carol Corrado, The Conference Board

#### *Program Chair-elect*

Alexander Aue, University of California at Davis  
Kevin L. McKinney, U.S. Census Bureau

#### *Secretary/Treasurer*

Cindy Yu, Iowa State University  
Michael Levine, Purdue University

#### *Council of Sections Representative*

Katherine Bennett Ensor, Rice University  
Roxy Cramer, Rogue Wave Software, Inc.

### **Section on Statistical Computing (COMP)**

#### *Chair-elect*

Wolfgang Jank, University of South Florida  
Michael Minnotte, University of North Dakota

#### *Program Chair-elect*

Guilherme V. Rocha, Indiana University  
Nicholas Lewin-Koh, Genentech



## Section on Statistical Consulting (CNSL)

### *Chair-elect*

Rick Ittenbach, Cincinnati Children's Hospital and University of Cincinnati  
Walter Ambrosius, Wake Forest School of Medicine

### *Publications Officer*

Christopher Swearingen, University of Arkansas for Medical Sciences

Chris Barker, Pharmaceutical Consultant

### *Council of Sections Representative*

Bin Huang, Cincinnati Children's Hospital and University of Cincinnati

Stuart Gansky, University of California at San Francisco

### *Executive Committee At Large*

Christopher Holloman, The Ohio State University  
Charles Davis, CSD Biostatistics, Inc.

## Section on Statistical Education (EDUC)

### *Chair-elect*

Jim Albert, Bowling Green State University  
William Notz, The Ohio State University

### *Secretary/Treasurer*

Neal Rogness, Grand Valley State University  
Dexter Whittinghill, Rowan University

### *Executive Committee At Large*

Andy Zieffler, University of Minnesota  
Brigitte Baldi, University of California at Irvine  
David Diez, OpenIntro and Harvard University  
Herle McGowan, North Carolina State University

## Section on Statistics and the Environment (ENVR)

### *Chair-elect*

Alix Gitelman, Oregon State University  
Joel Reynolds, Western Alaska Landscape Conservation Cooperative

### *Program Chair-elect*

Mevin Hooten, Fish, Wildlife, and Conservation Biology, Colorado State University  
Brian Reich, North Carolina State University

### *Treasurer*

Brian Gray, U.S. Geological Survey  
Bo Li, Purdue University

## Section on Statistics in Epidemiology (EPI)

### *Chair-elect*

Eva Petkova, New York University  
John Neuhaus, University of California at San Francisco

### *Program Chair-elect*

Patrick Carmack, University of Central Arkansas  
Madhu Mazumdar, Mathematica Policy Research

### *Secretary/Treasurer*

Emilia Bagiella, Mt. Sinai School of Medicine  
Susan Shortreed, Group Health Research Institute

## Section on Government Statistics (GOVT)

### *Chair-elect*

Jill Montaquila, Westat and JPSM, University of Maryland

Promod Chandhok, Bureau of Transportation Statistics and The George Washington University

### *Program Chair-elect*

Virginia Chanley, GAO  
Grace O'Neil, Energy Information Administration

### *Secretary/Treasurer*

Kevin Cecco, Internal Revenue Service  
Jenny Guarino, USDOT/RITA Bureau of Transportation Statistics

### *Publications Officer*

Nancy Bates, U.S. Census Bureau  
Wendy Martinez, Bureau of Labor Statistics

### *Council of Sections Representative*

Ken Copeland, NORC at the University of Chicago  
Brian Meekins, Bureau of Labor Statistics

## Section on Statistical Graphics (GRPH)

### *Chair-elect*

Rick Wicklin, SAS Institute Inc.  
Hadley Wickham, Rice University

### *Program Chair-elect*

Michael Kane, Yale University  
Matt Shotwell, Vanderbilt University

### *Secretary/Treasurer*

Anushka Anand, University of Illinois at Chicago  
Kenneth Shirley, AT&T Labs - Research

### *Council of Sections Representative*

Yihui Xie, Iowa State University  
Mario Morales, Simulmedia Inc. and Stanford University



### **Health Policy Statistics Section (HPSS)**

#### *Chair-elect*

Marc Elliott, Rand Corporation  
Matthew Rotelli, Eli Lilly and Company

### **Section on Statistics in Marketing (MKTG)**

#### *Chair-elect*

Dirk van den Poel, Universiteit Gent  
Marianna Dizik, Google

#### *Program Chair-elect*

Blake McShane, Northwestern University  
Lynd Bacon, Loma Buena Associates

#### *Publications Officer*

Andres Musalem, Duke University  
Joseph Retzer, MarketTools, Inc.

### **Section on Physical and Engineering Sciences (SPES)**

#### *Chair-elect*

Sarah Kalicin, Intel  
Elizabeth Schiferl, The Lubrizol Corporation

#### *Program Chair-elect*

Cheryl Dingus, Battelle Memorial Institute  
James G. Wendelberger, Urban Science Applications, Inc.

#### *Council of Sections Representative*

Peter Hovey, University of Dayton  
Philip R. Scinto, The Lubrizol Corporation

### **Section on Quality and Productivity (Q&P)**

#### *Chair-elect*

Di Michelson, SAS Institute Inc.  
Marcus Perry, University of Alabama

#### *Program Chair-elect*

Abdel-Salam G. Abdel-Salam, J.P. Morgan Chase & Company  
Ming Li, General Electric Global Research  
Tony (Hon Keung) Ng, Southern Methodist University

#### *Council of Sections Representative*

Martha Gardner, General Electric Global Research  
Alix Robertson, Sandia National Labs

### **Section on Risk Analysis (RISK)**

#### *Chair-elect*

Robert L. (Bob) Obenchain, Risk Benefit Statistics LLC  
Edsel Pena, University of South Carolina

#### *Program Chair-elect*

Bonnie Ray, IBM Watson Research Center  
Stanley Young, National Institute for Statistical Sciences

### **Social Statistics Section (SOC)**

#### *Chair-elect*

Nancy A. Clusen, Mathematica Policy Research  
Robert L. Santos, The Urban Institute

#### *Program Chair-elect*

Christa D. Jones, U.S. Census Bureau  
Michael Sinclair, NORC at the University of Chicago

#### *Publications Officer*

Nick Beyler, Mathematica Policy Research  
Mark Mather, Population Reference Bureau

#### *Council of Sections Representative*

Warren A. Brown, Cornell University  
Marilyn M. Seastrom, National Center for Education Statistics

### **Section on Statistics in Sports (SIS)**

#### *Chair-elect*

Perry Choi, Dotblu Inc. and United States Yongmudo Association  
Joseph Hilbe, Arizona State University

#### *Program Chair-elect*

Mark Glickman, Boston University  
Mitch Watnik, California State University East Bay

### **Survey Research Methods Section (SRMS)**

#### *Chair-elect*

Michael Elliott, University of Michigan  
Phillip S. Kott, RTI International

#### *Program Chair-elect*

Karol Krotki, RTI International  
Brady T. West, University of Michigan

#### *Treasurer*

Jill A. Dever, RTI International  
David L. Hubble, Westat

#### *Publications Officer*

Young Chun, U.S. Census Bureau  
John Finamore, National Science Foundation

#### *Council of Sections Representative*

Trent D. Buskirk, The Nielsen Company  
Jeffrey Gonzalez, Bureau of Labor Statistics

#### *Education Officer*

Meena Khare, CDC/National Center for Health Statistics

Marilyn Seastrom, National Center for Education Statistics

#### **Teaching Statistics in the Health Sciences Section (TSHS)**

##### *Chair-elect*

Chul Ahn, The University of Texas Southwestern Medical Center

Constantine Daskalakis, Thomas Jefferson University

##### *Council of Sections Representative*

Jodi Lapidus, Oregon Health & Science University

Mary J. (Morrissey) Kwasny, Northwestern University

#### **Section on Nonparametric Statistics (NPAR)**

##### *Chair-elect*

David Ruppert, Cornell University

Young Truong, The University of North Carolina at Chapel Hill

##### *Program Chair-elect*

Runze Li, Pennsylvania State University

Mary C. Meyer, Colorado State University

##### *Treasurer*

Moulinath Banerjee, University of Michigan

Ana-Maria Staicu, North Carolina State University

##### *Council of Sections Representative*

Richard Samworth, University of Cambridge

David Dunson, Duke University

#### **Statistics in Defense and National Security Section (SDNS)**

##### *Chair-elect*

Michael Cohen, Committee on National Statistics, National Research Council

Jeffrey L. Solka, Naval Surface Warfare Center

##### *Program Chair-elect*

Laura Freeman, IDA

George Michailidis, University of Michigan

##### *Secretary/Treasurer*

Michael D. Porter, GeoEye Analytics

Lara Schmid, The RAND Corporation

##### *Publications Officer*

Shuguang Song, The Boeing Company

Michael Last

#### *Council of Sections Representative*

Alyson Wilson, IDA Science and Technology Policy Institute

Joseph D. Warfield, The Johns Hopkins University Applied Physics Laboratory

#### **Section for Statistical Programmers and Analysts (SSPA)**

##### *Chair-elect*

Vipin Arora, Abbott Laboratories

Vikash Jain, eClinical Solutions

##### *Program Chair-elect*

Mario Morales, Simulmedia Inc. and

Stanford University

Li Zheng, Genentech Inc.

##### *Council of Sections Representative*

Natalie Cheung Hall, Eli Lilly and Company

Mario Widel, Roche Molecular Systems

#### **Section on Statistical Learning and Data Mining (SLDM)**

##### *Chair-elect*

Bertrand Clarke, University of Miami

Xiaotong Shen, University of Minnesota

##### *Program Chair-elect*

Deepak Agarwal, Yahoo Research

Howard Bondell, North Carolina State University

#### **Section on Statistics in Imaging (SI)**

##### *Chair-elect*

Timothy D. Johnson, University of Michigan

Raymond Hoffmann, Medical College of Wisconsin

##### *Program Chair-elect*

Todd Ogden, Columbia University

Martin Lindquist, Columbia University

Bin Nan, University of Michigan

## **Don't Forget to VOTE!**

Wait for your ballot to arrive by email.

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

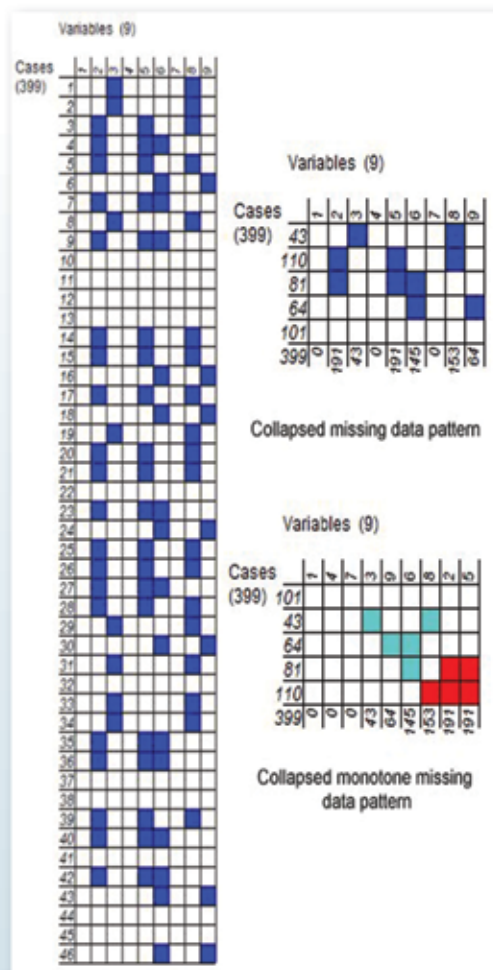
**NEW  
VERSION 4.0**

# solas for Missing Data Analysis

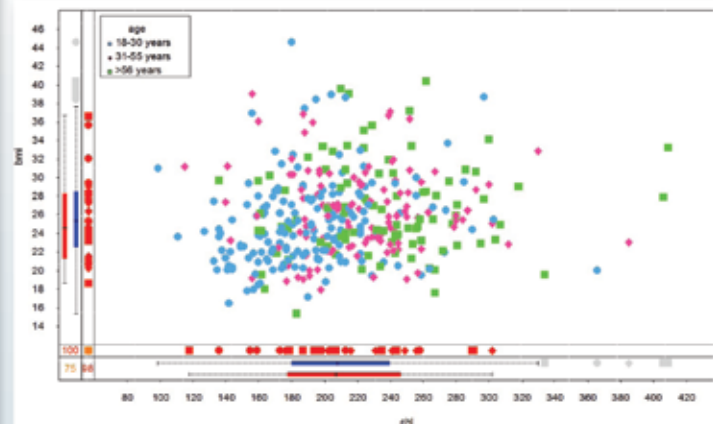
SOLAS is the missing data software most research statisticians and data analysts choose when working with incomplete data or missing values. It provides researchers with a range of imputation techniques in an easy-to-use, validated software application.

