

December 2015 • Issue #462

AMSTATNEWS

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A New Design for the 21st Century

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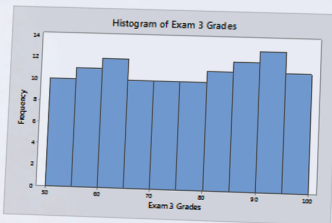
ASA Leaders

Reminisce: Ron Iman

Number of AP Statistics
Exams Administered
Approaches 200,000

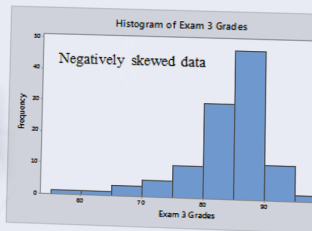
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Mean (~71.86) and median (73) are about the same



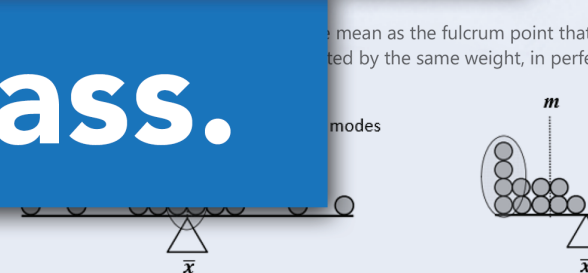
Mean (~75.04) and median (75) are about the same

Mean (~66.32) is greater than the median (62)



Mean (~83.50) is less than the median (89)

Measures of Spread



Also noted in each picture are the modes (circled) and location of the definitions of these statistics are contained in the following pages.

Example 1

Ten batteries from brands A, B, and C were tested to determine their

Brand A:	41	289	214	102	38	94	179
Brand B:	39	65	22	64	22	191	99
Brand C:	24	95	139	122	41	360	318

Here are the lifetimes plotted as comparison dotplots in Minitab:

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

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21 **STATtr@k** **Top 10 Tips for Getting Successful Statistical Internships**

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.

24 **FUNDING OPPORTUNITIES** **Better Statistical Participation Is Needed** **Across Collaborative Science**

This column highlights research activities that may be of interest to ASA members. This article includes information about new research solicitations and the federal budget for statistics. Comments or suggestions for future articles may be sent to the *Amstat News* managing editor at megan@amstat.org.



Online Article

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

The 2015 New England Symposium on Statistics in Sports (NESSIS) was held September 26 at the Harvard University Science Center. The symposium format was a mixture of invited talks, a poster session, and a panel discussion. One of the speakers, Stan A. Veuger of the American Enterprise Institute, gave a talk titled "Football Under Pressure: Assessing Malfeasance in Deflategate." The second featured talk was a presentation by Carl Morris, professor emeritus of statistics at Harvard University, titled "Comparing Sports Performances Using Counts and Rates." To read more about this conference, visit <http://magazine.amstat.org>. Technical talk videos, presentation slides, photographs, and additional information about the 2015 NESSIS can be found at www.nesis.org.

Make the most of your ASA membership

Visit ASA Members Only: www.amstat.org/membersonly.

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

departments

JSM2016 CHICAGO

- 26 **meetings**
Get Involved in JSM 2016



The Imposteriors perform with three guest musicians at the ICHPS Conference October 7–9 in Providence, Rhode Island.

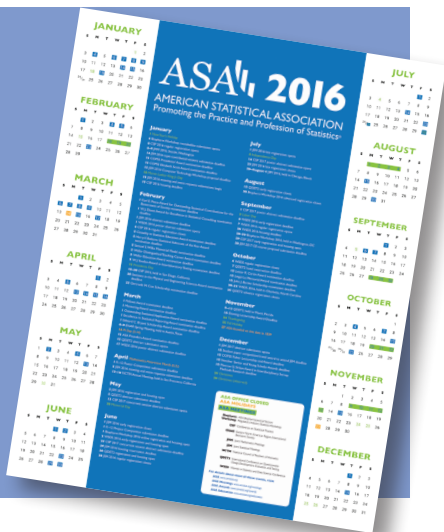
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Looking Back on 2015

I start this last of my President's Corners by "passing the pen" to Jessica Urts, who on January 1, 2016, will start serving as your next president—the 111th. Having worked for several years with Jessica on the board, I have come to know her as inspiring, dedicated, and tireless—a volunteer who will continue as she has in the past, serving the ASA community. I hope many of you will take the time to welcome her and offer her your appreciation for the huge give-away it can take to represent the association and to offer her, as you offered me, your support.

Memories

There are a number of memories of this experience serving you I will cherish. (Listen to the theme from "Cats" as you continue: <https://www.youtube.com/watch?v=EAAWaEQd6lE>).

Invitations to Visit. The ASA receives many invitations for speakers to make presentations to chapters, give keynote talks at conferences, and visit universities. Often, these go to the president first, and if he or she is unable to attend, the president-elect, the past president, the vice presidents, or other board members are asked. I was able to honor the ASA's founding with a talk to the Boston Chapter. I offered my thoughts about the practice and profession of statistics in a keynote presentation at the Non-Clinical Biostatistics Conference 2015, a University of Kansas Medical Center-sponsored conference, and Statistics Career Day—sponsored by Grand Valley State. Of

course, the trips to meet faculty, students, and graduates at North Carolina State University, Florida State University, and Arizona State University were both memorable and invigorating. Talking with graduate students and discussing their challenging questions was, without a doubt, one of the greatest pleasures of this experience! These visits were thoroughly enjoyable. My hosts always extended a warm welcome and offered great hospitality.

The Board. Having been part of the ASA Board for the past four years, what comes through clearly is the sense of shared purpose and common ground. These very active ASA volunteers put in a lot of time to serve the membership. They are dedicated to moving the association forward, growing it, making it more visible in the world, and supporting professional development opportunities. They are concerned about statistics education and how we can get our vital viewpoint into the media. Importantly, they enjoy working together, addressing the challenges we face, and finding and implementing solutions. It's been a pleasure and an honor to chair these meetings this year.

The ASA Staff. Our membership is extremely well served by our executive director and the staff he has assembled and manages. They have the experience and professionalism to do the job and do it well, as well as to advance our strategic plan. They really enjoy their work, and they continue to search for ways to do it better.

Past Presidents' Support. Last January 1, I found in my

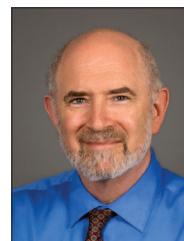
inbox emails from several past presidents, all welcoming me into this new assignment and offering their support. Simply offering to be there. Their wise counsel and presence has been and remains greatly appreciated! This is just one more gift for the future volunteers willing to take on this role. I suspect I met some of those future leaders in the visits I've been fortunate to make on behalf of the ASA.

Moving Forward

Some of our greatest opportunities fall into the following areas: finding and welcoming tomorrow's statisticians; stepping up to the challenge offered by Big Data; focusing our values on solving the world's problems; and helping mentor our colleagues and honoring those who have been effective at doing so.

Tomorrow's Statisticians. Our profession's future lies in the hands of young statisticians and statisticians-to-be. Those young people who have yet to realize they will be our future colleagues and leaders in our profession are guided and influenced by high-school teachers, community-college instructors, and undergraduate faculty in math and statistics. The ASA does a great deal and can do more to support and encourage the people who are so critical to enlisting and teaching the next generation.

STATS 101. We all have had that experience of meeting someone who, upon learning what we do, showed that "look" on their face. The look that says, "I took a statistics class once. Terrible instructor." Or "I couldn't do



David Morganstein

The explosion of data from numerous areas is both a challenge and an opportunity for our profession. From genomics to web to the Internet of things, there is a high demand for people with data-analytic skills to work in these areas.

that for a living,” because that one and only statistics class was a boring recitation of formulas. Dick De Veaux and his committee are developing a life raft of exciting case studies, possibly with accompanying video—materials that can be used by a first-time instructor or someone without any data analysis experience to make that one (and hopefully eye-opening) course more interesting. The challenge ahead is to promote this material and make it accessible to anyone teaching an introductory stats course.

This is Statistics. Our This is Statistics program is aimed at high-school students and college undergraduates. It’s designed to plant the seed that our profession could be the right profession for them. We need to keep sending the message and supporting the teachers, instructors, and counselors who work with these students.

Utts’ Initiative. One of Jessica’s initiatives is to deliver information about careers in statistics to high-school statistics classes. This is a perfect complement to the ASA’s This is Statistics program and one that can help inspire that next generation of young statisticians!

Big Data and Data Science. The explosion of data from

numerous areas is both a challenge and an opportunity for our profession. From genomics to web to the Internet of things, there is high demand for people with data-analytic skills. Many of us may think we have been excluded from important discussions about these recent changes (e.g., the talk given by Terry Speed, <http://bit.ly/1kxwvR5>). The recent ASA Board Statement (www.amstat.org/misc/DataScienceStatement.pdf) is a call to action.

To meet the demand, data science programs have been initiated at many universities but, unfortunately, too often outside of and with no connection to traditional statistics departments. The University of Michigan, for example, just announced a \$100 million data science initiative that may grow to include 35 new faculty. The initiative is led by members of the electrical engineering and computer science departments and the school of medicine. Here’s a map (<http://data-science-university-programs.silk.co>) showing how many of these new programs are distributed globally.

While many of us may have an impression that the term “data science” is relatively new,

a few prescient members of our profession have been urging that we broaden the training offered by academic programs for quite some time. In his presentation at the John W. Tukey 100th Birthday Celebration (<http://sml.princeton.edu/tukey>) at Princeton University, Dave Donoho presented the long history of pioneers who were aware of the need for changes we are now seeing. More than 50 years ago, he noted, John Tukey identified a future “science” that involved learning from data. Almost 20 years ago, John Chambers, William S. Cleveland, and Leo Breiman independently advocated expanding statistics beyond theory. Data preparation, presentation, and prediction—*not just inference*—were identified as growing in importance.

The term “data science” was coined by Cleveland long before it gained its current popularity. In 2001, he suggested data science consist of the following interdisciplinary mix:

- Multidisciplinary investigations (25%)
- Models and methods for data (20%)
- Computing with data (15%)
- Pedagogy (15%)
- Tool evaluation (5%)
- Theory (20%)

There remain many ways in which departments can expand into the areas urged by these early visionaries. Some departments have begun offering both certificate and master’s programs, while quite a few maintain an emphasis heavily focused on theory. Hopefully, more in academia will see these programs as opportunities while

they observe how other disciplines are already addressing these needs.

What else can we do? The Washington Statistical Society (WSS) has a link on its home page to Data Community DC (www.datacommunitydc.org) and is trying to build a connection with its member community. The ASA organized meetings between academia and industry representatives to identify business needs so curricula might be modified to better address upcoming needs for data-analytic skills. The ASA is planning for joint conferences with data science organizations to try to create alliances that serve both memberships. What else would you suggest the ASA consider?

Mentoring Our Colleagues. We've made great strides in working to improve the professional connections among us and in outreach to our colleagues moving through their careers.

- **Colleague to Colleague.** Almost a decade ago, the ASA decided to offer a greatly reduced membership rate to students. In the ensuing years, the association has added close to 5,000 student members. While a notable accomplishment, only a small portion of these members convert to full membership after they graduate. If you've been a member for long, you know we have a lot to offer new graduates. However, we clearly aren't making a compelling case. If we make a connection between these young graduates and experienced members who can offer career advice and support, and if we can connect them with a local chapter or a

ASA Mentoring Award

Beginning in 2016, the ASA Mentoring Award will be given annually to a member who has demonstrated extraordinary commitment to providing significant early-career support to statistics students, statisticians, or statistical researchers. The award honors those people recognized by their colleagues for their sustained career-long efforts championing the work and developing the careers of The award honors those people recognized by their colleagues for their sustained career-long efforts championing the work and developing the careers of biostatisticians and statisticians. The winner will be designated by a committee of seven ASA members: a chair, who will be the ASA past president whose term coincides with the award year, and two each drawn from the three broad employment sectors (academe, industry, government). The ASA and Mentoring Award Committee will strive for a diverse applicant pool that will ensure the award recognizes work from all three sectors. See <http://bit.ly/1ln79ti> for more information about the nomination process.

section that is relevant to their specialty, both we and they would gain. The ASA is calling this new effort Colleague to Colleague. It's being developed by ASA staff and the Committee on Membership, Recruitment, and Retention.