## SOLAS Highlights

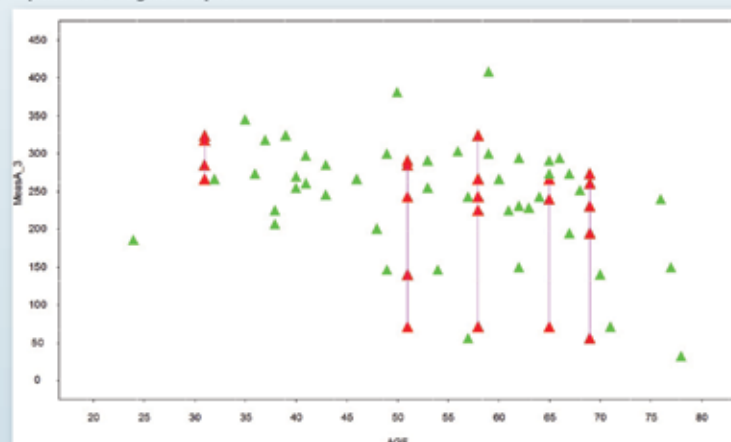
- Developed with guidance from Prof. Donald B. Rubin, the inventor of multiple imputation
- 9 different imputation techniques, including 5 for multiple imputation
- Unique missing data pattern with new "collapse" feature
- New Pre-imputation diagnostic and Post-imputation distribution plots, graphics and visualization tools
- Script Language capabilities



With the unique Missing Data Pattern and new "collapse" features, you can get immediate insights into the structure and form of your data



Pre-imputation diagnostic plot



Post-imputation distribution plots make it easier to compare the implications of different imputation choices



### Statistical Solutions

Stonehill Corporate Center, Suite 104, 999 Broadway, Saugus MA 01906, U.S.A.  
Tel: +1 781 231 7680 • Fax: +1 781 231 7684 • Toll Free **1800-2621171**  
Email: [info@statsolusa.com](mailto:info@statsolusa.com) Web: [www.solasmissingdata.com](http://www.solasmissingdata.com)

# NSF Announces Education, Training Funding

Gabor Szekely and Nandini Kannan, NSF Statistics Program Directors

## Upcoming Solicitations

### Integrative Graduate Education and Research Traineeship Program

Letter of intent due May 1 and full proposal due July 2

[www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=12759](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12759)

### Transforming Undergraduate Education in Science, Technology, Engineering, and Mathematics

Proposals due May 28

[www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5741](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5741)

### Research Experiences for Undergraduates

Proposals due June 1

[www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5517&from=fund](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517&from=fund)

### Mentoring Through Critical Transition Points in the Mathematical Sciences

Proposals due June 5

[www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503627](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503627)

### Research Training Groups in the Mathematical Sciences

Proposals due June 5

[www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5732](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5732)

### NSF Scholarships in Science, Technology, Engineering, and Mathematics

Proposals due August 14

[www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5257](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5257)

### Mathematical Sciences Postdoctoral Research Fellowships

Proposals due October 17

[www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5301&org=DMS](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5301&org=DMS)

The National Science Foundation (NSF) has several funding opportunities that support research, education, and training for undergraduate and graduate students and postdoctoral fellows.

The Division of Mathematical Sciences (DMS) is investing in several work force programs with the long-range goal of increasing the number of well-prepared U.S. citizens, nationals, and permanent residents who successfully pursue careers in the mathematical and statistical sciences and other NSF-supported disciplines. The DMS Workforce Program has several solicitations such as Research Training Groups, Research Experiences for Undergraduate sites, and Mentoring Through Critical Transition Points. Doctoral students close to graduation should consider applying for mathematical sciences postdoctoral research fellowships at [www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5301](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5301). In particular, proposals that seek to broaden participation in the mathematical and statistical sciences are of interest to DMS.

NSF also administers the Graduate Research Fellowship Program and the Integrative Graduate Education and Research Traineeship program. The NSF scholarships in science, technology, engineering, and mathematics (S-STEM) program provides funding for students pursuing associate, baccalaureate, or graduate degrees. Statistics departments that offer undergraduate degrees also should consider the Transforming Undergraduate Education in STEM program. It is focused on improving the quality of STEM education. The solicitation allows for small exploratory proposals and large projects with the potential to transform undergraduate STEM education.

Additionally, the Mathematical Sciences Infrastructure Program provides support for conferences and workshops. The statistics community is encouraged to take advantage of these and many other opportunities.

Faculty and graduate students are encouraged to visit the NSF DMS website for details. The statistics program officers are also available to answer questions about specific solicitations or more general questions related to research and education. Contact Gabor Szekely at [gszekely@nsf.gov](mailto:gszekely@nsf.gov) and Haiyan Cai at [hcai@nsf.gov](mailto:hcai@nsf.gov). ■

# Meet U.S. Census Bureau Director Robert Groves

**A**mstat News invited Robert Groves, director of the U.S. Census Bureau, to respond to the following questions so readers could learn more about him and the agency he leads. Look for other statistical agency head interviews in past and forthcoming issues.

## What have you enjoyed most about being head of the U.S. Census Bureau?

Some of the most enjoyable experiences have nothing to do with statistics. During the data collection period of the 2010 decennial census, I visited many small and large towns throughout the country. I met with grassroots groups that were helping us ensure that each of their members was counted. Many of the groups were new immigrants. I learned that new immigrant groups are spread throughout the country, not just in big cities on the coasts (as was true in prior immigrant waves). This will mean that the socialization of these groups will be part of smaller cities versus the large urban centers. It was fun to see these new groups seeking to achieve the American dream just as earlier groups did.

useful for statistics); and the federal government budget for statistics is likely to be flat or declining in the mid-term.

Some of these are daunting hurdles, but others are exciting potential breakthrough solutions. The future most of us feel we are building is one of multiple sources of data (each subject to missing data and measurement error) being used to support one another (e.g., Internet, telephone, face-to-face surveys, administrative records). The multiple sources must be evaluated with statistical modeling—for real-time switching among modes of data collection—and real-time estimation. More timely estimates will be accomplished by active analysis during data collection and statistical stopping rules for data collection. To do this, we need statisticians with strong design and modeling skills.

careers. Fostering the development of generalized systems for mixed-mode data collection and real-time management and estimation. Enhancing the utility of web-accessible statistical information from the bureau.

## What do you see as the role for the broader statistical community in supporting the Census Bureau?

We need the brightest minds in the United States working to solve the statistical design, data collection, and analysis issues the bureau faces. We have undergraduate internship, doctoral dissertation support; postdoctoral fellowships; and visiting faculty opportunities that ASA members can pursue. We have research data centers throughout the country for research uses of data and a research network of nodes at Carnegie-Mellon, Colorado, Cornell, Duke, Michigan, Missouri, Nebraska, and Northwestern. We actively seek research collaborations with the broader statistical community.

## What do you see as the biggest challenge(s) for the Census Bureau, and have they changed significantly since you started this position?

The costs of statistical data collection for surveys and censuses are increasing faster than inflation; the demand for more timely and smaller area statistics is increasing; the pace of innovation in technologies adaptable to data collection is increasing; more and more administrative data are digitized and more data are being generated by the Internet each day (some of these may be

## Describe your top two or three priorities for the Census Bureau.

Increasing innovation in statistical design, data collection, analysis, and dissemination of statistical information through enhancing the statistical, economic, and sociological talents of the staff and forming partnerships with academic researchers through the National Science Foundation – Census Bureau Research Network. Strengthening the breadth of experience of Census Bureau statisticians through assignment to different areas over their

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

All my goals for the U.S. Census Bureau are long-term ones; none of us will know for several years whether they will be achieved. Many will be achieved if the career statisticians at the Census Bureau continue to innovate in their methods. ■



Before becoming director of the U.S. Census Bureau, Robert Groves was a professor at the University of Michigan and director of its Survey Research Center. He also worked as a research professor for the Joint Program in Survey Methodology at the University of Maryland.

# SAMSI Announces New Partnerships, Initiative

The Statistical and Applied Mathematical Sciences Institute (SAMSI) recently partnered with the Institute for Computational and Experimental Research in Mathematics (ICERM) and several institutes in India (CMI, IISc, ISI, IMSC) to form the Virtual Institute for Mathematical and Statistical Sciences (VI-MSS). The virtual institute will sponsor joint workshops, research visitors, and graduate educational activities with support from the National Science Foundation.

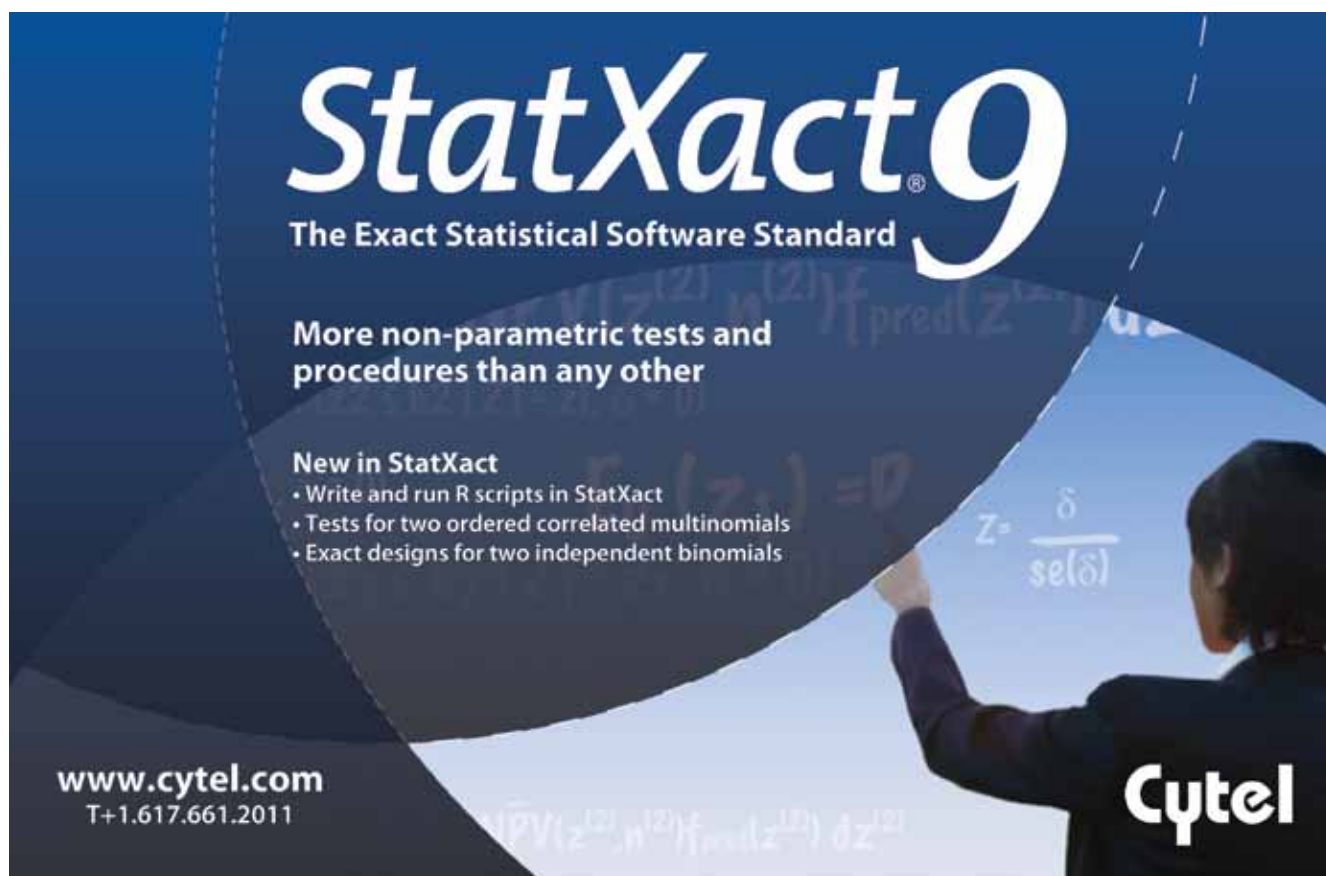
As part of this initiative, SAMSI announces three new activities:

A workshop on environmental statistics will be held at SAMSI June 18–20. There will be invited speakers from both the United States and India. Registration will include the opportunity to participate in a poster session. Major themes of the workshop include measuring and monitoring the environment, health effects of air and water pollution, and climate change.

A workshop on topics in probability will be held December 18–20 at the Chennai Mathematical Institute. This workshop will consist of 12–15 one-hour lectures spanning a broad range of topics of current interest in probability. We expect approximately half of the speakers to be from U.S. universities and the other half from universities in India.

In addition, we invite applications from U.S. participants to take part in research visits to India. Visits may be up to six months in duration for the purpose of extended research collaboration with a faculty member at one of the participating Indian institutes. To be considered for a research visit during the 2012–2013 academic year, applications should be received at SAMSI no later than March 31. Applications may be made through the SAMSI website at [www.samsi.info](http://www.samsi.info) and will be coordinated with ICERM.

For more information about any of these activities, email Richard Smith, director of SAMSI, at [rls@samsi.info](mailto:rls@samsi.info). ■



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## SCIENCE POLICY

# Bring Statistics to Policy Through Internships

Mary Gray, American University

*This month's science policy guest columnist, Mary Gray, provides a path for younger members of the statistical community to plant the seeds for influencing policymaking. Gray describes various opportunities and benefits of internships, along with the legal aspects for ensuring a worthwhile experience.*

— Steve Pierson, ASA Director of Science Policy

Public policy based on statistical analysis—perhaps a Utopian dream. But there is a crack in the door through which the statistical community might be able to increase the influence of our discipline. Student internships have long been an important part of both undergraduate and graduate education in many institutions. With the tightening economy, such experience is increasingly sought after, even in fields with excellent job prospects.

Many internships provide significant training for statistics students, both in technical skills and in working with 'clients' for whom an analysis is being done. Institutions learn where their students are likely to have a valuable experience and send their best students; employers are happy to provide mentoring while at the same time receiving excellent help with many substantive aspects of their work.

But there is another potential benefit. Students could come to understand the role statistics can and should play in the formulation of public policy. In fact, they can even become advocates for increased reliance on statistics.

Not only the DC-area universities, but institutions throughout the country send their students to work 'on the hill' and

## Beware the Clerical Internship

Internships, paid or unpaid, are supposed to constitute training for career development, not free or cheap labor for routine clerical tasks. The law is quite clear about this, and employers can be found to be in violation of minimum wage and other regulations if they fail to satisfy the requirements. Most colleges and universities are careful to verify with employers that clerical-type work will not form any substantial proportion of the interns' duties.

The U.S. Department of Labor applies the following six criteria to determine whether a position is exempt from the requirement to pay a minimum wage and overtime:

1. The training is similar to training that would be given in an educational environment
2. The internship experience is for the benefit of the intern
3. The intern does not displace regular employees, but works under close supervision of existing staff
4. The employer derives no immediate advantage from the activities of the intern
5. The intern is not necessarily entitled to a job at the conclusion of the internship
6. The employer and the intern understand that the intern is not entitled to wages for the time spent in the internship

The last requirement may appear difficult to meet, but employers are usually found to be in compliance if they can show that the internship is actually part of an educational program (thus many employers require that students be registered for credit).

On the other hand, a student may volunteer to provide service to a nonprofit organization or public agency for civic, charitable, or humanitarian reasons—an exception that does not apply to commercial employers, but it does to government.

## Science Policy Actions

ASA president submits comments for written record of December Senate Hearing, "Turning the Investigation on the Science of Forensics."

ASA signs onto letter opposing components of GRANT Act, H.R. 3433.

ASA signs onto letter urging opposing components of Elementary and Secondary Education Act reauthorization bills in the House that weaken STEM education.

ASA submits the comments for the OSTP request for information, "Public Access to Digital Data Resulting from Federally Funded Scientific Research."

ASA signs onto letter opposing the diversion of NIH/NSF research funding to non-research awards.

in the executive branch or state and local agencies. Students find being a part, however small, of the legislative process exciting; it looks good on résumés, there's lots of free food, etc. What they actually learn may not be much that acts as training in their field; however, it is a great opportunity to discover how statistics can be used in public policy, even if it means doing some research and implementation outside the strict confines of their job.

Optimistically, students might get a congressional staff member interested in the relevance of statistics to legislation on health, education, or the economy in general and find that work they do actually enters into the consideration of policy formulation and support. Even if not, they receive training that can prove useful in their careers by

expanding their understanding of how policy is made and could be made better through the use of statistics—knowledge they can implement in their future work.

The hill is not the only place where policy is formulated. How about some statistical input into the lobbying process? Interning with the multitude of lobbyists (in home districts and in DC), whose influence on policy may be deplored but has positive effects as well, can provide a fertile training ground for the understanding of the role of statistics in public policy. Many lobbyists represent business interests (and are, themselves, commercial enterprises) so that internships, at least in theory, should be paid. But nonprofits also seek to influence public policy—for example, the ASA speaks for the interests of its members.

Public policy internships can be useful to both the organizations and the interns. A short-term stint is unlikely to have a profound effect on the corporations and nonprofits that influence and make public policy, but the understanding of how both lobbying in general and statistics in particular can be entwined in policy formulation can play a part in the subsequent careers of embryonic statisticians. Moreover, it cannot be bad if, during their internships, they can be a voice for basing policy on statistics no matter one's political views.

The notion of public policy as part of training for statisticians can usefully be extended to undergraduate and graduate experience beyond internships. There are beneficial side benefits—considering public policy provides extensive opportunities for much-valued interdisciplinary work. Finally, internships can be preparation for responsible citizenship and effectiveness as a statistician.

There are myriad ways to find an internship, starting with your own university's resources. You also should contact your own representative—for home and school residences—and senators, as well as consult websites such as [www.internships.com/intern/government](http://www.internships.com/intern/government) and <http://magazine.amstat.org/blog/2011/12/01/internship12>. Many universities keep track of the employment of their graduates, who can be a great source of internships for current students, so check with your department faculty and the campus career center for more information. ■

175

# +25: Celebrating Our Past to Energize Our Future

Fred Hulting

In last month's 175 column, Stephen Stigler highlighted the secret to our association's longevity: its ability to adapt. Since 1839, the ASA has moved from a regional economics discussion club to an international statistical society fostering research and practice across many disciplines. Consequently, the impact of our association and our profession has been profound, as statistics has aided in developing economies, feeding the world, and expanding safe and effective health care.

As we look ahead 25 years to our bicentennial, it is difficult to predict what the ASA and our profession will look like, but we can already see the forces of change that will shape it. Social and digital media are altering our interactions and publications; globalization is changing the culture of our institutions and businesses; computing technology is flattening our world; and rapid, disruptive, innovation presents an ever-changing stream of new challenges and opportunities.

These many forces will continue to drive statistics into new and interesting areas, expanding our scale and scope and increasing our impact. This will make it possible to leverage our expertise to tackle the really big societal, medical, environmental, and technological challenges that will confront us between now and 2039.

At the same time, these forces will continue to put stress on our profession by pushing increasing specialization and fragmentation. This is not a new trend, and we

can already recognize that one key to the ASA's future adaptability is its existing diversity. The ASA has become the 'big tent of statistics,' a broadly inclusive organization welcoming those from business, academia, and government who build our discipline through practice, teaching, and research.

For example, the rise of 'big data' has attracted many statisticians to join in the hunt for messages hidden in big data. It also has attracted professionals in machine learning and bioinformatics. Bringing the latter to our big tent and offering them unique statistical insight is an opportunity for the ASA.

With the increasing need for quantitative scientists to process data, many statistical graduates are joining the business world and working as analytics professionals. The ASA is in a unique position to work with various graduate programs to help prepare our students so they can be successful in the business world. Their success can help create awareness and support among business leaders of the statistical profession and the association that helps define it.

Yet, expanding and leveraging our diversity presents several dilemmas. How will we maintain a unifying focus while accommodating these varied interests and applications? How do we continue to serve those within today's ASA, while identifying ways to attract future members? How exactly should we adapt our publications, meetings, services, and funding to serve our future membership?



The occasion of the ASA's 175th anniversary is an appropriate time to answer these questions and prepare for the future. We need to increase awareness of and appreciation for statistics, expand the sphere of statistical influence, attract and welcome new members, and keep our existing members engaged. Over the next few months, you will read about efforts to do just that in this column as we discuss the following:

- Focusing on membership initiatives to expand our big tent
- Adding innovative programs to enhance the visibility of statistics
- Engaging the global statistical community in celebrating the International Year of Statistics
- Sharing and implementing your BIG IDEAS for the ASA's future

In 2014, we will energize our association by celebrating both our past successes and the present strengths that will empower our future. ■

## MASTER'S NOTEBOOK

# Navigating Work Force Trends in the Human Age

Chuck Kincaid, Director of Delivery, Business Analytics Practice, Experis, a ManpowerGroup Company

The job market today is much different than it was a decade ago, and employers and job candidates need to be aware of the work force trends affecting society. This is particularly true for statisticians, because we see an increasing demand for individuals with data analysis skills.

Despite high unemployment, there is a pervasive talent mismatch, and employers cannot find people with the skills for mission-critical positions. This puts the issue of talent at center stage as we enter what we are calling the Human Age—an era in which people with the right talents and skills are critical to business success. Understanding how to navigate work force trends is vital for employers and job seekers alike.

Many years ago, when I was a graduate student, I enjoyed the big parties that Trilogy Consulting hosted at ASA meetings. I was just entering the job market and, besides the free food, I was interested in the networking opportunities these gatherings provided. Today, Trilogy is known as Experis, and I play a key role in the Business Analytics Practice. We still place statisticians, statistical programmers, and other professionals in our centers of excellence and with clients across the United States, but today's job market is definitely not the same.