- **Mentoring programs in chapters and sections.** As I've visited chapters or met with the councils of chapters and sections, I've offered the notion that a mentoring program could be beneficial to both the council and its members. The Biopharmaceutical Section and WSS have found this works for them and have instituted their own programs. They have been aided by the materials the Committee on Applied Statisticians has developed to make the start-up

process easier. Would your chapter or section benefit, as well?

- **Recognition of outstanding mentors.** I consider an important accomplishment working with the ASA Board to establish an annual award for an outstanding, career-long mentor. I think we can agree that people who take on the role of mentor do so because it is part of who they are and of what they see as their professional work. Our association makes an important statement of what we are about by those members we choose to honor and recognize.

Thank you for this unique opportunity to represent our community. Please join me in offering support to our 111th president, Jessica Utts!

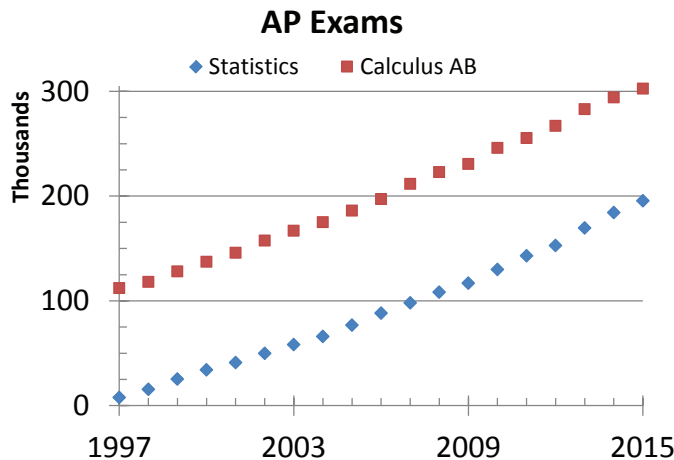


MORE ONLINE

David Donoho reflects in "50 Years of Data Science." This paper was presented at the John W. Tukey 100th Birthday Celebration at Princeton. <http://bit.ly/1S6ARxd>.

Number of AP Statistics Exams Administered Approaches 200,000

Steve Pierson, ASA Director of Science Policy



Data Source: College Board

Figure 1: Number of AP Statistics and Calculus AB exams administered since 1997

The data for the 2015 AP exams were released by the College Board in September and showed continued steady growth for statistics. In 2015, 195,526 AP Statistics exams were administered—an increase of 11,353 from the previous year—maintaining the roughly linear increases since the AP Statistics exam was first offered in 1997 and administered to 7,667 students. The annual increases have roughly matched those of Calculus AB exams.

2016 ASA President and AP Statistics Chief Reader Jessica Utts commented, “It’s very exciting to see the continued growth in AP Statistics, and the accompanying visibility it brings to our profession. I hope ASA members will consider learning more about the AP Statistics program, and, during my year as president, I hope to provide information on ways ASA members can get involved.” ■

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FDA Moves Toward Establishing a National Medical Device Evaluation Plan

Gregory Pappas, FDA National Device Evaluation Associate Director

A national medical device evaluation system is being established to further the mission of the Center for Devices and Radiological Health (CDRH) in the Food and Drug Administration (FDA). The use of electronic data gathered in routine health care will enhance CDRH's ability to evaluate device benefits and risks across the total product life cycle and successfully protect and promote public health. This evidence from clinical experience will allow for more rapid and accurate determination of safety and effectiveness issues. It will also facilitate the process of expediting patient access to important technologies. Establishing a national medical device evaluation system has become a strategic priority for CDRH for 2015–2016.

The national device evaluation system will collect device and patient-centric evidence from clinical experience from electronic health information such as electronic health records (EHRs), medical billing claims data, and data captured in procedure/device registries. Collaboration with data producers and users across the nation is essential to building this system. The core data strategy identified is linkage of clinical registries (national and international) to longitudinal data such as EHR and claims. The system will leverage and integrate with developing national resources such as PCORNet (EHRs) and Sentinel (claims data) and with CMS and State claims databases. The system also promotes the implementation of the unique device identifier (UDI) in claims data and electronic health records.

This robust infrastructure will help CDRH approve or clear devices more rapidly and appropriately; create a seamless process to transition products from pre- to post-market settings; generate continual feedback to enhance product development, innovation, and safety; and support patient health care needs.

The national medical device evaluation system evolved out of a vision for a medical device



the American Statistical Association Section on
medical devices and diagnostics

formerly the Special Interest Group on Medical Devices

post-market surveillance system described in two FDA white papers. The initial report, “Strengthening Our National System for Medical Device Postmarket Surveillance” (<http://1.usa.gov/1iSioYX>), was issued in 2012 and provides an overview of FDA's medical device postmarket authorities and the current U.S. medical device postmarket surveillance system. The update to the report (<http://1.usa.gov/1Ly7osU>), issued in 2013, details the concrete steps that will promote more-efficient collection of better and more-timely data, which will help identify issues more quickly.

The Engelberg Center for Health Care Reform of the Brookings Institution convened a multi-stakeholder planning board to promote this vision. In February 2015, the planning board issued a report titled “Strengthening Patient Care: Building a National Postmarket Medical Device Surveillance System” (<http://1.usa.gov/17qA1JX>) that sets out the key steps for a national system for development, regulation, and effective use of medical devices, while supporting improvements in patient safety and health outcomes. The system, which will support the needs of the entire community of stakeholders, was renamed an “evaluation system” with the release of the report “Recommendations for a National Medical Device Evaluation System: Strategically Coordinated Registry Networks to Bridge the Clinical Care and Research” (<http://1.usa.gov/1K6QK78>) in August 2015.

For information about MDEpiNet, a public-private partnership that produced this report and is working to build infrastructure for the national system and development, visit <http://mdepinet.org>. ■



Pappas

ASA LEADERS REMINISCE

Ron Iman

Jim Cochran

In the 12th installment of the Amstat News series of interviews with ASA presidents and executive directors, we feature a discussion with 1994 President Ronald L. Iman.

Q Ron, thank you for taking time for this interview. You published several papers with W. J. Conover on using rank-transformed data. What prompted your early career interest in nonparametrics?

A Jay Conover was on the faculty at Kansas State when I was in graduate school (he is now at Texas Tech). I took his nonparametrics course when his benchmark textbook *Practical Nonparametric Statistics*—now in the third edition—was just in manuscript form. I was taken by the subject, and I offered small suggestions to Jay during the book's development, which eventually led to Jay becoming my major professor. The term "rank transform" originated in my dissertation at Jay's behest. In 1980, we published a paper titled "The Rank Transform as a Bridge Between Parametric and Nonparametric

Statistics" in *The American Statistician*. With nearly 3,000 citations to date, that paper is the second-most-cited paper in the history of *TAS*. It is still cited 85 times a year. A doctor told me last month that he had looked up rank transform on Google and got 61 million hits—this number is likely inflated due to search procedures, but it provides evidence of widespread use.

Q You were employed by Sandia National Laboratories for more than two decades. What about Sandia's work environment appealed most to you? What was the most interesting and challenging problem you worked on while at Sandia?

A As a distinguished member of the technical staff at Sandia, I had the opportunity to work on several problems of national interest, including

Ronald L. Iman is a statistician and semi-retired consultant. After brief stints in teaching and research at Kansas State University and Western Michigan University, he spent 20 years at Sandia National Laboratories in Albuquerque, New Mexico, as a distinguished member of the technical staff before starting his own consulting business, Southwest Technology Consultants. He earned a BS in mathematics education in 1962, MS in statistics in 1970, and a PhD in statistics in 1973—all from Kansas State University. In addition, he earned an MA in mathematics from Emporia State University in 1965.



Iman served on the ASA Board of Directors for 10 years, including service as president in 1994 and as treasurer for four years. He served as chair of seven board-related committees. He is a Fellow of the ASA (1982) and was an early recipient of

the ASA Founders Award (1991). He received the Distinguished Alumni Award from Emporia State University in 1994 and Distinguished Service Award from Kansas State University in 1996. He has published extensively, including six textbooks in statistics. He received the Don Owen Award in 1988 and the Shewell Award in 1989. While at Sandia, he received the EPA's Stratospheric Ozone Protection Award, was named author of the year, and received the first President's Gold Quality Award. He was named a highly cited researcher by the Institute for Scientific Information in 2004.

Iman has a strong relationship with Kansas State University, having served on the alumni board of directors and Kansas State University Research Foundation board of directors. He also chaired the Dean's Advisory Committee for Arts and Sciences. He currently serves on the KSU Foundation Board of Trustees. He has provided pro bono statistical consulting for the provost, the alumni association, KSU Foundation, and dean of arts and sciences.

risk assessments for disposal of radioactive waste and nuclear power plants. I also worked on the reliability of the proposed space station. I worked with Steve Hora on the reliability of the solid rocket boosters (SRBs) on the space shuttle. This latter work was completed about three months before the *Challenger* space disaster. Our analyses had shown the failure rate of the SRBs to be about 2%, so we worked very hard to get failure data from NASA to compare to our analyses, but NASA was not forthcoming. I always felt that, had we been listened to, the *Challenger* incident might have been avoided. Incidentally, *Challenger* failed on the 25th flight—making the observed failure rate exactly 2%, as there are two SRBs per shuttle. I attended a congressional hearing on the *Challenger* incident and, even after the disaster, NASA was claiming a failure rate of only 10^{-6} .

The most interesting program was one that I headed to evaluate the reliability of a new soldering process that eliminated the use of ozone-depleting hydrofluorocarbons (HFCs) to clean printed circuit cards during the soldering process. This may not sound too exciting, but this is a *huge* business—look no further than your computer for a circuit card. There was a lot of resistance within the printed circuit card community to eliminating the use of HCFs in the cleaning process, so I formed a group of 10 organizations, several of which were military.

This program received a lot of notoriety and, in addition to receiving the EPA's Ozone Protection Award, it became the first recipient at Sandia of the President's Gold Award for a technical program. As an aside, Bill Clinton visited Sandia at this time during his first campaign. He was given one of our printed circuit boards, encased in epoxy, mounted on a plaque, and billed as the first "no-clean" circuit board!

The most appealing part of these programs and others was that I was given the freedom to do my own thing and I was able to make a lot of innovative contributions.

Q In the article "Partnering for the Future of the Statistics Profession," which you published in 1998 as part of *Statistical Case Studies: A Collaboration Between Academe and Industry*, you stated, "The problems we face today are too complex for any one entity to solve in isolation, and in this era of increasingly tighter budgets, academe and industry are seeking ways to leverage scarce resources. The statistics profession should flourish in such an environment!" Do you think our discipline has made good progress in this area?



Do you see the recent excitement over analytics—which most define as a combination of statistics, operations research, machine learning, algorithms, and data management—as an opportunity for our discipline or a threat to our discipline?

A The article to which you refer was an extension of my passion for partnering that I expressed in a President's Corner article in the October 1994 issue of *Amstat News* titled "Partnerships Among Academe, Industry, and Government." This article is where I first introduced the acronym SPAIG for Statistical Partnerships among Academe, Industry, and Government, which, I am pleased to say, is still going strong.

Analytics certainly seems to have become a buzzword in many constructs—for the most part, that is likely a good thing. At the same time, there could be a danger in the sense that the direct contribution of statistics may not be acknowledged or recognized when it comes to sharing the limelight.

A key point in my comment in the publication you mentioned is whether statistics as a profession is willing to recognize and adapt to different opportunities, particularly as they relate to promotion and training. To expand on this comment, we are all aware that a fundamental tenet of statistics is it can be used to optimize available resources to maximize returns—a strong and timeless selling point. As statisticians, we have all too often failed to take advantage of opportunities to make the nonstatistical community aware of what we can do. That is, we have traditionally been enamored with the science of statistics, but, all too frequently, we fail to ring the statistical bell loud and clear.

My comments in that article were intended as a clarion call to statisticians to promote the profession while also adapting our traditional training techniques, where I think great strides have been made.

Front row, from left: Bob Hogg, Ron Iman, and Ron Randles with (back row) Harry Posten and his wife during a 1998 taping for the ASA's Distinguished Statistician Series

Let me comment on the changes I have observed in the statistics department at Kansas State, since I am a frequent visitor to the department.

Like many of us, when I was in graduate school, there was a core set of courses that did not change all that much from year to year. Statistical computing made great strides during that time, albeit in the context of Fortran and not anywhere close to software that is available today, such as Beocat (<http://beocat.cis.ksu.edu/beocat>). Kansas State University had joint appointments with the agriculture experiment station from the beginning of its existence, so there was always a rich interaction in the area of agriculture.

All in all, Kansas State University had a strong set of traditional statistical courses, which continue today, but the face of the department has certainly changed from those days as the coursework has been greatly expanded, as the following recent hirings indicate.

As a DVM, Nora Bello might be considered a nontraditional hire, but she has a strong statistical background, plus the credentials to not just consult, but to do collaborative research with the college of veterinary medicine. Her collaborative research has created great opportunities for her students to be directly involved in many of veterinary medicine's research activities. It is extremely helpful that the Kansas State University administration embraces this approach to consulting/collaborative research in a way that could be described as "all in."

One new hire offers a new dimension in social and political science applications, having come to K-State from a post-doc in political science at Princeton. Two other recent hires are coming off post-docs in public health at Yale Medical School and Michigan State, and two other recent hires have interests in large high-dimensional data applications. K-State has also expressed an interest in applications for public policies related to food production, distribution, and consumption.

Another area that will have a direct impact on K-State's statistics department is the \$1.25 billion National Bio and Agro-Defense Facility (NBAF) under construction on the Kansas State University campus. This facility is unique in the United States and mainly funded by the Department of Homeland Security. It will be used to study diseases that threaten both this country's animal agricultural industry and public health. NBAF provides an opportunity for the statistics department to be on the ground floor

of collaborative research when the facility opens, which will require some nontraditional faculty.

Q What motivated the development of Latin hypercube sampling? Were you working on a specific problem that motivated the development of this technique?

A My colleague Jay Conover developed Latin Hypercube Sampling (LHS) while working at Los Alamos National Laboratory in the summer of 1975 on a project to improve the efficiency of simple random sampling. Coincidentally, I began working at Sandia at that time and I had need for such an improved technique. Jay shared his paper with me, and I wrote the first software for LHS. My need was necessitated by a time-consuming computer code that simulated peak cladding temperature for a loss of coolant accident in a nuclear reactor. LHS made it possible to extract better information with far fewer computer runs. Jay's innovation was published in *Technometrics* with McKay and Beckman in 1979. With nearly 5,200 citations, it has since become the most-cited article for that journal. LHS has gone on to be used worldwide in numerous applications.

In a related development, the computer codes in use had to correlate some of the input variables, so I developed a methodology for correlating such variables without destroying the marginal distributions. I was able to resolve this roadblock by using rank correlation. That technique has been widely used by commercial software developers and the article has close to 1,200 citations.

Q Early in your career, you worked a great deal on methodologies for disposal of radioactive waste. How did you get involved in this area of research, and how did you use statistics to contribute to these efforts?

A In the early years, I worked a lot with computer codes used for risk assessments for geologic disposal of radioactive waste, and also with nuclear power plants. These projects were sponsored by the Nuclear Regulatory Commission (NRC). The NRC requested a sensitivity analysis (SA) for one of the models without providing any working definitions or guidance. I performed what I considered to be a sensitivity analysis and traveled to the NRC to make a presentation of my results. I was not sure how the NRC would react, but they said my work was just what they wanted, and we were off and running. Not too long after that, the NRC made a similar

COMING UP

Please return to this column next month, when we will feature an interview with 2001 ASA President Richard Scheaffer.

request for an uncertainty analysis (UA). After that, we produced many papers on UA/SA applications—many of these were co-authored with my colleague Jon Helton.

Q What differences do you see in the responsibilities you took on as ASA president in 1994 and the responsibilities Jessica Utts will take on as ASA president in 2016?

A This is a much more complex question than it might appear and could more than likely take more than one path. I spent 10 years on the ASA Board of Directors during a 12-year period. I was on the executive board for nine of those 10 years, so I had a great opportunity to really understand all aspects of the operation of the ASA. I was on the budget committee for three years, followed by four years as ASA treasurer.

During this time, I gained an in-depth understanding of ASA finances. In my experience, an organization such as the ASA cannot move ahead into new programs without having good financial health, which was lacking. I think Jessica will find the ASA in a strong financial position today, but that was not the case years ago, when the ASA had good in-house bookkeeping capabilities but no accounting skills.

Contributing to the ASA's financial situation was the hiring of the same auditor year after year, with the selection based on being the lowest bid and in line with what the ASA thought they could afford. This is not a criterion I would recommend when selecting an auditor. We changed auditors and, by following their recommendations and making other changes, we were able to reverse the financial situation.

In addressing the financial issues, I want to acknowledge the good support I had on the executive board from John Neter, Janet Norwood, Bob Hogg, Arnold Zellner, and Stu Hunter. John was particularly helpful in setting up funded depreciation accounts for the ASA building and equipment. These accounts later proved their worth by allowing the ASA to move to its present building without a fundraising campaign. This may sound like a lot of technical jargon, but it was absolutely critical at the time.

Q You and your wife have established awards at Kansas State University. What motivated you to do so?

A Rae and I started endowing statistics scholarships at Kansas State University in 1998. These

scholarships have provided funding for a least one student per year since 2003. We felt this could help out the department and perhaps entice some students into the statistics profession. Based on the number of nice letters we have received over the years, it appears the scholarships have been very helpful and appreciated.

Another area we established is yearly faculty awards. Eight years ago, we started making yearly cash awards to the best teacher and the best researcher on the faculty at Kansas State University. We hoped this might be one way of honoring outstanding faculty. The honorees are selected by a committee of peers and others at KSU from a list of university-wide faculty-generated nominees. We think it is kind of neat that these awards are funded by a “statistician,” and we are pleased that they reflect well on the statistics department. The awards are endowed, so they will continue indefinitely. ■

Statistics-Centric Sessions Highlight AAAS Annual Meeting

The 2016 AAAS Annual Meeting—to be held February 11–15 in Washington, DC—will include seven sessions submitted by the Statistics Section (aka Section U), along with other statistics-centric sessions. The large number represents the ongoing, concerted effort of Section U and the broader statistical community (e.g., Marie Davidian's 2013 ASA Presidential Initiative: <http://bit.ly/1PqDYlq>) to raise the profile of statistics within AAAS—the largest, broadest scientific professional association.

Current Section U Chair and 2006 ASA President Sallie Keller said of this year's statistics sessions: “This year's Section U program offers a diverse set of sessions, strongly aligned with the AAAS theme of Global Science Engagement. Beyond the sessions highlighted on Steve Pierson's blog (<http://bit.ly/1Ph93GN>), the overall program is very rich, with something of interest to all statisticians. I hope everyone will consider attending.”

The Section U business meeting will take place from 10 a.m. to noon February 13.

For details, visit the AAAS Annual Meeting website at <http://meetings.aaas.org> or the ASA's Science Policy blog at <http://bit.ly/1Ph93GN>.



Planning for the 2020 Census

A New Design for the 21st Century

Lisa Blumerman

MORE ONLINE
To read the Director's Blog on the 2020 Census, visit: <http://1.usa.gov/1Gbfl90>. To view footage of the project management review events, visit www.ustream.tv/recorded/74937484.

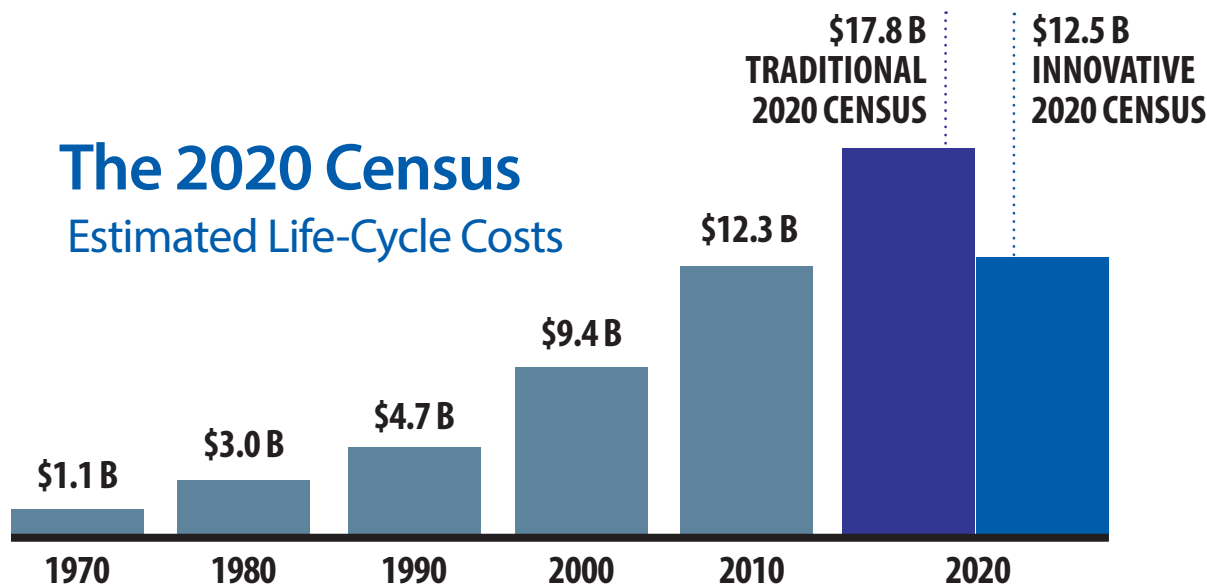
In October, the U.S. Census Bureau unveiled its Census 2020 Operational Plan. (<http://1.usa.gov/1Y33pes>). The culmination of years of research and testing, the operational plan lays the foundation for the most modern and dynamic census in our nation's history—and outlines how we propose to save taxpayers more than \$5 billion compared to doing the census the old way.

The decennial census is the largest civilian mobilization effort the nation undertakes, and its effects are vast and far-reaching. Its results are used to apportion congressional representation and distribute federal dollars among states. Governments at

all levels, businesses, organizations, and individuals rely on its data for decision-making every day, and it provides the population benchmark for nearly every other U.S. survey.

The overarching goal of the census is the same every decade: to count everyone in our nation once, only once, and in the right place. In 2020, we will be trying to reach an increasingly diverse and growing population of around 330 million people in more than 140 million housing units. We'll also have another challenge: conducting the census at a lower cost per housing unit (adjusted for inflation) than the 2010 Census, while maintaining high-quality results.

The 2020 Census Estimated Life-Cycle Costs



To meet that challenge, we plan to use a flexible design that takes advantage of new technologies and data sources while minimizing risk and ensuring a high-quality population count. The smart use of technology and information will make the census more efficient and accessible at every stage.

As we establish where to count, we'll conduct a 100% review and update of the nation's address list before the census. For 2020, we will minimize fieldwork with in-office updating—adding new addresses to the Census Bureau's address frame using multiple data sources, including geographic information systems and aerial imagery.

Next, we'll motivate people to respond to generate the largest possible self-response and reduce the number of households requiring follow-up. To do that, we'll conduct a nationwide communications campaign, using targeted ads in traditional and new media. We'll also partner with trusted sources to inspire participation.

Some of the biggest innovations will be deployed when we begin to count the population. We'll encourage households to respond using the Internet, reducing the need for more expensive data capture. We will use data the public has already provided to the government and data from commercial sources. Sophisticated operational control systems will automate follow-up work for those who do not respond to the census—optimizing assignments for census

takers, letting them know right away which households have already responded, and sending them GPS-based directions to follow up with households that have not. The savings from these innovations will allow us to focus additional visits in areas that have been traditionally hard to enumerate.

Additionally, the plan spells out how we will thoroughly test every component of census operations, piece by piece and as a whole. Confidentiality and privacy are important to us, and we'll use layers of information security protections and protocol to secure the systems we use and data we collect.