From staffing to IT to professional occupations to management, there are four trends that affect how individuals and employers make hiring decisions. ManpowerGroup has identified these as technological revolutions, individual choice, the rise of customer sophistication, and a demographics/talent mismatch.

## Technological Revolutions

It is clear that our tools, communication channels, and information access are rapidly evolving as the JSM 2012 theme—Statistics: Growing to Serve a Data-Dependent Society—shows. I'm chairing a session titled "Remote Statistical Consulting," in which 'remote' is becoming less meaningful every year.

## Individual Choice

The 'fight' for talent is intensifying. Attitudes about work are shifting, and the rules are being rewritten. Individuals have greater choice in where they work, which puts the pressure on employers to consider employees as individuals in order to attract, engage, and motivate.

## Rise of Customer Sophistication

With customers having greater and immediate access to information, businesses must deliver greater value for less. How often have we heard that? This rise pushes employers to consider new approaches to work force management and to instill a culture of innovation.

## Demographics/Talent Mismatch

These trends give rise to a mismatch between what employers are looking for and what talents are available. Emerging markets, aging populations, and antiquated educational and training programs have made talent harder to find and the key differentiator.

Our world of work differentiates itself from previous eras because the current ability to optimize human potential is a key competitive factor. Also, talent is scarcer than ever. Some facts to consider include the following:

1. According to ManpowerGroup, the demand for labor will outstrip supply by almost 18 million people by 2020.
2. Ninety percent of employers experience difficulties filling mission-critical roles because of candidates' lack of necessary skills and experience, insufficient qualifications, or a lack of soft skills, according to ManpowerGroup.
3. In the U.S., employees eligible for retirement are outnumbering their teenage counterparts for the first time in more than 60 years, according to a July 2008 *TIME* article.
4. According to the Pew Research Center, 10,000 baby boomers began turning 65 every day starting in 2011, and this trend will continue for the next 19 years.
5. Eighty-four percent of employees are actively seeking a new position, according to a 2010 Right Management survey.

These facts are broader than our particular profession, but they are just as true. It's an exciting time to be a statistician. As other Master's Notebook columns have shown, there are many opportunities in many fields, and that's true even if you're not a statistician. Maybe you're a marketing scientist, data scientist, analytics engineer, or analytics developer.

These are some of the nonstandard titles that our Business Analytics Practice is seeing.

Now, add to that excitement the reality of the Human Age and what do you have? The Bureau of Labor Statistics projects the number of employed statisticians (ignoring the other titles, it seems) will grow by almost 3,000 between 2008 and 2018. Most of these statisticians will have a master's degree. Is that good or bad for us as employees? Given the facts above, particularly with so many people retiring, it means the job market is very good. It's very good today, too.

CareerBuilder.com defines labor pressure as a "ratio used to estimate the difficulty in acquiring talent by comparing the supply and demand for the position. ... [A] lower number indicates that there is less supply to satisfy the demand." For the title "statistician," they calculate the labor pressure over the last six months, roughly July 2011 to January 2012, to be 0.2, which makes it difficult for employers to find the right candidates. (This number includes some, but not all, positions related to statistician such as biostatistician, senior statistician, statistical analysis manager, and even the ever-popular "ultimate hoops statistician.")

If you're a master's statistician and trying to find a job, what does all this mean for you? It means your prospects are very good, especially if you're willing to be flexible. Because of the rise of

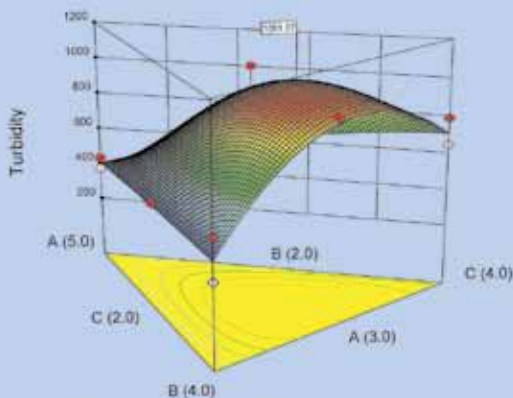
customer sophistication, employers have to be more selective in who they hire. Erin Tanenbaum's interview in the July 2010 issue gives some insight into what two hiring managers look for. The National Association of Colleges and Employers tells us that employers want analytical, computer, problemsolving, and technical skills, all of which we statisticians can easily provide. They also want strong communication skills and work ethic, teamwork, initiative, flexibility/adaptability, and interpersonal skills. As statisticians, we also have to be able to understand and communicate with the business we are supporting. The Individual Choice trend shows us that we have more power in finding the right fit. We just have to realize it's a two-way street.

Sometimes, that flexibility is geographic, as Beth Elston tells us in the November 2011 Master's Notebook. Technological Revolutions make it much easier to telecommute today, but companies often want that only for their experienced employees.

Demographics/Talent Shortage emphasizes that the difficulty for employers is finding the right people with the right skills in the right location for the right salary. With the career outlook we have, a little bit of flexibility and preparation will put you in that right fit.

If you would like more information about the Human Age, please visit <http://manpowergroup.com/humanage>. ■

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# The World of Applied Statistics: Where Do YOU Fit In?

## Panelists

**Bob Rodriguez** is ASA president and senior director of statistical software R&D at **SAS Institute**. He leads a group of statistical software developers, who evaluate customers' needs, keep up with advances in statistical methodology, design code and program in C, write user documentation, assist technical support in responding to customers, and give presentations to customers and professional audiences.

**Christy Chuang-Stein** is head of the statistical research and consulting center at **Pfizer**. She leads a group of senior statisticians who work as internal consultants to colleagues in research, development, and commercial organizations. Christy has been with the pharmaceutical industry for 26 years and was a vice president of the ASA between 2009 and 2011.

**Nathaniel Schenker** is the associate director for research and methodology at the **National Center for Health Statistics (NCHS)**. He leads about 40 employees in NCHS's Office of Research and Methodology while also serving as adjunct faculty at the University of Maryland. Nat has held faculty positions at the University of California, Los Angeles and served as a consultant to RAND, a mathematical statistician at the U.S. Census Bureau, and a statistician at CNA Insurance. He is a past vice president of the ASA.

**Todd Behrens** is senior statistical analysis manager of the Retail Model Validation Group at **Capital One**. He reviews and ensures the quality of the data and models used for Basel compliance in retail businesses (e.g., credit cards, mortgage, home equity, auto).

**Amarjot Kaur** is director in the clinical biostatistics and research decision sciences at **Merck Research Labs**. She manages both project work, which is directly related to drug development, and non-project work, such as internal and external activities. Previously, Amarjot was a post-doctoral fellow in the department of statistics at Penn State University and a lecturer in the Department of Statistics at Panjab University's in India.

During the 2011 Joint Statistical Meetings, a group of leading statisticians gathered for a panel discussion, titled "The World of Applied Statistics: Where Do YOU Fit In?" Panelists responded to several questions about being applied statisticians and related the experiences that shaped their careers. Here are the highlights.

## *What does it mean to be an applied statistician in your department? Where are the opportunities for applied statisticians in your organization?*

**Bob:** Within SAS research and development, I work with a group of statistical software developers who are both PhD specialists in some area of applied statistics and professional programmers. In addition, we hire statisticians with either MS or PhD degrees for the following activities:

1. Testing statistical software, which includes writing test programs and validating the results. This requires an understanding of the statistical methodology and how the software will be used by customers.
2. Developing analytical software solutions, for industry-specific problems such as fraud detection in banking or warranty analysis in manufacturing. Statisticians must have good problemsolving skills and work in teams with other developers.
3. Providing technical support for customers. Statisticians answer 10,000 inquiries per year, and 85% of the calls are answered within one minute. They must have thoughtful communication skills in addition to an understanding of the statistical methodology and how the software is used in practice.
4. Educating customers. In addition to effective teaching and presentation skills, statisticians must understand the methodology and how the software is used.

My own work frequently brings me into contact with customers who are applying statistics in research, business, and government organizations around the world. There are unprecedented career opportunities in those organizations for statisticians

with the communication and computational skills to do the following:

- Adopt a strategic view by understanding the needs of the organization and how their contributions can meet these needs
- Collaborate within interdisciplinary teams
- Understand the sources, meaning, and quality of the data
- Integrate disparate sources of data and prepare them for analysis
- Formulate business problems as statistical models
- Solve problems using an ensemble of statistical modeling, data mining, forecasting, and optimization
- Analyze both structured and unstructured (textual) data
- Explain the relevance of statistical results to managers and others in the organization

**Christy:** Pfizer has about 225 statisticians worldwide who provide statistical support to all aspects of product development and commercialization. Support includes pre-clinical development (e.g., discovery, animal testing, biomarker development, pharmaceutical science), clinical development (phase I–IV clinical trials), and commercialization (e.g., reimbursement support, publication strategy, product defense, marketing and sales optimization). Approximately 60% of Pfizer’s statisticians are PhD’s and 40% have a master’s degree.

Developing a new pharmaceutical product is a long, risky, and expensive process. Historically, out of 5,000–10,000 compounds screened, approximately 250 entered into pre-clinical testing. Among the latter, about five made it to clinical testing and, at most, one among these five became a marketed product (Source: DiMasi et al., *J of Health Economics*, 2003). Recent figures show the chance that a candidate becomes a product among those entering into clinical testing has dropped to below 10%. The average cost of developing a product is estimated to be between \$802 million and \$1.5 billion USD, and the average duration of development is about 15 years.

**Nat:** NCHS documents the health status of the population, identifies health disparities, describes experiences with the health care system,

monitors trends, supports biomedical and health care research, and disseminates data and information to the public for research and policymaking. It has several major data collection programs, as well as offices that focus on cross-cutting analyses and research, developing methodology, consulting, and dissemination.

Statisticians at NCHS work on design of the data collection systems, analyze data, collaborate with researchers and scientists within and outside the agency, conduct research and evaluations of methodology, ensure that data released to the public preserve privacy and confidentiality, write reports and give presentations, and participate in management and program leadership.

**Todd:** Opportunities for statisticians and analysts are everywhere at Capital One. They obtain, retain, and enhance products for customers. Credit card, financial services, banking, and credit risk are broad areas in which applied statisticians contribute.

**Amarjot:** Statisticians are the leaders in all stages of drug development. The applied statistician needs to listen and communicate effectively, receive and provide feedback, work in teams, convey complex scientific information to nonstatisticians, and of course have strong statistical knowledge.

### *What drew you into applied statistics? What experiences, outside of academic preparation, have shaped and enriched your career path?*

**Nat:** I enjoy working on real problems, analyzing data, and making sure my research is relevant. I like doing theoretical work, but find focusing on applications helps keep me grounded. I also enjoy working in teams with people who have diverse skills, backgrounds, and interests, and I find figuring out how to explain statistical issues to nonstatisticians to be a useful exercise. As an applied statistician in a federal agency, I often find myself working on large-scale projects that are of interest to a lot of people, and I feel a sense of accomplishment when the projects are completed. The applied statistician sometimes needs to push the envelope with regard to methodology, via research, assumptions, and approximations, while working under time constraints and maintaining the integrity of the data. This makes for an exciting job. I have also found that professional service, especially in the ASA, has enriched my career substantially and is a good way to get to know others in the profession.

**Christy:** Both my parents were teachers. So early in life, I thought I would become a college professor, too. During my first post-graduate job (a joint appointment between teaching and consulting), I realized I was interested more in applying statistics to biomedical research than in teaching.

I had three internal role models who helped shape my early career in industry. All three mentors showed me the importance of professional identity and the need to give back to the profession. I also had two external mentors who were a substantial influence. They both had brilliant careers in statistics and left statistics to join other departments in their respective organizations. Their career paths made me realize statisticians could have substantial influence in nonstatistical groups within a pharma company.

**Amarjot:** My academic career started with strong interest in physics; however, teachers I met along the way suggested I consider statistics as a career because it was easier to get a job. I identify with statistics because it is an all-encompassing discipline and the opportunities for continuing education are appealing.

*What valuable advice can you give a young applied statistician? What skill sets and personality traits are critical for success?*

**Bob:** When you begin your job search, look for organizations in which statisticians are prized not just as problemsolvers, but as professionals. For

example, are there experienced statisticians who can serve as mentors? Does the management value professional growth? Are they supportive of continuing education and active participation in a professional community such as the ASA?

Some important success factors are:

- Having effective writing skills
- Having the ability to formulate problems. In graduate school, you were taught how to solve well-defined statistical problems, but in the “world of applied statistics,” you need to be able to translate the business problem into a statistical problem.
- Working to make others in your organizational successful
- Becoming professionally active. This will bring you into contact with outstanding people who will help you grow by sharing their experiences and helping you build and update your skills as a statistician. In time, as you gain experience, you will be able to do this for others.

**Christy:** There are five words I would like to share: passion, courage, tenacity, curiosity, and adaptability. Also acknowledge and praise others. Often, we statisticians start a sentence with words such as “but” or “however” and we speak up when we have something to criticize. Make sure to acknowledge others when they have great ideas. When we work with nonstatisticians who emphasize the importance of statistical principles, we should praise them. We should also acknowledge those who have great ideas. Others are more apt to listen to us if we balance criticism with praise.

Other important traits include observing social etiquette and cultivating poise under stress. Managers should focus on the big picture and let go of the small stuff. This is challenging for statisticians, as we excel in technical details. Respect diversity and welcome different opinions. Say “thank you” as often as the situation calls for it. Thank you.

**Todd:** Know the business and know the data. Ask yourself what the value drivers are.

**Nat:** Be curious and keep learning. Be open to working on new problems, learning new methods, and learning the subject-matter in the field in which you work. Take advantage of opportunities for training, learn from your mistakes, and listen to senior colleagues. Work on your oral and written communication skills.

## Modeling Course Planned for Summer

Students with interests and backgrounds in paleoecology, terrestrial ecosystem modeling, and/or statistics are encouraged to apply for the PaleON summer course, Assimilating Long-Term Data into Ecosystem Models. The course will take place at the Notre Dame Environmental Research Center in Land O’ Lakes, Wisconsin, from August 12–18.

Funded by the National Science Foundation, the course will focus on paleo data collection, ecosystem models, and statistical methods for analyzing paleo data and using the data to inform the models.

Applications are due March 31. More information can be found at <https://ebi-forecast.igb.illinois.edu/paleon/news.html>.



Other useful skill sets and personality traits include a solid training in statistics, tenacity, patience (e.g., to help your “clients” clarify their goals), friendliness, and ability to work with others. Character and integrity are necessary skills.

### *What are the pros and cons of moving from a technical role into management or leadership?*

**Amarjot:** Moving into a management role allows me to look at the business at the macro level and have the opportunity to mentor. On the other hand, it takes me away from the data and details of analysis and leaves me with less time to work on interesting problems. There is no one role (management or individual contributor) that is better than the other. It depends on the interest of an individual and the appropriate skill set.

**Todd:** Seeing people develop is the best part of the job. As a manager or leader, you have the opportunity to contribute to and work on multiple problems.

**Bob:** In general, there are not enough statisticians in managerial or leadership roles. Often, people who excel technically are promoted into management positions and fail because they have not been adequately prepared for this responsibility. Successful managers are those who focus on helping their groups succeed. They see it as their job to remove obstacles to success and to create collegial, productive environments for their groups. Successful managers often pay the price of added stress, especially when there are conflicting goals or unclear direction from upper management. On the other hand, being a manager can be rewarding if you measure success by the accomplishments of the people you serve.

**Christy:** Helping others grow is a top priority for management. This requires selflessness on the individual manager’s part.

### *To succeed in the “world of applied statistics,” does it make a difference whether your graduate degree is from a theoretical or applied program?*

**Bob:** A degree from an applied program can get you off to a faster start, but my experience (both personally and as a manager) has been that it doesn’t make much difference in the long run. What ultimately matters is the ability to think creatively about problems, and having solid theoretical training can be helpful for this purpose.

**Todd:** A degree that includes a mix of theory and applied statistics is best. Learn the theory and learn how to apply it.

### *I teach in a university. How can I help my students learn skills such as how to give effective presentations?*

**Nat:** In a course I taught at UCLA, I assigned students presentations, and then asked them to comment or critique each other’s presentations. Give them team projects, as well.

**Bob:** Students should learn to think about their audience and how to meet their audience’s needs and interests. Students should also learn to state the problem clearly, give useful examples, and produce a concise summary. They should not let technical details dominate their talks.

### *How to find a mentor?*

**All:** ASK. Put yourself out there and let others know you want their opinion. Seek a mentor through your local ASA chapter or join an ASA section. ■

## 2012 Poster and Project Competitions

Introduce K–12 students to statistics through the annual poster and project competitions directed by the ASA/NCTM Joint Committee on Curriculum in Statistics and Probability. The competitions offer opportunities for students to formulate questions and collect, analyze, and draw conclusions from data. Winners will be recognized with plaques, cash prizes, certificates, and calculators, and their names will be published in *Amstat News*. Posters for grade K–12 students are due every year on April 1. Projects, now for only grade 7–12 students, are due on June 1. For more information, visit [www.amstat.org/education/posterprojects](http://www.amstat.org/education/posterprojects).

# JSM 2012 Site a City with History

## San Diego: The highlights



The San Diego area has long been inhabited by the Kumeyaay (Tipai-Ipai) Native Americans. The Kumeyaay Research Portal at [www.kumeyaay.info/kumeyaay\\_indians.html](http://www.kumeyaay.info/kumeyaay_indians.html) says the following:

The oldest known Kumeyaay ancestors—the San Dieguito Paleo Indians—have been traced back into prehistoric San Diego lands to 10,000 B.C. through hard archeological evidence collected from ancient San Diego–area indigenous sites, which virtually proves the Diegueno and Kumeyaay Indian peoples have lived in Southern California and northwest Mexico for at least 12,000 years.”

The Kumeyaay operate farms, casinos, and other businesses on their lands within the county.

The original town of San Diego was located at the foot of Presidio Hill, in the area that is now Old Town San Diego State Historic Park. Today, Old Town is a popular place to visit, dine, and shop because of its unique boutique shops, historical sites, Mexican restaurants, and the most-haunted house in the United States—the Whaley House.

San Diego was incorporated as a city and named the county seat of San Diego County. In 1867, Alonzo Horton built a wharf on the bay and developed land several miles south of the town, an area that would become

downtown San Diego. In 1906, John D. Spreckels built a railway to provide San Diego with a direct transcontinental rail link to the east by connecting with the Southern Pacific Railroad. The railway was dubbed the “The Impossible Railroad” by many engineers of its day due to the immense logistical challenges involved in building it. Eight major catastrophes delayed the completion of the railway to 1919. After completion, the line was plagued with a series of environmental disasters, including earthquakes, landslides, heavy rains, and fires. Passenger service was discontinued in 1951. The line includes Goat Canyon trestle, built in 1932, which is the longest and tallest curved wooden trestle in the United States.

San Diego has always had a strong military presence, with garrisons of soldiers of Spain, Mexico, and the United States. Significant U.S. Navy presence began in 1901, with the establishment of the Navy Coaling Station in Point Loma. Large installations since then include Marine Corps Air Station Miramar, Naval Base San Diego, San Diego Naval Hospital in Balboa Park, Marine Corps Recruit Depot San Diego, San Diego Naval Training Center (closed in 1997), and Marine Base at Camp Pendleton.

San Diego hosted two World’s Fairs: the Panama-California Exposition in 1915 and the California Pacific International Exposition in 1935. The expositions left a lasting legacy in the form of Balboa Park and the San Diego Zoo. Today, Balboa Park hosts more than 15 museums, including the Reuben H. Fleet Science Center, 19

gardens, nine performing arts and music theaters, a carousel, a miniature railroad, the Spanish Village art center, and the world-famous San Diego Zoo.

San Diego is a member with Tijuana, Mexico, of the San Diego-Tijuana international metropolitan area. The combined area includes a population of 5 million people. Each city is a major port of entry for trade and tourism between the United States and Mexico. Hundreds of thousands of vehicles pass between the nations daily and 40 million people cross the border each year.

Like other American cities, San Diego is home to immigrants and descendants of recent immigrants from all over the world. Because of its nearness, Mexico has contributed the largest number of immigrants, but there are immigrants from Iraq, Iran, Israel, Italy, Germany, France, India, Pakistan, China (including autonomous Taiwan), S. Korea, Indonesia, Ukraine, Russia, Vietnam, Canada, and the Philippines. With rare exceptions (the end of the Vietnam War, the collapse of the USSR), the immigration has been a continuous flow, rather than discrete floods.

San Diego supports major sports and arts, in addition to science, commerce, and industry. The spectacular statue of a face near the convention center was built in 2001 under the supervision of Niki de Saint Phalle, an immigrant from France, whose other works are distributed around the public areas of San Diego. For further information, visit the San Diego History Center website at [www.sandiegohistory.org](http://www.sandiegohistory.org). ■

# Call for Proposals for Late-Breaking JSM Sessions

Steve MacEachern, JSM 2012 Program Chair

I would like to thank the many speakers and organizers for contributing to an interesting and stimulating program for JSM 2012. By the time you read this, we will have a wonderful program in place, and members of the JSM Program Committee will be working with the ASA Meetings Department staff to put the finishing touches on it. The late-breaking sessions are one such finishing touch.

Planning for the JSM program began in July 2011, so most technical sessions will be organized long before the meeting takes place. While the advance planning is needed to organize a large meeting such as JSM, it prevents us from scheduling sessions about recent developments of great interest and in which statistical issues are relevant. Thus, there are two special invited session slots reserved for late-breaking issues. Any member of the sponsoring organizations or partner societies (ASA, Institute of Mathematical Statistics, Statistical Society of Canada, International Biometric Society [ENAR and WNAR], International Chinese Statistical Association, and International Indian Statistical Association) can propose such a session.

A late-breaking session must cover one or more technical, scientific, or policy-related topics that arose in the one-year period prior to JSM 2012. Proposals for late-breaking sessions must be emailed to me at [snm@stat.osu.edu](mailto:snm@stat.osu.edu) with a copy to the ASA Meetings Department at [meetings@amstat.org](mailto:meetings@amstat.org) by April 13. The proposal must include the following:

- Session description, including a title, summary of its statistical and scientific content, explanation of its timeliness, and comments about the target audiences
- Format of the session (e.g., a chair and four panelists; a chair, two or three speakers, and a discussant)
- Names, affiliations, and contact information for the session organizer, chair, and all participants (speakers, panelists, discussants)
- A title for each presentation
- Web links to relevant technical reports or news reports, if applicable

Organizers should make sure all the participants agree to participate before the proposal is submitted. The JSM participation guidelines state that a speaker can give a main presentation and participate in a late-breaking session at the same meeting.

Two late-breaking sessions will be selected from the proposals received by the deadline (subject to approval by the ASA Committee on Meetings). Proposals will be judged on statistical and scientific quality, novelty, and timeliness of the subject matter; potential audience appeal; and completeness. A description of the late-breaking sessions and other special sessions will appear in a future issue of *Amstat News*. ■



MacEachern

## ASA CONFERENCE ON RADIATION AND HEALTH



Photo by Robert Dennis

Join us June 10–13 at The Colony Hotel in Kennebunkport, Maine, for the 2012 American Statistical Association's Conference on Radiation and Health.