The 2020 Operational Plan will let us use fewer staff and offices during the 2020 Census—for example, we anticipate having half the number of regional census centers, area census offices, and trained enumerators than we did in 2010. By using innovations to reduce the burden for the whole census life cycle, we will realize savings compared to conducting the census the same way we did in 2010.

Much more information about our plans for the 2020 Census is available online—you can find everything from footage of our project management review events to blog updates from Census Bureau Director John Thompson. The automations and innovations we'll use are truly groundbreaking, and I hope you'll visit www.census.gov to learn more about them. ■



Lisa Blumerman is associate director for Decennial Census Programs and acting associate director for the 2020 Census. She holds a master's degree in demography from Georgetown University and a bachelor's in sociology with a concentration in population studies from the University of Massachusetts at Amherst.



2016 INTERNSHIP OPPORTUNITIES

MORE ONLINE
Full descriptions
for these
internships are
on STATtr@k at
[http://stattrak.
amstat.org](http://stattrak.amstat.org).

More than 30 companies are looking for interns for 2016. In fact, there are so many that the list was too long to print. Instead, we included the full descriptions for all the internships on STATtr@k at <http://stattrak.amstat.org>.

You'll see there is something for everyone, from positions at pharmaceutical companies to a summer spent studying social issues that affect integrated human habitat, health, and well-being. If you are interested in improving your programming skills, making connections, or honing your data-analysis skills, apply for one of these opportunities.

If your organization would like to include an internship opportunity on our website, complete the form online at www.amstat.org/education/internships.cfm. Interested students will send a letter of inquiry and résumé directly to the contact and location you list.

AbbVie

Lake County – North Chicago, Illinois

Number of Positions: Multiple

Type of Student: Graduate–third-fourth year into PhD program

Deadline for Applying: January 31, 2016

AbbVie also posts science intern positions on our career website. If your school isn't listed, visit www.abbviecareers.com.

Contact: Dorth Korst, Postdoctoral Program Manager, AbbVie, dorth.korst@abbvie.com

Amgen Inc.

Thousand Oaks, California

Number of Positions: 2

Type of Student: Graduate, PhD

Deadline for Applying: January 30, 2016

Please visit www.careers.amgen.com to view the full job description, including basic and preferred qualifications. Search the database by position title or requisition R-12565. Only those who apply on Amgen.com will be considered.

Contact: Dollie Grajczak, University Relations, Amgen Inc., universityrelations@amgen.com

Axio Research LLC

Seattle, Washington

Number of Positions: 2

Type of Student: Graduate student/
MS and/or PhD

Deadline for Applying: March 31, 2016

The intern will provide SAS testing, statistical programming, and analysis support for research projects.

Contact: Nina Pashova, *ninap@axioresearch.com*

Bayer Pharmaceuticals

Whippany, New Jersey

Number of Positions: 3

Type of Student: Graduate, PhD
candidates in (bio)statistics or related field

Deadline for Applying: January 4, 2016

As an intern within the clinical statistics U.S. department, the incumbent will gain a direct view into research and development at Bayer and witness how clinical trials influence the decisions made during the drug-development process.

Candidates must be available for a three-month assignment at Bayer's Whippany, New Jersey, site from June 2016 until the end of August 2016.

Apply: Visit www.career.bayer.us/en and search for "clinical statistics intern."

Contact: Daniel Haverstock, Global Clinical Statistics Group Leader, *daniel.haverstock@bayer.com*

Bristol-Myers Squibb

Princeton, New Jersey; Hopewell, New Jersey; Wallingford, Connecticut

Number of Positions: Multiple

Type of Student: PhD candidates
in statistics or biostatistics

Deadline for Applying:

Available until filled

Successful candidates must have effective oral and written communication skills and good

working knowledge of SAS and/or R.

Apply: Send unofficial graduate transcripts, résumé, and cover letter to the contact below.

Contact: Rose Elcsics, Bristol-Myers Squibb, *rose.elcsics@bms.com*

Department of Statistics, Carnegie Mellon University

Pittsburgh, Pennsylvania

Number of Positions:

Approximately 15

Type of Student: Undergraduate

Deadline for Applying:

February 1, 2016

The program will run from May 31 through July 22, 2016.

Apply: Visit summer.stat.cmu.edu for more information and to apply.

Contact: Paige Houser, *summer@stat.cmu.edu*

Chevron Oronite Company LLC

Richmond, California

Type of Student: Graduate

Deadline for Applying:

January 29, 2016

The successful candidate will spend 10–12 weeks of the summer working with a small team of highly experienced and skilled statistical consultants to support Chevron Oronite Products and Technology (P&T) and a variety of other Chevron clients.

Apply:

1. Go to <http://careers.chevron.com>.
2. Click on "Find a Job" in the upper left side of the page.
3. Select "United States."
4. Click "Go Directly to Job Search" located in the middle of the page.
5. Search for job posting number 031042400.

Contact: Michelle Young, *PandTRecruiting@chevron.com*

Eli Lilly and Company

Indianapolis, Indiana

Number of Positions: Multiple

Type of Student: Candidates must be U.S.-authorized workers (U.S. citizen or green card holders) and enrolled in a graduate-level curriculum leading to a master's or PhD in statistics or biostatistics. PhD students with at least three years of completed graduate work or master's students with at least one year of graduate work by the end of the spring semester 2016.

Deadline for Applying: January 31, 2016

The internships start in either May or June and last 12 weeks. Successful candidates will be assigned specific projects to work on under the guidance of a Lilly statistician or statistical analyst (mentor).

Contact: Ryan Burke, Global Recruiting and Staffing, *burke_ryan_neal@lilly.com*

The EMMES Corporation

Rockville, Maryland

Number of Positions: 3–5

Type of Student: MS or PhD biostatistics

Deadline for Applying: April 30, 2016

Apply: For immediate consideration, submit your résumé and apply directly through the company website at www.emmes.com.

Contact: Marcella Pickard, HR/Staffing Manager, *mpickard@emmes.com* (Please email only or directly through the company website to the biostat intern opening.)

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Office of Biostatistics, CDER, FDA

Silver Spring, Maryland

Number of Positions: 10–12

Type of Student: Advanced PhD students

Deadline for Applying: March 31, 2016

The Office of Biostatistics (OB), CDER, FDA plans to hire 10–12 advanced PhD graduate students in biostatistics/statistics as interns from June through August 2016. Preference will be given to senior doctoral candidates with a strong background in statistical methods and good computational and programming skills.

Contact: Send CV and cover letter to Ram Tiwari, Associate Director, OB/CDER/FDA, at ram.tiwari@fda.hhs.gov.

Federal Reserve Board of Governors

Washington, DC

Number of Positions: 2

Type of Student: Third- or fourth-year (junior or senior) undergraduate student

Deadline for Applying: For spring semester: January 15, 2016; for summer: May 6, 2016

Internships are available year-round: fall, spring, and summer semesters. Most internships span 10–12 weeks. Deadlines are flexible, but slots are limited and tend to fill three to six months in advance.

Contact: Alexandra Brown, Alexandra.M.Brown@frb.gov

Genentech, Inc.

South San Francisco, California

Number of Positions: 4–6

Type of Student: PhD in statistics, biostatistics, or related field

Deadline for Applying: January 29, 2016, but offers may be made earlier

Our biostatistics summer interns work for 10–12 weeks under the supervision of experienced biostatisticians. At the end of the internship,

students give a department-wide presentation on their research topics. It is not uncommon for an intern to summarize their work in a peer-reviewed publication.

Applicants must have at least one year of graduate work by May 2016 and be returning to school in the fall of 2016.

Apply: Send CV, personal statement of interest, and a letter of recommendation to gnebiostatsummerintern@gene.com.

GlaxoSmithKline

Collegeville, Pennsylvania

Number of Positions: 2

Type of Student: Graduate students

Deadline for Applying: May 31, 2016, for spring hiring and November 30, 2016, for fall hiring

This position is full time for five to six months. It will be posted online and managed by third party ZeroChaos. There are two hiring windows every year. The position from January–June is posted in early October and the position from June–December is posted in late March.

Apply: Go to <https://gsk-zerochaos.icims.com>.

Google

Several locations in North America

Number of Positions: Multiple

Type of Student: Currently pursuing a BS, MS, or PhD and enrolled in a full-time degree program with plans to return to the program after the end of the internship.

Deadline for Applying: We will begin accepting applications on January 8, 2016. Applications are due by 11:59 p.m. PST on January 25, 2016. Our team will review applications on a rolling basis, and it's in the candidate's best interest to apply early. All hiring will be completed by April 2016.

To receive notification when the roles are posted in January, complete the interest form at <http://bit.ly/1WzBa4A>.

The Hartford Financial Services Group

Hartford, Connecticut

Number of Positions: 8

Type of Student: Master's or PhD student

Deadline for Applying: Ongoing

Data science intern candidates must be working toward either a master's degree or PhD in a quantitative discipline such as operations research, statistics, economics, business analytics, or other similar discipline.

Apply: Visit <http://bit.ly/1GLB1JG>

Contact: Kendra Ashmore, Kendra.ashmore@thehartford.com

Institute for Defense Analyses

Alexandria, Virginia

Number of Positions: 3

Type of Student: PhD students with at least 2 years of graduate school

Deadline for Applying: February 1, 2016

More information can be found at <https://www.ida.org/CareersAtIDA/ExploreIDACareers.aspx>.

Contact: Matthew Avery, mavery@ida.org

The Joint Program in Survey Methodology Junior Fellow Program

Various federal statistical agencies in Washington, DC

Number of Positions: 20

Type of Student: Rising college junior or senior in the 2016–2017 school year

Deadline for Applying: January 8, 2016

Junior fellows will be expected to work 40 hours a week (May 31, 2016–August 5, 2016) on tasks associated with the development, deployment, and analysis of surveys. Each junior fellow will be paid between \$11.25 and \$12.50 per hour. Housing is also provided as part of the fellowship.

Contact: To learn more, visit <http://jointprogram.umd.edu/undergrad/JuniorFellows> or email JPSMJuniorFellows@umd.edu.

MORE ONLINE

Full descriptions for all these internships are on STATtr@k at <http://stattrak.amstat.org>.

Liberty Mutual Insurance

Boston, Massachusetts; Seattle, Washington

Number of Positions: Approximately 20

Type of Student: PhD candidates in mathematics, statistics, economics, operations research, or related field. Completion of doctoral pre-qualifying exams is preferred.

Deadline for Applying: Open until filled

Housing subsidy available for eligible candidates.

Apply: Visit Liberty Mutual's website at www.careers.libertymutualgroup.com.

Contact: Liberty Mutual Advanced Analytics, LMAdvancedAnalytics@libertymutual.com

The Lubrizol Corporation

Wickliffe, Ohio

Number of Positions: 1–2

Type of Student: Graduate (MS, PhD) student

Deadline for Applying: February 8, 2016

This is a three-month summer internship.

Apply: Go to the www.lubrizol.jobs and search for the statistician intern position or go to <http://bit.ly/1N8u4UK>.

Contact: Brittany Folino, Brittany.Folino@Lubrizol.com

Mayo Clinic

Rochester, Minnesota

Number of Positions: Approximately 8–10

Type of Student: Undergraduate, graduate, PhD

Deadline for Applying: January 8, 2016

For more information, review our professional opportunities listed on our division website: <http://mayoresearch.mayo.edu/mayoresearch/biostat>.

Apply: To submit an unofficial transcript, résumé, and cover letter via our internships and summer opportunities web page (<http://mayocl.in/1qex3AX>), search by keyword "Biostats" (statistical internship) or "Intern-IS" (informatics internship) and our current openings will be available.

Contact: Dawn Swiers, Department of Human Resources, Swiers.dawn@mayo.edu

Merck Research Laboratories

Suburban Philadelphia, Pennsylvania; Rahway, New Jersey; Kenilworth, New Jersey

Number of Positions: Approximately 7

Type of Student: Graduate

Deadline for Applying: Rolling deadline

Must be available for a period of 9–12 weeks, beginning June 2016.

Apply: To be considered for these internship positions, visit our career site at www.merck.com/careers to create a profile and submit your résumé for the biostatistics internship. Résumés will not be accepted via email.