With this conference, the ASA continues a decades-long tradition of bringing together leading internationally known scientists and new investigators working in the biophysical, biological, biostatistical, and public health aspects of radiation epidemiology.

### Registration Now Open!

For further information or to register, visit [www.amstat.org/meetings/radiation/2012/index.cfm](http://www.amstat.org/meetings/radiation/2012/index.cfm).



**Sallie Keller**, 2006 ASA president, was recently appointed as provost of The University of Waterloo in Ontario, Canada, effective this summer.

Keller is currently the director of the Institute for Defense Analyses Science and Technology Policy Institute in Washington, DC. She leads more than 40 researchers who gather and analyze information about international and national science and technology issues for the White House, National Science Foundation, National Institutes of Health, and federal commerce and energy departments. Her five-year term at Waterloo begins July 1, when she will also become a tenured professor in the department of statistics and actuarial science.

“Waterloo is an institution known for being focused on

how to bridge the boundaries of the disciplines,” said Keller. “I have had success in building these kinds of connections, and so I believe in institutions like Waterloo that promote entrepreneurial activity and faculties working together.”

Keller earned a PhD in statistics from Iowa State University of Science and Technology. She holds BS and MS degrees in mathematics from the University of South Florida. ■

ASA member **Judea Pearl** and Sir Richard Friend of the University of Cambridge were recently named winners of Technion’s 2011 Harvey Prize in Science and Technology. The prize ceremony will take place at Technion on March 29.

Pearl, professor of computer science at the University

of California at Los Angeles, through his wide-ranging and keen research, laid the theoretical foundations for knowledge representation and reasoning in computer science. His theories for inference under uncertainty, and most notably the Bayesian network approach, have profoundly influenced diverse fields such as artificial intelligence, statistics, philosophy, health, economics, social sciences, and cognitive sciences. The Harvey Prize is awarded to Pearl in recognition of his foundational work that has touched a multitude of spheres of modern life.

Pearl completed his bachelor’s degree in electrical engineering at Technion in 1960. ■

Read about your colleagues and friends in the news. Go to [www.amstat.org](http://www.amstat.org) and click on “Statisticians in the News.”



# Survey Michigan

photo credit: Thinkstock

## Courses in Survey Research Techniques

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## Cox Award

Members of the Gertrude M. Cox Award Committee are seeking nominations for the 2012 Gertrude M. Cox Award.

The annual award recognizes a statistician in early to mid-career (fewer than 15 years after his/her terminal degree) who has made significant contributions to survey methodology, experimental design, biostatistics, and statistical computing.

The award is presented at the Washington Statistical Society's (WSS) annual dinner, held in June, with the recipient delivering the keynote address on a topic of general interest to the WSS membership. The award consists of a \$1,000 honorarium, travel expenses to attend the WSS annual dinner, and a commemorative WSS plaque.

Nominations should be emailed to Karol Krotki at [kkrotki@rti.org](mailto:kkrotki@rti.org) by March 16. A supporting statement and CV (or a link to one) for the candidate should be included.

The award is in memory of Gertrude M. Cox (1900–1978). In 1945, Cox became director of the Institute of Statistics of the Consolidated University of North Carolina. In the 1950s, as head of the department of experimental statistics at North Carolina State College, she played a key role in establishing mathematical statistics and biostatistics departments at The University of North Carolina. Upon her retirement from North Carolina State University in 1960, Cox became the first head of the statistical research division at the newly founded RTI. She was a founding member of the International Biometric Society (IBS) and, in 1949, became the first woman elected into the International Statistical Institute. She served as president of both the American Statistical Association and IBS.

In 1975, she was elected to the National Academy of Sciences.

## Spiegelman Award

The Statistics Section of the American Public Health Association (APHA) invites nominations for the 2012 Mortimer Spiegelman Award, which honors a statistician 40 years of age or younger who has made outstanding contributions to health statistics, especially public health statistics.

The award was established in 1970 and is presented annually at the APHA meeting.

Candidates for the Spiegelman award must have been born in 1972 or later. Please send electronic versions of a nominating letter and the candidate's CV by April 2 to the Spiegelman Award Committee, c/o Rafael A. Irizarry (chair), at [rafu@jhu.edu](mailto:rafu@jhu.edu).

Details about the award and information about the Statistics Section of APHA can be found at [www.apha.org/memberships/sections/aphasections/stats/about/spiegelman.htm](http://www.apha.org/memberships/sections/aphasections/stats/about/spiegelman.htm).

## Ellis R. Ott Scholarship

The Statistics Division of the American Society for Quality has \$7,500 scholarships to

support students who are enrolled in or accepted into a master's degree or higher program with a concentration in applied statistics and/or quality management. This includes the theory and application of statistical inference, statistical decisionmaking, experimental design, analysis and interpretation of data, statistical process control, quality control, quality assurance, quality improvement, quality management, and related fields. The emphasis is on applications.

Qualified applicants must have graduated in good academic standing in any field of undergraduate study. Scholarship awards are based on demonstrated ability, academic achievement, industrial and teaching experience, involvement in student or professional organizations, faculty recommendations, and career objectives.

Application instructions and forms can be downloaded from [www.asqstatdiv.org](http://www.asqstatdiv.org), and applications will be accepted until April 1.

Throughout the last 14 years, scholarships totaling \$200,000 have been awarded to 34 students.

For more information, contact Lynne Hare at [lynn.hare@comcast.net](mailto:lynn.hare@comcast.net) or 55 Buckskin Path, Plymouth, MA 02360. ■

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

[www.amstat.org/awards](http://www.amstat.org/awards)

**April 2, 2012**  
ASA Gertrude M. Cox Scholarship

Nominations: Pam Craven, [pamela@amstat.org](mailto:pamela@amstat.org)  
Questions: Eleanor Feingold, [feingold@pitt.edu](mailto:feingold@pitt.edu)

**April 2, 2012**  
ASA Outstanding Statistical Application Award

Nominations: Pam Craven, [pamela@amstat.org](mailto:pamela@amstat.org)  
Questions: Petrutza C. Caragea, [pcaragea@iastate.edu](mailto:pcaragea@iastate.edu)

**April 2, 2012**  
ASA Edward C. Bryant Scholarship

Nominations: Pam Craven, [pamela@amstat.org](mailto:pamela@amstat.org)  
Questions: Tapabrata Maiti, [maiti@stt.msu.edu](mailto:maiti@stt.msu.edu)

**April 2, 2012**  
ASA Excellence in Statistical Reporting Award

Nominations: Pam Craven, [pamela@amstat.org](mailto:pamela@amstat.org)  
Questions: Morteza Marzjarani, [marzjara@svsu.edu](mailto:marzjara@svsu.edu)

**April 2, 2012**  
ASA Samuel S. Wilks Memorial Medal

Nominations: Pam Craven, [pamela@amstat.org](mailto:pamela@amstat.org)  
Questions: Paul P. Biemer, [ppb@rti.org](mailto:ppb@rti.org)

# sectionnews

## Biopharmaceutical

Steve Wilson and Steve Gulyas, 2011 and 2012 section chairs, coauthor their first transition letter and acknowledge the past and current section members for their service. These include Rick Caplan, who served as secretary; Christie Clark, who led the student paper competition; and Yongming Qu, who started the Contributed Poster Competition Committee. Jeff Maca and Carmen Mak are both acknowledged for their service to the JSM committee, and Brenda Crowe and Joan Buenconsejo are recognized for their work with the 2011 FDA/ Industry Statistics Workshop. Also acknowledged are Alex Dmitrienko for his service as council of sections representative and Tom Keefe, Veronica Taylor, and Anna Legedza for their years of service to the executive committee. Other members recognized for their service include webmaster Daniel Christen and Amit Bhattacharyya, associate editor of the *Biopharm Report*. 2011 past chair, Kathy Monti, is thanked for her overhaul of the *Manual of Operations*, the “bible” of responsibilities for the executive committee. The chairs also thanked continuing members of the committee.

Looking ahead, the chairs welcome the new members of the executive committee: Olga Marchenko, Dionne Price, Jingyee Kou, Alan Hartford, Jerry Wang, Carmen Mak, Estelle Russek-Cohen, Gary Aras, Jim MacDougall, Kjell Johnson, Anna Nevius, Ed Luo, and Richard McNally.

Wilson and Gulyas also review new ideas being discussed among members of the executive committee for 2012. For example, the section will evaluate the potential for smartphone voting during JSM sessions in the contributed paper competition; members of the Distance Learning Committee are discussing podcasts of seminars and virtual journal clubs; and members of the executive committee are talking about efforts to consolidate a professional development curriculum for “Statisticians as Leaders,” improving real-time communication via Twitter and texting alerts, and a continuous improvement initiative. The latter four areas are in need of a champion, and the section invites interested members to come forward.

View the details of the transition letter at <http://magazine.amstat.org/?cat=17>.

## Business and Economic Statistics

The ASA Business and Economic Statistics Section is pleased to announce that Edward Leamer will speak at the Economic Outlook Luncheon during the Joint Statistical Meetings (JSM) in San Diego, California, on July 31.

The luncheon is a long-standing feature of JSM and provides attendees the opportunity to hear leading economists, forecasters, and policymakers share their views about the economic outlook and issues regarding macroeconomic modeling and forecasting.

Leamer is the Chauncey J. Medberry Professor of Management, professor of economics, and professor of statistics at the University of California at Los Angeles (UCLA). He was formerly chair of the economics department at UCLA and is the author of more than 100 articles. He has published five books, including *Macroeconomic Patterns and Stories* and, most recently, *The Craft of Economics*.

Leamer is also the director of the UCLA Anderson Forecast, which provides forecasts for the economies of California and the United States. During its 50 years of operation, the forecast has been recognized as one of the most accurate and reputable independent sources of U.S. economic forecasts available.

Leamer is both a leading economic forecaster and a leading academic researcher in economics and econometrics. As such, he is uniquely qualified to speak on the economic outlook.

The Economic Outlook Luncheon is a fee event. Please look for and select it on your JSM registration form. For more information about this year's JSM, visit [www.amstat.org/meetings/jsm/2012/index.cfm](http://www.amstat.org/meetings/jsm/2012/index.cfm).

## Statistics and the Environment

The ASA Section on Statistics and the Environment (ENVR) is seeking nominations for their Distinguished Achievement Award and Young Investigator Award. Both are given to a member in recognition of outstanding contributions to the development of methods, issues, concepts, applications, and initiatives of environmental statistics. Successful nominees will receive their awards at the ENVR business meeting and reception during the Joint Statistical Meetings (JSM) in San Diego, California.

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

Nominations for both awards must be received by March 30. The nomination may be submitted electronically as a PDF document (preferred) or as a Word file. If submitted as a hard copy, send the original and five copies. Submit nominations to Walter W. Piegorsch at [piegorsch@math.arizona.edu](mailto:piegorsch@math.arizona.edu) or Program in Statistics, Keating 241, University of Arizona, Tucson, AZ 85721.

In addition to giving out awards during JSM, the section will cosponsor two short courses: Introduction to Analysis of Extremes: Univariate and Multivariate Cases, taught by Dan Cooley of Colorado State University, Fort Collins, and Statistical Methodologies for Exposure Data Analysis, co-taught by Thomas Mathew and K. Krishnamoorthy of the University of Maryland and University of Louisiana.

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

## chapternews

### Rochester and Syracuse

The Rochester and Syracuse chapters of the American Statistical Association are jointly organizing the first ASA upstate mini-conference, to take place March 31 at the Rochester Institute of Technology in New York.

The keynote speaker is Jason Hsu, from the department of statistics at The Ohio State University. The main theme for the meeting is “Harnessing the Power of Statistics Education.” Additional themes include the following:

- Approaches to Teaching Core Statistical Concepts
- Technology in Statistics (Statistical Software and Beyond)
- Practice of Statistics (Using Applications as Catalysts for Deeper Understanding)

For information and to register, visit <http://asaupstateconference.syr.edu/conference-program>.

### Southern California

The Southern California Chapter of the American Statistical Association will present an applied statistics workshop on Bayesian analysis March 24 at the Pointe conference center at the Walter Pyramid

on the campus of California State University, Long Beach. Scott M. Lynch, professor of sociology at Princeton University, will give a presentation on the application of Bayesian analysis in social sciences. For details and to register, go to the workshop website at <http://lasw.sc-asa.org>.

## committeeneews

### Committee on Applied Statisticians

The ASA Committee on Applied Statisticians will sponsor a topic-contributed session for the Joint Statistical Meetings (JSM) in San Diego, California. The session is titled Strategic Career Planning for the Academic Statistical Scientist: Another Kind of ‘Survival Analysis.’

The focus of the session is on career development for master’s and PhD biostatisticians who are recruited by academic institutions to be primarily involved in consulting and collaborating. This panel and floor discussion will focus on how collaborating biostatisticians and their units can survive and thrive in academia today. The panel members will cover two perspectives: that of the individual biostatistician and that of the leader of the biostatistics unit.

Issues to be addressed include mutual expectations and responsibilities by the individual and the institution to ensure career-long, on-the-job learning and general professional growth (in spite of limited resources); sound, but not burdensome, documentation of consulting and collaborative successes, goals set and met, and how the individual adds general value to the academic unit, key research teams, and the entire institution; and criteria for promotion, and, if applicable, tenure.

To learn more about the ASA Committee on Applied Statisticians, visit the committee’s web page at [www.amstat.org/committees/commdetails.cfm?txtComm=CCNARS02](http://www.amstat.org/committees/commdetails.cfm?txtComm=CCNARS02).

For details about the Joint Statistical Meetings, visit [www.amstat.org/meetings/jsm/2012/index.cfm](http://www.amstat.org/meetings/jsm/2012/index.cfm).

### Correction

The clip art that accompanied the Master’s Notebook column in the January issue misrepresented the graphic standards cited by Edward Tufte and Naomi Robbins. We apologize for any confusion this may have caused.



# SAS IS HIRING

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General responsibilities include identifying appropriate statistical techniques for implementation, programming in C, testing and documenting the software, and giving presentations to statistical audiences. Positions require a PhD in statistics, biostatistics, applied mathematics, numerical analysis or a related field, as well as specialization in one of the areas listed below.

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Causal inference

Design of experiments

Finite mixture models

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Mixed linear models

Model selection methods

Statistical graphics

Statistical reliability analysis

Structural equation methods

Survey data analysis

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EOE/AA Employer M/F/D/V Drug-free environment; screening required.





## Maryland

■ Department of epidemiology and biostatistics seeks applications for an assistant professor (tenure track). A doctorate in biostatistics or statistics is required. Candidates should demonstrate potential to establish and maintain external funding for a multidisciplinary research agenda and commitment to excellence in teaching and advising graduate students. Effective interpersonal, communication, and collaborative skills are essential. For application information, please visit our website: [sph.umd.edu/about/jobs.cfm](http://sph.umd.edu/about/jobs.cfm). The University of Maryland is an equal opportunity and affirmative action employer.

## New Hampshire

■ Statistical Analyst: Assist biostatistics faculty and cancer researchers in NCI-designated comprehensive cancer center.

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](http://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](http://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](mailto: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](http://www.amstat.org/jobweb).

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Promoting the Practice and Profession of Statistics



University of Maryland, College Park School of Public Health  
Department of Epidemiology and Biostatistics  
Position Vacancy: Biostatistics, Assistant Professor (Tenure Track)

The Department of Epidemiology and Biostatistics, School of Public Health, University of Maryland, College Park (<http://www.sph.umd.edu/EPIB>) invites applications for an Assistant Professor tenure-track position in biostatistics.

Qualified candidates should possess a doctoral degree in biostatistics or statistics and submit a record of scholarly achievement in biostatistics or statistics that supports a tenure-track position at the Assistant Professor rank. Candidates should demonstrate the potential to develop and conduct an independent research program using statistical methods to address public health issues. The ability to work collaboratively with colleagues in the department, the school, and the University is highly desirable. We are particularly interested in candidates with expertise such as multilevel modeling, structural equation modeling, spatial-temporal analysis, and Bayesian methods that can be applied to the study of chronic and infectious diseases, population and epidemiologic research, environmental studies, or related areas. Qualified candidates will have the ability to teach graduate level biostatistics courses, mentor graduate students, and collaborate in research projects.

Applicants must apply electronically to <https://jobs.umd.edu> specifying 112966, listed under the faculty section. Review of applications will begin immediately and applications will be accepted until the position is filled. Inquiries about the position should be directed to: Dr. Sandra Hofferth, Search Committee Chair ([hofferth@umd.edu](mailto:hofferth@umd.edu)). For questions concerning application submission, please contact Ms. Karen Mackey ([klmackey@umd.edu](mailto:klmackey@umd.edu)).

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### Tenure-Track Faculty Position

The Division of Biostatistics and Epidemiology at the Texas Tech University Health Sciences Center's Paul L. Foster School of Medicine at El Paso seeks highly qualified applicants for a full-time tenure-track biostatistics and epidemiology faculty position at the Associate Professor level. The position will report to the Chief of the Division of Biostatistics and Epidemiology and will hold a faculty appointment at the Paul L. Foster School of Medicine.

The city of El Paso is nestled between the beautiful Franklin Mountains and the Rio Grande with over 300 days of sunshine a year. Ranked as the 2<sup>nd</sup> Safest City in America with a population of more than 500,000, the community offers a vibrant city life at an affordable cost of living, with excellent collaboration opportunities with the University of Texas at El Paso and William Beaumont Army Medical Center.

Applicants must have a doctoral degree in Biostatistics, Statistics, Epidemiology or related field, strong communication and presentation skills, evidence of ability to conduct independent research and collaborate with research team/multiple investigators, regional or emerging national reputation in the area of biostatistics/epidemiology, and a successful track record of teaching or mentoring. Preferred Qualifications include record of peer-reviewed publications, record of collaborative research, record of scientific presentations and consultations, and a successful track record in teaching.

The successful candidate will be expected to collaborate with pre-clinical and clinical researchers to enhance research opportunities, conduct and direct independent research in biostatistics and epidemiology, complement the success of existing research programs and mentor junior faculty, research staff and students, and design and analyze pre-clinical (laboratory and animal), clinical and epidemiologic studies.

Salary, academic rank and tenure option are commensurate with qualifications and experience. A comprehensive benefits package is included. Interested candidates must apply online at <http://jobs.texasotech.edu>, requisition #84667. For further information, potential applicants may inquire confidentially to:

Patrick Tarwater, PhD, Search Committee Chair  
Professor and Chief, Division of Biostatistics & Epidemiology  
[patrick.tarwater@ttuhsc.edu](mailto:patrick.tarwater@ttuhsc.edu)

The position is open until filled. Application review will begin immediately. Texas Tech University Health Sciences Center is an Equal Opportunity/Affirmative Action Employer.

Statistical consulting/computing/data management/methodologic research; MS in biostatistics or equivalent; consulting experience in clinical research/epidemiology. R/SAS/genomics software/relational data bases. Full Dartmouth benefits. CV plus 3 references to: Tor D. Tosteson, ScD / HB 7927 / Dartmouth Medical School / One Medical Center Drive, Lebanon, NH 03756. Email: *Biostatistics.Shared.Resource@Dartmouth.edu*. *biostat.hitchcock.org*. Equal opportunity, affirmative action employer, women and minorities are encouraged to apply.

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

### International

■ American University in Cairo. 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 mathematics, statistics, or actuarial science, beginning September 2012. The candidate is expected to teach and conduct research and play an active role in the department, the school, and university service activities. Apply Here: [www.Click2Apply.net/ydjzy8q](http://www.Click2Apply.net/ydjzy8q). EOE.

■ School of Statistics, Central University of Finance and Economics invites applications for full-time tenure-track positions of all ranks (assistant, associate, and full professor) in all areas of statistics or econometrics to begin in the fall of

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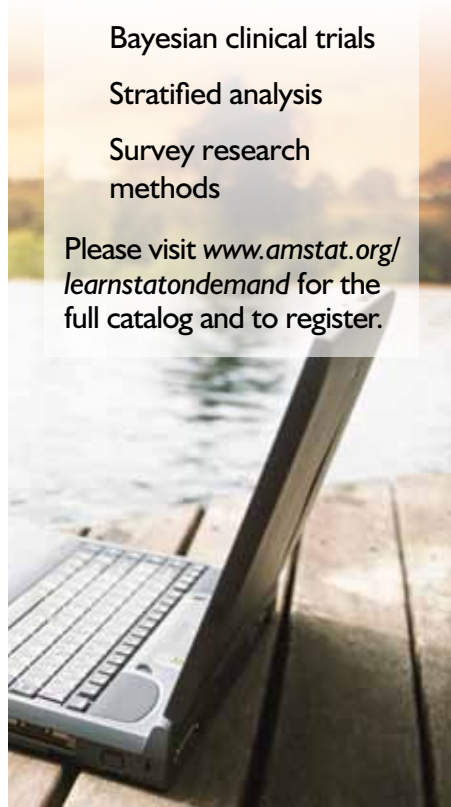
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## Survey Sampling Statistician

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

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

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

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### Survey Sampling Statistician

Job Code 4621BR

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

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# UC San Diego

## SCHOOL OF MEDICINE

The Department of Family and Preventive Medicine within the School of Medicine, Health Sciences at UC San Diego (<http://famprevmed.ucsd.edu/>) is committed to academic excellence and diversity within the faculty, staff, and student body. We invite applications for Chief of the Division of Biostatistics and Bioinformatics. The Division is situated within the research-intensive environment of UCSD Medical School, which has research funding of nearly \$1 billion annually and is among the leading US academic medical centers. The Division currently has 11 faculty members, and supports major research initiatives in Alzheimer's disease, AIDS, stroke, cancer, and public health. The division is an integral part of the newly funded UCSD Clinical and Translational Research Institute, as well as NCI-designated UCSD Moores Comprehensive Cancer Center. The Division has historically strong ties to the UCSD Department of Mathematics, including its new Ph.D. in Statistics, as well as to the San Diego Supercomputer Center.

We seek a Division Chief who is nationally recognized for his or her research, with a successful record of administrative leadership in an academic medical setting. The Chief will lead division faculty in strategic planning for growth, including identification and pursuit of funding initiatives in translational and methodological biostatistics research. Responsibilities will include representing the Division effectively within the Department and the School of Medicine, recruiting and mentoring new faculty; and working closely with division faculty to provide leadership and oversight, including administration and growth of Division resources and academic promotion and retention of Division faculty.

Candidates must have a doctoral degree in Biostatistics, Statistics, or a closely related field, and must be eligible for a tenured appointment at the associate or full professor level. A strong track record in research, strong interpersonal and administrative skills, and significant academic experience and accomplishment, including in a leadership role, are also required.

Please reference position number **10-284-AD** on all correspondence.

Salary is commensurate with qualifications and consistent with University of California pay scales.

Review of applications began on December 1, 2011 and continue until the position is filled.