MetroPlus Health Plan

New York, New York

Number of Positions: 3

Type of Student: Graduate statistics

Deadline for Applying: April 15, 2016

Unless there are visa restrictions, we can pay about \$15/hour.

Contact: Ronald B. Low, Assistant Medical Director of Appeals, lowrb@metroplus.org

National Agricultural Statistics Service

Fairfax, Virginia; Washington, DC

Number of Positions: Multiple

Type of Student: Graduate student (PhD preferred)

Deadline for Applying: March 31, 2016, but offers may be made earlier

Preference will be given to candidates having an interest in a future career with NASS. Applicants must be U.S. citizens. The agency is interested in hiring mathematical statisticians, statistical programmers, survey methodologists, and geospatial analysts for positions in both research and operational environments.

Contact: Linda Young, USDA National Agricultural Statistics Service, linda.young@nass.usda.gov

MORE ONLINE

Full descriptions for all these internships are on STATtr@k at <http://stattrak.amstat.org>.



ASA, in cooperation with the Bureau of Labor Statistics (BLS) under a grant from the National Science Foundation (NSF) is pleased to announce a Senior Research Fellow Program for 2016.

The Fellowship Program at BLS allows research fellows to come to the BLS and use BLS data and facilities, and interact with BLS staff. More information is available on the BLS website at http://www.bls.gov/osmr/asa_nsf_bls_fellowship_info.htm or in our brochure at <http://www.amstat.org/careers/pdfs/ASANSFBLSFellowshipProgram.pdf>

Eligibility

An academically recognized research record and considerable expertise in the area of proposed research required. U.S. government employees are not eligible to apply. Applicants must be employed by a U.S. institution.

Condition of Appointment/Benefits

Research will be conducted at the government agency. The stipend received is commensurate with qualifications and experience. Term of appointment is flexible. Fringe benefits and travel allowances are negotiable.

Application Deadline: February 8, 2016

National Cancer Institute

Rockville, Maryland

Number of Positions: 2

Type of Student: Flexible

Deadline for Applying: Three months before you want to start

See <http://prevention.cancer.gov/about-dcp/staff-search/vance-berger-phd>. This is an unpaid internship. To compensate, we try to make the experience as educational and rewarding as possible. There is no clerical work. Rather, the intern engages in high-level research in important areas.

Contact: Vance Berger, vb78c@nih.gov or vance917@gmail.com

MORE ONLINE

Full descriptions for all these internships are on STATtr@k at <http://stattrak.amstat.org>.

Novartis Oncology, Biometrics and Data Management

Cambridge, Massachusetts; East Hanover, New Jersey

Number of Positions: Multiple

Type of Student: At least 18 months of graduate work (see other relevant information below)

Deadline for Applying: February 12, 2016

The internship program will be approximately 12 weeks (May–August, dates flexible). For more information, visit the September 2011 issue of Amstat News at <http://bit.ly/1MHZPVf>.

Contact: Linda Finelli, BDMOncology.summerinternship@novartis.com

Novartis Pharmaceuticals, Biostatistical Sciences and Pharmacometrics

East Hanover, New Jersey; Cambridge, Massachusetts

Number of Positions: Multiple

Type of Student: Graduate

Deadline for Applying: January 31, 2016

Novartis Pharmaceuticals Corporation will have multiple internship positions available for approximately 12 weeks (May to August, dates flexible).

Candidates must be enrolled in a graduate-level program

working toward a PhD in biostatistics, statistics, or a related discipline and have completed at least two years of course work.

Contact: Lisa Klaas, biostatistics.summerinternships@novartis.com

Pegged Software

New York, New York; Baltimore, Maryland

Number of Positions: 1

Type of Student: Current master's or PhD students in statistics

Deadline for Applying: March 1, 2016

Pegged Software is interested in students with expertise/interest in survival analysis and/or Bayesian statistics or students with experience using text analytics and NLP tools to develop features used in statistical modeling. Student will be responsible for their own housing arrangements.

Contact: Bonnie Ray, VP, Data Science, bonnie@peggedsoftware.com

Pew Research Center

Washington, DC

Number of Positions: 5

Type of Student: Graduate, PhD

Deadline for Applying: March 15, 2016

Interns will work at Pew Research Center full time for a 12-week period. The position pays \$20/hour and is subject to the employment policies of the Pew Research Center, including a confidentiality agreement.

Contact: Applicants should send complete applications to careers@pewresearch.org.

Pfizer Inc.

La Jolla, California; Groton, Connecticut; Collegeville, Pennsylvania; Cambridge, Massachusetts; New York, New York; Andover, Massachusetts; Pearl River, New York

Number of Positions: 15

Type of Student: Graduate student in statistics, biostatistics, or related field

Deadline for Applying: February 27, 2016

The internship will consist of up to 480 hours of work at one of the Pfizer sites in

New York, California, Connecticut, Massachusetts, or Pennsylvania, commencing as early as April and ending as late as December.

Contact: Liqiang Yang, Director, Pfizer Inc., liqiang.yang@pfizer.com

Precima, Inc.

Chicago, Illinois; Toronto, Canada

Number of Positions: 3

Type of Student: Graduate

Deadline for Applying: March 18, 2016

Internship is for summer of 2016. Candidate should be expecting a master's or PhD degree on or before June 2017 in the areas of statistics, operations research, mathematics, economics, econometrics, industrial engineering, or computer science.

Contact: Mandy Marotta, mmarotta@loyalty.com; www.precima.com

QBE North America

Irvine, California; Sun Prairie, Wisconsin; New York, New York

Number of Positions: 8

Type of Student: Progress with bachelor's degree

Deadline for Applying: December 30, 2015

- Perform basic data analysis by following established guidelines to organize and format data into usable reports for actuarial department needs.
- Perform basic data integrity checks by retrieving data and following established guidelines to minimize errors and support delivery of accurate information for sound actuarial analyses.

Apply: Online at www.qbena.com/careers

RAND Corporation

Santa Monica, California; Washington, DC; Pittsburgh, Pennsylvania; Boston, Massachusetts

Number of Positions: Multiple

Type of Student: Graduate students who have completed at least two years of graduate work leading to a doctorate

Deadline for Applying: January 5, 2016

The program runs in the summer months only. Summer associates work at RAND full time for a 12-week period. Positions are available in RAND's major U.S. offices—Santa Monica, CA; Washington, DC; Pittsburgh, PA; and Boston, MA.

Apply: RAND accepts online applications only. Position description and details available at www.rand.org/jobs/id4229. Summer associate program and application details are available at www.rand.org/about/eduop/fellowships/gsap/html. Applications mailed directly to RAND or emailed to our summer director will not be considered.

SAS Institute Inc.

Cary, North Carolina

Number of Positions: 2

Type of Student: PhD students studying in the United States; students must have completed at least two years of graduate work by the end of the spring semester 2016

Deadline for Applying: January 22, 2016

Eligible candidates must have completed at least two years of graduate work by the end of the spring semester of 2016 and have demonstrated experience in statistical computing beyond the routine classroom use of statistical packages.

The program provides a salary and stipend for a 12-week internship at SAS headquarters in Cary, North Carolina, during the summer of 2016.

Apply: Submit your résumé or view all SAS fellowship opportunities at <http://tinyurl.com/SASFellows>. The SAS statistical fellowship is requisition

#20009307. In addition, you must ensure that two faculty members from your graduate program send a letter of recommendation via PDF to SASFellows@sas.com by January 22, 2016.

Contact: If you have any questions about the program, send an email to SASFellows@sas.com.

StataCorp LP

College Station, Texas

Number of Positions: 1

Type of Student: Graduate student in biostatistics or a closely related field

Deadline for Applying: February 15, 2016

StataCorp's biostatistical department is seeking a statistical intern. Interns work with a senior member of Stata's development team. This position may include projects in the areas of survival analysis, pharmacokinetic analysis, and clinical trials.

StataCorp's summer internships offer the opportunity for students to learn the inner workings of statistical software development by working closely with StataCorp's professional staff.

The application period is open between January 15 and February 15.

Apply: Visit www.stata.com/internships.

StataCorp LP

College Station, Texas

Number of Positions: 1

Type of Student: Graduate student in economics, econometrics, finance, or a closely related field

Deadline for Applying: February 15, 2016

The application period is open between January 15 and February 15.

Apply: Visit www.stata.com/internships.

StataCorp LP

College Station, Texas

Number of Positions: 1

Type of Student: Graduate student in statistics or a closely related field

Deadline for Applying: February 15, 2016

The application period is open between January 15 and February 15.

Apply: Visit www.stata.com/internships.

Summer Institute for Research Education in Biostatistics (SIBS)

Up to six sites, to be announced early 2016

Number of Positions: Up to 25 at each site

Type of Student: Undergraduates majoring in mathematics, statistics, biology, or other science who have an interest in quantitative methods. Those who already have a baccalaureate degree are eligible to apply, but priority will be given to undergraduates at the time of application. U.S. citizenship or permanent resident status is required.

Deadline for Applying: Early March 2016 or as specified by individual sites

The Summer Institute for Research Education in Biostatistics (SIBS) provides a comprehensive six- to seven-week program designed to expose undergraduate students to the exciting opportunities offered by a career in biostatistics and encourage them to pursue graduate study in the field.

Applications should be made to each program site separately; there is no restriction to how many programs a student may apply to.

Contact: Please check the NHLBI website starting in the middle of January 2016 for information about locations, along with links to the individual program sites: www.nhlbi.nih.gov/funding/training/redbook/sibsweb.htm.

Takeda Pharmaceuticals, Inc.

Cambridge, Massachusetts;
Deerfield, Illinois

Number of Positions: 10

Type of Student: PhD

Deadline for Applying: March 1, 2016

The analytical science biostatistics department of Takeda Company in Boston and Deerfield is looking for PhD graduate students interested in an internship during summer 2016. At the end of the internship program, interns will give a presentation summarizing their work.

Visit www.takeda.com/company for a full description of Takeda.

Candidate must be enrolled in a PhD statistics program (which includes biostatistics, bioinformatics, mathematics programs with an emphasis on statistics). Candidate PhD student must have passed qualification exams. Three years or more of training post bachelor's degree is preferred.

Contact: Jing Xu, biostatistics.intern2@takeda.com

Travelers

Hartford, Connecticut; St. Paul, Minnesota

Number of Positions: 25

Type of Student: MA, PhD

Deadline for Applying: February 2016

The Advanced Analytics Summer Internship Program provides qualified students with an excellent opportunity to gain first-hand business experience, receive valuable on-the-job training, and learn about the many actuarial or advanced analytics positions available in the insurance industry.

Apply: Visit www.travelers.com. Respond to posting number 2921BR.

Undergraduate Research Program in Statistical Genetics

Sioux Center, Iowa

Number of Positions: 5–6

Type of Student: Undergraduate

Deadline for Applying: January 31, 2016

Visit the statistical genetics website at www.dordt.edu/statgen for more information, a link to this year's project descriptions, and an application. Each participant will receive a \$4,000 stipend for the eight-week program, which runs from June 6 to July 29, 2016. Free apartment-style housing and funds for travel to/from Dordt College will be provided.

Contact: Nathan Tintle, statgen@dordt.edu

U.S. Census Bureau

Suitland, Maryland

Number of Positions: Multiple

Type of Student: BS/BA/MS/MA/PhD

Deadline for Applying: January 15, 2016

Apply: Go to usajobs.gov and search under Census Pathways Internships.

Contact: Tasha Harris, Human Resources Division, Tasha.L.Harris@census.gov

University of Arkansas for Medical Sciences/Arkansas Children's Hospital—Department of Pediatrics

Little Rock, Arkansas

Number of Positions: 1–2

Type of Student: Graduate

Deadline for Applying: January 30, 2016

To be considered, candidates must be enrolled in a graduate program at an accredited institution leading to a master's or a PhD in statistics or biostatistics.

Apply: Go to <https://base.uams.edu/redcap/surveys/?s=KHYXX9LKED> and provide the requested information. For more information about the department of pediatrics and our program, visit www.arpediatrics.org.

Contact: Amber Sharp, achbiostat@uams.edu

Social and Decision Analytics Laboratory, Virginia Bioinformatics Institute at Virginia Tech

National Capital Region;
Arlington, Virginia

Number of Positions: 3+ for summer position

Type of Student: Undergraduate, graduate, PhD

Deadline for Applying: January 29, 2016

To be considered for a 2016 summer internship appointment, send a résumé and cover letter stating why this summer internship is of interest to you, and ask two references to send recommendation letters.