To apply, please provide a letter of interest, CV, and names and contact information of three referees. Applicants are also asked to summarize in a personal statement their demonstrable commitment to promoting and enhancing diversity and equality, or their potential to make contributions in the field.

### Apply at:

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### Or send by mail to:

Karen S. Messer Ph.D. Chair, Search Committee  
c/o Emily Pittman, Ph.D.  
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■ Senior instructor of rank comparable to associate professor position in the Dept. of ISOM. Applications will be accepted until the position is filled. Excellence in teaching and PhD required by employment start date. The successful applicant is expected to play an important role in teaching and developing business statistics courses for undergraduate and MBA programs of the business school. Submit CV and three referees to: [stat11@ust.hk](mailto:stat11@ust.hk). EOE.

*continued on p. 46*

## NORC at the UNIVERSITY OF CHICAGO

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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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City University of Hong Kong is a dynamic, fast-growing university that is pursuing excellence in research and professional education. As a publicly-funded institution, the University is committed to nurturing and developing students' talent and creating applicable knowledge to support social and economic advancement. Currently, the University has six Colleges/Schools. Within the next two years, the University aims to recruit **100 more scholars** from all over the world in various disciplines, including **science, engineering, business, social sciences, humanities, law, creative media, energy, environment**, and other strategic growth areas.

Applications are invited for :

### **Associate Professor/Assistant Professor Department of Management Sciences [Ref. B/886/49]**

**Duties** : Conduct quality research, teach courses at undergraduate and graduate levels, and supervise PhD/MPhil students. The posts are tenable from September 2012. Most undergraduate classes are conducted in the day time, with evening teaching for the taught postgraduate programs.

**Requirements** : The Department seeks strong candidates in the areas of statistics, econometrics, sampling survey and risk management. Candidates for Associate Professor should possess a PhD in statistics, a solid publication record in quality international journals and a dedication to quality teaching, preferably with relevant teaching experience. They are expected to provide contribution/leadership in research, plan curriculum of studies and supervise postgraduate/research degree students. Candidates for Assistant Professor should possess a PhD or near its completion.

#### **Salary and Conditions of Service**

Remuneration package will be driven by market competitiveness and individual performance. Excellent fringe benefits include gratuity, leave, medical and dental schemes, and relocation assistance (where applicable). Initial appointment will be made on a fixed-term contract.

#### **Information and Application**

For further information or queries about the posts, please send to Head of Department [Fax: (852) 3442 0189/email: msapril@cityu.edu.hk].

Please send the application with a current curriculum vitae to the Human Resources Office, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong [Fax : (852) 2788 1154 or (852) 3442 0311/email : hrojob@cityu.edu.hk]. **Applications received by 15 April 2012 will receive full consideration.** The University reserves the right not to fill the positions. Personal data provided by applicants will be used strictly in accordance with the University's personal data policies, a copy of which will be provided upon request.

The University also offers a number of visiting positions through its "CityU International Transition Team" for current graduate students and for early-stage and established scholars, as described at [http://www.cityu.edu.hk/provost/cityu\\_international\\_transition.htm](http://www.cityu.edu.hk/provost/cityu_international_transition.htm).

City University of Hong Kong is an equal opportunity employer and we are committed to the principle of diversity. We encourage applications from all qualified candidates, especially those who will enhance the diversity of our staff.

**City University of Hong Kong was ranked the 110<sup>th</sup> among the world's top universities and the 15<sup>th</sup> in Asia according to the *Quacquarelli Symonds 2011* surveys.  
<http://www.cityu.edu.hk>**



**Biostatistician - PhD Faculty Opportunity**  
**Samuel Oschin Comprehensive Cancer Institute Biostatistics and Bioinformatics Research Center**

Applications are being accepted for a faculty-level biostatistician, effective immediately. The successful applicant will join the Biostatistics and Bioinformatics Research Center and will work closely with a multidisciplinary team of biostatisticians, research scientists and clinicians at the Cedars-Sinai Medical Center to further research efforts at the Cancer Institute (<http://www.cedars-sinai.edu/Patients/Programs-and-Services/Samuel-Oschin-Comprehensive-Cancer-Institute-/Research-and-Clinical-Trials/Biostatistics-and-Bioinformatics-Research-Center/>). An opportunity to develop an independent research program will exist in addition to collaboration and consultation with ongoing research efforts at Cedars-Sinai. The successful candidate will be eligible for an academic appointment in the Cedars-Sinai Medical Center professorial series. Preferred areas of research include but are not limited to clinical trials, survival analysis, and Bayesian modeling.

Applicants must have a PhD or equivalent degree in biostatistics or a statistics-related discipline; be capable of independent research and collaboration; have experience working in an academic setting; and have excellent written and oral communication skills. Cancer-related experience is desirable but not required. Opportunities exist for collaborations in other disease areas.

Responsibilities include:

- Developing or expanding an independent methods-based research program;
- Collaboration and consultation with faculty on design and analytic methods for research proposals and current research projects;
- Teaching statistics at the graduate level; and
- Preparation of grants, reports, and manuscripts

For full consideration, all applicants should submit:

- A cover letter describing qualifications for the position described above;
- A current curriculum vitae;
- Three representative publications; and
- Contact information for three references

Review of applications will begin immediately and will continue until the position is filled. Electronic submissions of application documents (in one PDF file) should be emailed to André Rogatko, PhD, Director of Biostatistics and Bioinformatics Research Center at the Samuel Oschin Comprehensive Cancer Institute, Cedars-Sinai Medical Center c/o [patricia.carson@cshs.org](mailto:patricia.carson@cshs.org).

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■ The department of mathematics and actuarial science announces the availability the AIG Distinguished Visiting Professor of Actuarial Science. This prestigious position is funded by the American International Group, Inc. (AIG), beginning September 2012. The candidate is expected to teach and conduct research in actuarial science and play an active role in the department, the school, and university service activities. Apply Here: [www.click2apply.net/3z962jw](http://www.click2apply.net/3z962jw). EOE.

■ 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 mathematics, statistics, or actuarial science, beginning September 2012. The candidate is expected to teach and conduct research and play an active role in the department, the school, and university service activities. Apply Here: [www.Click2Apply.net/ldjzy8q](http://www.Click2Apply.net/ldjzy8q). EOE. ■

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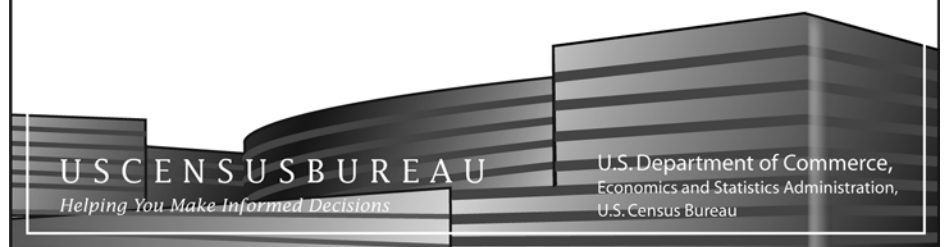
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- Improve statistical methods for modeling and adjustment of seasonal time series.
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## Requirements

- U.S. citizenship
- Bachelor's, Master's or Ph.D with at least 24 semester hours in math and statistics (see website for more specifics on required coursework)

Apply at [www.census.gov](http://www.census.gov), click on Jobs@census, Headquarters and NPC Employment Opportunities, Mathematical Statistician

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**LSU Health Shreveport**

HEALTH SCIENCES CENTER

**Christus Schumpert Health System Endowed Chair  
Employment Opportunity – Biostatistician/Epidemiologist**

The Department of Neurosurgery at Louisiana State University Health Science Center is seeking an biostatistician/epidemiologist to join as the Christus Schumpert Health System Endowed Chair focusing on neuroscience research, stroke and outcomes data. This position will be at the Associate Professor/Professor Faculty level, tenure track, as commensurate with experience. Our research program includes a broad array of applied epidemiologic, clinical services and scientific research.

The successful candidate will be able to take leadership in a program of applied research; mining our large clinical database to produce successful research activities culminating in the writing and publication of scientific papers and the acquisition of applicable grants. They will be responsible for developing research plans, conducting analysis of existing databases, assessing gaps in data collection and analysis, overseeing research intended to acquire new data, and will focus on collaborative, applied research with research team colleagues in neurosurgery and neurology which will require good communication among the multiple departments.

Qualifications include: PhD in Biostatistics/Epidemiology or a closely related field with interest in neurosciences; advanced knowledge of research principles, theories, and concepts; applied statistical skills; applied knowledge of statistical software for analysis of complex data; and a proven record of achievement including peer reviewed publications and national presentations.

Salary, startup package, and space allocation will be commensurate with faculty rank and extramural funding. Applicants should have a PhD and/or MD with relevant post-graduate experience. Applications will be reviewed as they are received until the position is filled. Shreveport is a progressive modern city with excellent schools, numerous family activities, and a very low cost of living. Interested individuals who wish to participate in a unique, diverse, academically productive medical center should send a C.V. with a letter describing research or clinical interests and with three letters of reference to:

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Professor and Chairman, Department of Neurosurgery  
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### misc. products and services

University of Michigan ..... p. 34

### professional opportunities

American Institutes for Research ..... p. 40

Capital One ..... p. 45

Cedars-Sinai Medical Center ..... p. 45

City University of Hong Kong ..... p. 44

Louisiana State University Health Sciences  
Center ..... p. 47

NORC ..... p. 43

Northwestern University School of Continuing  
Studies ..... p. 42

SAS ..... p. 38

Texas Tech University Health Sciences Center ..... p. 41

U.S. Census Bureau ..... p. 46

University of California, San Diego ..... p. 43

University of Maryland ..... p. 39

Westat ..... p. 42

### software

Cytel Inc. .... p. 21

JMP, a business unit of SAS ..... cover 3

Minitab Inc. .... centerfold

NCSS ..... p. 6

Salford Systems ..... p. 22, centerfold

SAS ..... cover 4

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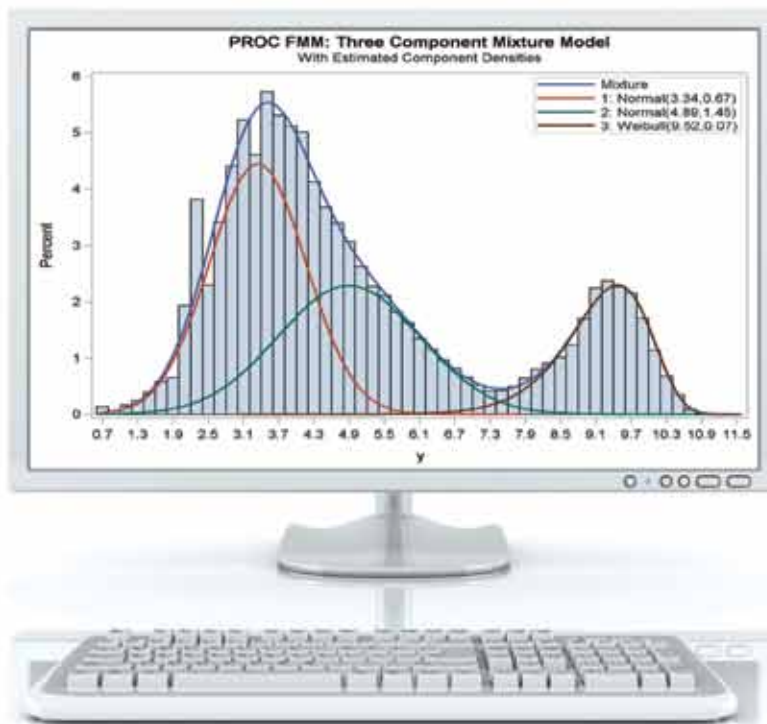
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