For more information, see <http://vbi.vt.edu/sdal/careers/call-for-students>.

Contact: Stephanie Shipp, steph19@vt.edu

MORE ONLINE

Full descriptions for all these internships are on STATtr@k at <http://stattrak.amstat.org>.

MORE ONLINE

Additional internships will be posted as received at <http://www.amstat.org/education/internships.cfm>.



STATtr@k

Top 10 Tips for Getting Successful Statistical Internships

Kelly H. Zou, Willis A. Jensen, Dongseok Choi, Yun Zhang (Graduate Student and Guest Contributor), and Barry D. Nussbaum, on behalf of the ASA SPAIG Committee

Previously and recently, the ASA Statistical Partnerships Among Academe, Industry, & Government (SPAIG) Committee has called for fruitful collaborations and partnerships between two or more of these career sectors, particularly in the era of Big Data (see <http://bit.ly/1MZKb7F>). With the ASA as a “big tent” organization (see <http://bit.ly/1QkLNJQ>), SPAIG’s main mission is to “identify, lead, and promote initiatives that foster partnerships between academe and business, industry, and government (B/I/G).”

Students find it increasingly important to gain the width and breadth of statistical skills through effective internship positions. Statistical internships can help build and maintain successful partnerships to prepare the next generation of statisticians and researchers in related fields, as well as to prepare future leaders along these career tracks. Interns may be hired at any stage of their education, but graduate students generally have some advantage in terms of statistical knowledge and programming skills. For advanced internship applicants, some organizations may prefer those who have completed their

master’s degrees or PhD-qualifying exams.

Successful systematic internship partnerships between the ASA and a host company have been featured previously (see The Summer Internship Partnership of ASA and Novartis Oncology: A Multi-Win Endeavor at <http://bit.ly/1HKMJz2>). However, despite existing useful tips and annual advertisement of various internship positions via the ASA, many students may still find the search and application process for valuable statistical internship positions bewildering and daunting.

If you are a graduate or advanced undergraduate student in statistical sciences and related fields, these 10 tips may increase your likelihood of getting an internship. Once you have secured and completed an internship, it will be a valuable lifelong experience. (This communication is by no means formal legal advice in terms of compensation, payment, or visa requirements. Foreign students must consult with their respective international students’ and scholars’ offices, as well as the host organization, to ensure legal compliance.)

We hope these tips are helpful and will help you land that dream internship. Good luck!

MORE ONLINE

For information about the SPAIG Committee and their mission, visit <http://magazine.amstat.org/blog/2014/10/01/spaig-committee>.



**MORE
ONLINE**

What is your intelligence quotient (IQ)? (See “Rising Scores on Intelligence Tests,” *American Scientist* at <http://bit.ly/1WSSWpi>).

What is your emotional quotient (EQ)? (See “What Makes a Leader?” *Harvard Business Review* at <http://stattrak.amstat.org/files/2015/11/Whatmakesaleader.pdf>).

1. Be Diligent.

Consider starting your search at least half a year before the target starting date of the internship. December of the preceding year may be ideal, because that is when organizations may be completing their planning for the following year's projects and budget figures. From then on, use the ASA to periodically search for available internship opportunities, which are posted both online and in the December issue of *Amstat News*. Treat the search process like a job hunt: Read the job descriptions carefully and tailor your résumé for specific internships. Bring your résumé to your school's career center and ask for professional advice. Résumés may be two or three pages and should clearly state your career goals, educational background, key projects with a brief description of each, software skills, and publications or presentations, if applicable. It's better to list a variety of projects that cover a wide range of statistical topics, rather than a series of projects on closely related topics. Hiring managers tend to prefer someone who has similar experience, but you never know what will be relevant to the potential internship projects they have in mind. Professional networking tools such as LinkedIn may come in handy. Read the application instructions carefully and be sure to meet deadlines.

2. Be Flexible.

Don't be too choosy about location or organization. Although an internship may lead to a future job, it also may be a window to a particular career track. Take the opportunity to try something new or to live in a new place. It is important to gain experience, which helps you better know what you are really looking for when it comes time to look for actual jobs.

3. Be Prepared.

Study the hosting organization ahead of time. Read about the specific team on the organization's website, in the media, and in scientific publications. Ask others what they like about working there. Find out about the good and bad things about working there. This is your chance to learn all you can about the organization you are with. Doing such 'homework' in advance will make it less of a surprise during the internship period and easier to decide if you want to be there in the future. Learn about the history of the organization and where it is going.

4. Be Open-minded.

Think and talk about statistics, as well as the core scope of the work involved, in a different way. For example, orientations or information-sharing sessions may rarely cover statistics or technical topics. Experience-sharing will lead to a smooth transition from school to the internship position, and also help bring back a successful intern for a full-time position. If the hosting organization is not solely in the business of statistics or data analysis, it may focus more on business-related areas such as marketing, finance, or insights.

6. Be Succinct.

Giving an oral presentation and writing a summary report based on an internship project in a particular industry or for the government can be quite different from giving a presentation for a research project in school. As a student, you are trained in and used to developing complex statistical methodology and focusing on technical details. In an internship presentation, it is important to be streamlined and to the point, using short sentences, clear schematic displays, and readable tables. With understanding and support from your immediate manager, aim to focus on reasoning and conclusions, while leaving complex technical details and modeling choices as backup information.

5. Be Proactive.

During the internship, ask many questions and learn as much as you can. If you don't know something, find out who knows the answer and ask them. If no one knows the answer, try to figure out the answer by yourself or with your team and then share with others. This is a chance for you to impress your manager and peers and shine. This is also an opportunity to introduce yourself to other staff members. The more contacts you have, the better. Attend intern or networking activities onsite, where interns from different functions mingle—these activities help you explore the hosting organization's culture more comprehensively. If the manager is at a more senior level, consider identifying a formal or informal mentor who may be both technically savvy and hands-on. It is extremely important to work on your intelligence quotient (IQ) (see “Rising Scores on Intelligence Tests,” *American Scientist*, at www.americanscientist.org/issues/pub/rising-scores-on-intelligence-tests) and your emotional quotient (EQ) at the same time. Your proactive attitude and technical ability may greatly increase your chances of turning the internship into something further, such as a full-time position.

7. Be Reflective.

Organize and document your work well in an accessible area shared by your team and record the key tasks of the internship in your résumé. This is helpful to you during and close to the end of the internship, and it is a huge benefit for future interns if carrying on the same project. The internship project may enhance or enrich your research interest. Regard and treasure your internship as a bridge between academe, industry, and/or government. It's possible that some ongoing work after your internship may lead to a greater achievement, such as a publication or a further research topic. Share your experiences with other students and professors. Tell them what went well and what didn't go well so they have a sense about this particular organization or career path. Give useful advice, without revealing any confidential or proprietary information, to future internship applicants.

8. Be Appreciative.

Thank those you have worked with and who have helped you during your internship. Some of them may have taken extra time to help answer your questions. Write them thank-you notes or send emails of appreciation, telling them what you enjoyed about your experience, right after the internship ends. Be specific! If you cite a topic you have worked on, your teammates will remember you better. The end of your internship may not be the end of collaboration with them.

9. Be Hopeful.

If you have gained a great experience and aim to return to that organization as a future employee, stay in touch with those you met during the internship via professional channels such as LinkedIn, conferences (e.g., the Joint Statistical Meetings), and local ASA chapter activities. Some managers may provide references during your formal job searches. Send a brief and well-written note occasionally to let them know how things are going after returning to school. Even though a full-time position may not open up immediately in the area you worked in, you may be able to find opportunities in relevant areas of the same organization. Such an organization will find a space for talented individuals who have already demonstrated their capabilities and enthusiasm.

10. Be Positive.

If the internship lands you a full-time career and a position you love, then congratulations! If an internship makes you never want to do this type of work again, treat it as a learning experience and remain hopeful. Stay positive that an internship or position will come along eventually, and the internship experience will remain to strengthen your technical, communication, and collaborative skills. ■

MORE ONLINE
For useful tips on finding success in entry-level jobs, visit <http://bit.ly/1HlmqG>.

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FUNDING OPPORTUNITIES

Better Statistical Participation Is Needed Across Collaborative Science

ASA Committee on Funded Research

The ASA's Committee on Funded Research (CFR) is working, on the one hand, to foster greater awareness of the importance of statistics at several funding agencies and, on the other hand, to help ensure agency leadership has access to statistical expertise when needed.

CFR is charged with facilitating communication and interaction between members of the statistical community and funding organizations, including federal agencies, nonprofit organizations, the technology sector, and biotechnology companies. One committee member recently served on a review panel for proposals with substantial statistical content—but with no statisticians listed in the proposal. This seems to be an all-too-common issue and results in a double loss: The science in these proposals was weak in statistical rigor and our profession lost an opportunity to make a substantial contribution to an important area of science.

Based on such experiences and what we hear from other science societies, we are concerned that statisticians participate in these outreach activities less than other scientists, and that this may have an adverse effect on our discipline. As part of our efforts, we want to remind the ASA research community of the importance of participating in scientific review and generally conveying the importance and benefit of engaging statisticians in research.

Statisticians' involvement in the interdisciplinary research and proposal review process is key to scientific progress and the vitality of our discipline. Specifically, serving on a study section or review panel is especially important. First, it ensures the statistical perspective is represented, which, in turn, improves the quality of scientific research and helps other study section members see the importance of statisticians' involvement as

scientific partners. For example, study sections/panels that do not include statisticians may fail to make appropriate recommendations regarding inclusion of statistical rigor and/or co-investigators, when such inclusion is likely to improve the quality of the scientific problem being addressed in a proposal.

Second, it helps to ensure proposals involving a good deal of statistical methods and applications receive a fair review. In particular, a study section/panel that does not include a statistician may lack the expertise to adequately review proposals that have statisticians as principal investigators (PIs); this may, in turn, discourage members of the statistical community from submitting proposals in the future.

On a personal level, statisticians who serve on study sections/panels associated with funding agencies find it has been one of the most important factors in their professional development and expansion of their professional networks. They gain not only a broader perspective on emerging scientific methods, but also invaluable perspective on the proposal review process; in particular, they learn what is necessary to have their own research funded.

For junior researchers, involvement in the funding review process is increasingly valued as evidence of professional stature and professional citizenship when a candidate is considered for promotion or tenure. Moreover, while serving on such sections/panels, junior researchers can expand their professional networks by meeting not only lead researchers in their field, but program officers as well.

The need for and importance of a more active role of statisticians in the collaborative sciences is clear. If we as members of the ASA community engage ourselves in these areas of service, then, together, we can greatly benefit the scientific process, maximize our influence on allied sciences, and play active roles in developing newer modes of scientific collaborations.

We encourage every statistical researcher to become involved. Here are some ways to help:

- Serve on study sections/review panels. Accept an invitation to serve or, if you're unable to serve, recommend a colleague who has similar expertise. It is especially important that seasoned statisticians and those with a broad range of knowledge or experience be available to help review larger, collaborative research proposals; more junior researchers can cut their teeth on more statistically focused reviewing.
- Help to convey information to the broader scientific community on research issues where statistical methods can play an important role. You can do this through your networks, your university, blog writing, and/or participation with ASA efforts. The ASA has whitepapers and/or one-pagers relating to the BRAIN Initiative, Big Data Initiative, precision medicine, and climate change. The board has also just released a statement, "The Role of Statistics in Data Science." (<http://bit.ly/1YitXZj>) We ask your help in sharing these documents broadly. If you have ideas for other whitepapers or one-pagers, we ask you to contact our committee.
- Another important mechanism is responding to requests for information (RFIs) when strong statistical engagement would benefit the science in the RFI.
- If you serve as a PI, engage in scientific discussions with your funding officers, keeping them updated on how statistics is benefiting their work and other investigations. It is highly encouraged that a PI on a funded research project send a brief note (e.g., within a page) with illustrative figures that exemplify the outcome of the funded project(s) while submitting an annual report to a funding agency. In many cases, such brief and effective research outcomes are used by the program officers (e.g., at the National Science Foundation (NSF) and National Institutes of Health

Committee on Funded Research

Ming-Wen An, Chair, Vassar College

William F. Christensen,
Brigham Young University

Debashis Ghosh, University
of Colorado

Sujit Kumar Ghosh, North Carolina
State University and SAMSI

David M. Higdon, Virginia Tech

Scott H. Holan, University of Missouri

Karen Messer, University of California,
San Diego

Cynthia Rudin, Massachusetts Institute
of Technology

Marina Vannucci, Rice University

(NIH)) to showcase the effect of research at their respective divisions and ultimately to Congress.

- Connect statistical colleagues to appropriate scientific collaborative efforts; for example, by forwarding funding announcements to appropriate colleagues or announcing such information while giving seminars/talks at other campuses, institutions, workshops, or conferences.
- Learn more about serving on a study section or review panel, including how to become a reviewer with (e.g., NIH: <http://bit.ly/1O6021C> or NSF: <http://1.usa.gov/1SmPZWY>).

The ASA CFR also maintains an external funding website (www.amstat.org/careers/efs.cfm), hosts the ASA Community Funding Opportunities group (which circulates funding solicitation notices), and organizes an annual meeting at JSM, Funding Opportunities for Statisticians (e.g., <http://bit.ly/1SITayc>). ■

Get Involved in JSM 2016

Jeffrey S. Morris, JSM 2016 Program Chair



Jeffrey S. Morris

The 2016 Joint Statistical Meetings (JSM) will be held in Chicago, Illinois, from July 30 to August 4. The theme is “The Extraordinary Power of Statistics,” which emphasizes the power our discipline has to extract relevant information and inform decisions based on collected data. Its further development has the potential to greatly affect all aspects of our society, including government, education, health care, marketing, business, finance, and even entertainment.

The JSM 2016 Program Committee has put together 181 invited sessions with topics ranging from data science and Big Data to health policy, climate science, precision medicine, sports, and complex modeling issues such as integrative modeling and various types of structured and high-dimensional data.

I hope you also will participate by presenting your work, attending talks, visiting poster sessions, and taking Continuing Education courses.

Speed Sessions

A speed session is a hybrid of an oral and poster presentation, and inherits the benefits of both. It consists of 20 oral presentations of four minutes each, with a 10-minute break after the first set of 10 talks. The short oral presentations are followed by an electronic poster session on the same day. The idea is that the oral presentation hits the main point of the work to pique interest, and then the e-poster provides an opportunity to present more details of the work, customized to the interests and background of the viewer.

In the past, the best speed session presentations have not tried to squeeze too much information into the four-minute oral presentation, but just enough to give the big picture and attract viewers to the e-posters. Also, e-posters allow greater flexibility than other formats, such as video files and software demonstrations. This format affords a great deal of flexibility to use your creativity in getting your message across.

Given the success of and positive feedback on speed sessions since they were introduced in 2013, the program committee is trying to increase participation in them. Besides providing a great experience for the presenter and audience, speed sessions also improve the overall program by reducing the number of overlapping sessions.



Poster Sessions

Poster sessions allow you to generate attention for your topic through the use of effective visual displays. You also have the opportunity to interact with your audience and make connections without worrying about time constraints.

Topic-Contributed Sessions

A topic-contributed session is organized around a common theme. The session consists of five speakers—either five papers or four papers with one discussant. Topic-contributed sessions have several advantages over contributed sessions, including the following:

- The talks are focused on one theme and are more cohesive
- Each speaker has 20 minutes of presentation time, instead of 15 minutes
- Session slots are limited, so high-quality papers are chosen

Topic-contributed sessions require organizers to select a theme, invite five speakers, and ensure speakers' commitments prior to the submission deadline of January 14, 2016.

Contributed Sessions

Nearly half of JSM sessions are contributed sessions. To present a contributed paper, you need to submit a title and abstract, along with the choice of the ASA section or JSM partner society most closely associated with the topic of your paper. These sessions consist of seven papers with 15 minutes of presentation time for each.

Abstract Submission

The online abstract submission system will close February 1, 2016. This deadline is firm, so please submit your abstract ahead of time. The system

MORE ONLINE
To submit your abstract, visit the JSM website at www.amstat.org/jsm.

will be reopened for abstract editing from March 31 to April 18, 2016. To ensure a well-organized program, speakers must register for JSM when they submit their abstracts.

Session Chairs

All JSM sessions require a chair to ensure speakers are well informed about the session in advance, introduce speakers, and manage time for each speaker. Chairing a session is a great way to get involved with JSM and network with other professionals in your field. I especially encourage people who are new to the profession and JSM to consider chairing sessions by contacting the program committee members.

Finally, the success of JSM relies on your input and effort to help assemble a strong and exciting program. I encourage you all to participate, and I am glad to receive any feedback. Contact me, Jeff Morris, at jefmorris@mdanderson.org. ■

ABSTRACT SUBMISSION **OPEN**

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Recai M. Yucel, Arlene Ash, and Kelly H. Zou

Highlights of the 11th International Conference on Health Policy Statistics

Kelly H. Zou and Recai M. Yucel, Conference Co-Chairs

Big Data approaches for health policy, comparative effectiveness research, and health data confidentiality are some of the subjects that topped the agenda during the 11th International Conference on Health Policy Statistics (ICHPS) October 7–9 in Providence, Rhode Island.

Under the overall theme “Statistical Science at the Forefront of Health Policy Research,” nearly 250 people from eight countries attended the conference, which was sponsored by the ASA Health Policy Statistics Section (HPSS) and co-chaired by Kelly H. Zou and Recai M. Yucel. The conference included workshops, paper and poster sessions, and keynote and plenary addresses. Among the health policy issues discussed were the following:

- Big Data approaches for health policy
- Comparative effectiveness research
- Health data confidentiality
- Improving medical decision-making in the era of personalized medicine
- Meta-analysis and evidence-based medicine
- Measurement, implementation, and interpretation of patient-reported outcomes
- Quality performance analyses
- Social network analysis

- Statistics and payment reform
- The Medical Expenditure Panel Survey

A conference highlight was an invited session on the advances in nonexperimental causal inference methods for patient-centered health services and health policy research, organized by Elizabeth Stuart, a member of the Advisory Panel on Clinical Trials of the Patient-Centered Outcomes Research Institute.

Additionally, three HPSS major achievement awards and student travel awards were presented. Constantine Gatsonis of Brown University and Donald Hedeker of The University of Chicago won HPSS Long-Term Excellence Awards, and Liz Stuart of the Johns Hopkins University Bloomberg School of Public Health won the HPSS Mid-Career Award. Fifteen students were honored with travel awards. Also, HPSS recognized nine members who became ASA fellows in 2014 or 2015.

Throughout the past 20 years, ICHPS has played a vital role in the dissemination of statistical methods in health policy and health services research. The conference has fostered a great tradition of linking methodologists with health policy-makers to add focus and perspective to the development of new tools.

The co-chairs for The 12th ICHPS will be held in 2018. To contact co-chairs Laura Lee Johnson and Bonnie Ghosh-Dastidar, send an email to ICHPS2018@gmail.com. ■

MORE ONLINE

To view photos of the conference, visit <http://bit.ly/1Hb1VuE> and <http://bit.ly/1HZCtbs>.



Gatsonis, Hedeker, Stuart Receive HPSS Awards

The Health Policy Statistics Section (HPSS) presented its Mid-career Award and Long-term Excellence Award on October 9 during the keynote session of the 11th International Conference on Health Policy Statistics (ICHPS), held at the Providence Biltmore Hotel in Providence, Rhode Island.

Long-Term Excellence Award

Constantine Gatsonis of Brown University and **Donald Hedeker** of The University of Chicago received the Long-Term Excellence Award in recognition of their outstanding leadership and sustained contribution to the development and application of statistical methods in health care policy and health services research, and for service to the section.

Gatsonis is the Henry Ledyard Goddard University Professor of Biostatistics and chair of the department of biostatistics at Brown University and a leading authority on the evaluation of medical test technology for diagnosis and prediction. His research ranges from the design and conduct of multi-center clinical studies to research synthesis and health care policy implications. He has also contributed to the statistical foundations of health services and outcomes research by developing and applying hierarchical Bayesian methods for studies of variations in health care use and outcomes and for the comparison of health care providers.

Gatsonis has served on numerous review and advisory panels and currently chairs the Committee on Theoretical and Applied Statistics of the National Academies. He helped establish the Health Policy Statistics Section in 1994, co-chaired the inaugural International Conference on Health Policy Statistics in 1995, and served as founding editor in chief of the journal *Health Services and Outcomes Research Methodology*. He is a fellow of the American Statistical Association and the Association for Health Services Research.

Hedeker is a professor of biostatistics in the department of public health sciences of The University of Chicago. He is an expert in the development and use of advanced statistical methods for clustered and longitudinal data, with

AWARD JUDGES

The 2015 HPSS honorees were selected from a large roster of nominees by five judges: Arlene Ash, University of Massachusetts; Marc Elliott, RAND Corporation; Robert Gibbons, The University of Chicago; Sharon-Lise Normand, Harvard University; and Susan Paddock, RAND Corporation and Award Committee chair and 2016 HPSS chair.

a particular emphasis on mixed-effects models. He is the primary author of several freeware computer programs for mixed-effects analysis.

Hedeker was co-chair of the 10th ICHPS in 2013 and has served in several other roles for the ASA, including as chair of the Mental Health Section in 2015. He has been a member of numerous grant review committees and editorial boards. Hedeker is a fellow of the ASA.

Mid-Career Award

Elizabeth Stuart of The Johns Hopkins University received the Mid-Career Award for her contributions to developing statistical methods and for continuing achievement at the frontier of statistical practice and research in health care policy and health services research.

Stuart is a professor in the department of mental health, department of biostatistics, and department of health policy and management of the Johns Hopkins Bloomberg School of Public Health. Her primary research interests are in statistical methodology for causal inference and missing data, especially in the trade-offs in different study designs for estimating causal effects. Her primary substantive research areas are education, health policy, and mental health.

Stuart has had an organizing role in several conferences, including the ICHPS, and serves on the editorial boards of several journals. She is a fellow of the ASA and a member of several national advisory panels, including being the chair of the Inaugural Clinical Trials Advisory Panel in the Patient-Centered Outcomes Research Institute (PCORI). ■

The NMSU ASA Student Chapter Leadership and Ron Wasserstein

In early November, Ron Wasserstein, executive director of the ASA, spoke in a special seminar series at New Mexico State University (NMSU) in Las Cruces, New Mexico. A land-grant institution known for being the home of Clyde Tombaugh, the discoverer of Pluto, and for a world-renowned chile pepper institute, New Mexico State also has a small applied statistics group in the department of economics, applied statistics, and international business. That group fostered the development of a student chapter of the ASA, one of a few in the nation and the first in the state. Wasserstein spoke at the invitation of the department and student chapter.

The first seminar was a discussion of the p -value debate that has ensued since, in early 2015, a journal edited by faculty at NMSU banned the use of F - and t -statistics, as well as p -values and any mention of “significant” differences. Wasserstein discussed the problems inherent in p -values specifically and how they are misunderstood, misused, and maligned. The NMSU community attended in force, with standing room only for the entire talk—faculty and students from departments across the campus and many members of the community were in attendance.

The second seminar focused on lotteries and featured an

in-class demonstration of how one works (real money was not used, much to the chagrin of the jackpot winner). As New Mexico finances large education scholarships with its state lottery, the talk showed how such a program is possible and demonstrated the long odds associated with winning a lottery. The event was also well attended by faculty and students.

The student chapter of the ASA at NMSU is advised by Charlotte Gard (cgard@nmsu.edu) and led by President Adam Sayre and Vice President Elmira Torabzadehkhosrasi. The chapter is seeking speakers for events during the 2015–2016 academic year. ■

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NISS Honors Ingram Olkin

The National Institute of Statistical Sciences (NISS) celebrated its 25th anniversary as an organization at a reception held during the Joint Statistical Meetings in Seattle this past August. As part of the celebration, NISS Director Nell Sedransk presented Ingram Olkin, one of the founders of NISS, with a book describing the history of the organization.

Many of Olkin's former students and research collaborators were on hand for the celebration.

The history of NISS will be published in the *Statistics and Public Policy* journal in early 2016. To read more about the journal, visit Taylor & Francis' website at <http://bit.ly/1HDNWxs>.



Emory Celebrates Stats Day

The department of biostatistics and bioinformatics in the Emory University Rollins School of Public Health celebrated World Statistics Day 2015 by holding a special department meeting with snacks and beverages followed by a presentation, "History and Milestones of the Department (1963–2015)," by Michael Kutner, Rollins professor of biostatistics. The presentation was followed by a blinded wine tasting experiment involving three Napa Valley Cabernet Sauvignons. Fun was had by all participants.

Xihong Lin, ASA member and faculty member of Harvard T.H. Chan School of Public Health, received a prestigious National Cancer Institute Outstanding Investigator Award (OIA). These multimillion-dollar, seven-year awards provide extended funding stability and are aimed at giving promising and productive investigators enough time and money to continue or embark on projects of unusual potential in cancer research—and to take greater risks in their work.

For a description of the award, visit the NIH website at <http://1.usa.gov/1lX7sg>. To read more about Lin, visit the Harvard website at <http://bit.ly/1NNLt13>. ■

Obituaries

Peter W. M. John

Veronica Czitrom

Peter William Meredith John, professor emeritus of mathematics at the University of Texas at Austin, died on January 22, 2015, at the age of 91. He will be remembered for his many contributions to the design of experiments, with applications in a variety of fields.

A fellow of the American Statistical Association, Royal Statistical Society, and Institute of Mathematical Statistics, John was recognized for his statistical contributions. He was the keynote speaker twice for the Quality and Productivity Research Conference, one sponsored by Bell Laboratories in 1997 and the other by the IBM Watson Research Center in 2003. John received the Don Owen Award in 1995 and received honorable mention for the Shewell Award at the 1977 Fall Technical Conference and jointly for the Shewell Award at the 1991 conference.

On a personal level, John was delightful, always with a ready smile and a wonderful sense of humor. At statistical meetings, he enjoyed a good beer and conviviality with colleagues; even people who hadn't seen him in years remembered him fondly. He had a strong effect on both the personal and professional lives of many of his students. He delivered classroom lectures with enthusiasm and fascinating anecdotes, as well as interesting examples. He was a true gentleman.

John was born in Porthcawl, Wales, in 1923. He attended local schools through middle school and won a scholarship in 1937 to Hereford Cathedral School, followed by a mathematics scholarship in 1941 to Jesus College, Oxford. After two years



Peter W. M. John

at Oxford, reading for a wartime degree, he enlisted in the Royal Air Force in 1943 as a university student. He spent several more months at Oxford, intensively learning advanced physics so he could work on technical problems supporting the war effort. In 1944, he completed his BA and began full-time military service. As a World War II officer, he served in India, Burma, Japan, and, briefly, Singapore. He was in India when the atomic bomb was dropped on Hiroshima, and later saw the devastation it caused.

After military service, John earned his MA (Oxon) in 1948 and used his military benefits to return to Oxford and earn a post-graduate certificate (now called MSc) in statistics a year later. On hearing of his change from mathematics to statistics, John's high-school mathematics teacher told him it was sad to see the waste of such a brilliant young mind.

Given the difficult job market in post-war UK, John became a mathematics instructor at the University of Oklahoma; a year later, he resumed his graduate studies in mathematics there. One summer, he was offered a position conducting a door-to-door survey. A door was opened by a bright, attractive history graduate student, Elizabeth Ann Harper. A courtship ensued, and the couple married in 1954.

Elizabeth later became a well-respected scholar of American Indian and Spanish history in the American Southwest.

John earned a PhD in 1955 with a dissertation in probability involving birth and death processes.

After joining the University of New Mexico as assistant professor for two years, he became a research statistician at the Chevron Research Corporation in the San Francisco Bay Area. Henry Scheffé, a consultant there at the time, became John's mentor. John remembered Scheffé as a shy, private, and delightful person who invited him to the Tuesday afternoon seminars at the University of California at Berkeley, where John became a visiting assistant professor of statistics for three years. Those were exciting times, including programming the then-new computers to do regression, expanding the methodology of analysis of variance and experimental design, and learning about response surfaces. While at Chevron, John began attending the summer Gordon Research Conferences and later became particularly proud of serving as chair of the 1976 Gordon Conference on Statistics.

John returned to academia in 1961 as a tenured (and later full) professor at the University of California at Davis. While there, he worked closely with agronomists, geneticists, and food scientists, whose experimental design needs were quite different from those he'd encountered at Chevron. In 1967, he joined the University of Texas at Austin, where he remained a professor of mathematics until his retirement as emeritus professor 37 years later.

His research often emerged from practical situations; for

instance, three-quarter replicates to supplement full and fractional factorials and optimal run order to ensure against early termination of an experiment.

John supervised 11 PhD students and more than 60 master's students. He also consulted for many industrial corporations and government agencies, including the Los Alamos National Laboratory and SEMATECH (Semiconductor Manufacturing Technology).

John published 85 technical papers and three books. His 1971 book, *Statistical Design and Analysis of Experiments*, was innovative in several ways. It used a more mathematical treatment than previous textbooks on the subject and incorporated material from diverse sources, including emerging ideas such as fractional factorial designs. It illustrates many concepts with both engineering and agricultural applications; some of the examples are used in other well-known DOE books to this day. The book filled a need and was well received. While it is quite concise, John illustrated the concepts with interesting examples in class. The book was republished in 1998 by the Society for Industrial and Applied Mathematics as part of its Classics in Applied Mathematics Series. John also published two other books, *Incomplete Block Designs* (1980) and *Statistical Methods in Engineering and Quality* (1990).

John is survived by his beloved wife of 61 years, a daughter, a son, and two grandchildren.

Visit the University of Texas memorial page at www.ma.utexas.edu/users/mks/PWMJMemorial/PeterJohnMemorial.html to read more about John. ■

Boris Iglewicz

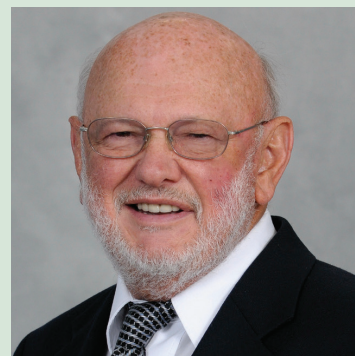
R. Boris Iglewicz, a renowned researcher and tenured faculty member in Temple University's Fox School of Business, died August 25. He was 75.

Iglewicz, a professor emeritus, had taught in the statistics department since 1969, upon his hire as an associate professor by Temple's School of Business and Management. In 1974, he was promoted to full professor. He acted as the department's chairperson from 1978–1982, chaired Temple's Graduate Affairs Committee from 1974–1975, and served as director of the PhD program in statistics from 1971–1976. Additionally, in 1984–1985, he was a visiting professor at Harvard University.

"Boris was a pillar of the department in his 45 years, having created our PhD program in 1973 and nurturing its growth since then," said Sanat K. Sarkar, Cyrus H. K. Curtis Professor of Statistics and chair of the Fox School's statistics department. "His enthusiasm and passion for the department and the school were infectious. He was a true scholar and a great mentor who deeply cared for the success and well-being of his students and colleagues. We will deeply miss him."

Iglewicz wrote or contributed chapters to four published books, wrote 57 refereed journal articles, and served on the editorial boards of the *Journal of Quality Technology* and *Statistics in Biopharmaceutical Research*.

At the Fox School, Iglewicz supervised 24 PhD dissertations, with students winning



Boris Iglewicz

17 international awards for dissertation research. He was elected a fellow of the American Statistical Association and Royal Statistical Society, a member of the International Statistical Institute, and a senior member of the American Society for Quality.

In 2001, Iglewicz received the W.J. Youden Award, which acknowledges authors who have made outstanding contributions to the design of interlaboratory tests. In 2003, he received the Don Owen Award, which recognizes excellence in research, statistical consultation, and service to the statistical community.

Iglewicz is survived by his wife of 43 years, Raja Iglewicz. He is also survived by his son, David Iglewicz; David's wife, Sandy Benkler; and their children, Brandon and Sydney Benkler-Iglewicz. He is also survived by his daughter, Alana Iglewicz; her husband, Sorin Lerner; and their children, Talia and Ellie Lerner. Boris was a proud and delightful father and grandfather with a wonderful sense of humor. He lived his life the way he wanted to and thoroughly enjoyed it. He was also a mentor and father to all his PhD students. He was loved by all and respected by many. ■

Roger Herriot Award

Nominations are open for the 2016 Roger Herriot Award for Innovation in Federal Statistics. The award is intended to reflect the special characteristics that marked Roger Herriot's career, including the following:

- Dedication to the issues of measurement
- Improvements in the efficiency of data collection programs
- Improvements and use of statistical data for policy analysis

The award is not limited to senior members of an organization, nor is it to be considered a culmination of a long period of service. Individuals or teams at all levels within federal statistical agencies, other government organizations, nonprofit organizations, the private sector, and the academic community may be nominated on the basis of their contributions. Since innovation often requires or results from teamwork and team innovations often are more lasting—resulting in real paradigm shifts, not just one-time improvements—team nominations are encouraged. For an example, see the 1998 Herriot (team) award.

The recipient of the 2016 Roger Herriot Award will be chosen by a committee comprising representatives of the American Statistical Association's Social Statistics and Government Statistics sections and the Washington Statistical Society (WSS). Herriot was associated with, and strongly supportive of, these organizations during his career.

The award consists of a \$1,000 honorarium and a framed citation, which will be presented

at a ceremony during the Joint Statistical Meetings in August 2016. The WSS will also host a seminar given by the winner on a subject of his or her choosing.

Nomination packages should contain the following:

- A cover letter from the nominator that includes references to specific examples of the nominee's contributions to innovation in federal statistics. These contributions can be to methodology, procedure, organization, administration, or other areas of federal statistics, and need not have been made by or while a federal employee.
- Up to six additional letters of support that demonstrate the innovativeness of each contribution.
- A current curriculum vita for the nominee with contact information. For team nominations, the vitae of all team members should be included.
- The committee may consider nominations made for prior years, but encourages nominators to provide updated information in resubmitting those nominations.

For more information, contact Dave Hubble, chair of the 2016 Roger Herriot Award Committee, at (301) 610-8814 or davidhubble@westat.com. Nominations for the 2016 award will be accepted beginning in January 2016. Completed packages must be received by April 1, 2016. Electronic submissions in MS-Word or as a PDF file are strongly encouraged.

COPSS Awards

Each year, the statistical profession recognizes outstanding members at the Joint Statistical Meetings (JSM) in an awards ceremony organized by the Committee of Presidents of Statistical Societies (COPSS). Nominations are an important part of the process, and everyone can contribute—from the newest to most senior members of our societies. We recognize excellence in our mentors, colleagues, and friends. It is important to single out those who have made exceptional contributions to the profession, so take a few minutes, review the various COPSS Awards for 2016, and see if you can identify worthy individuals to nominate.

Nominations are being sought for the following COPSS awards, which will be presented at the 2016 JSM in Chicago, Illinois (July 30–Aug 4):

- The Fisher Award and Lectureship is awarded yearly for outstanding contributions to aspects of statistics and probability that closely relate to the scientific collection and interpretation of data. The award exists to recognize the importance of statistical methods for scientific investigations. The awardee delivers an hour-long lecture during JSM. Eligible nominations should be sent in PDF format by December 15 to Fisher Award Committee Chair Hans Kuensch at kuensch@stat.math.ethz.ch.
- The Presidents' Award is presented yearly in recognition of outstanding contributions to the statistics profession. It is typically granted to an individual

MORE ONLINE
To view the names of previous award recipients and to read more about Herriot's life, visit the ASA Social Statistics Section website at www.amstat.org/sections/ssoc/rogerherriot.html.

who has not yet reached his or her 41st birthday. In the special case of an individual who has received his or her statistically related terminal degree fewer than 12 years before the nomination deadline, the individual will be eligible if he or she has not yet reached his or her 46th birthday during the year of the award. Nominations should be sent in PDF format by January 15, 2016, to Presidents' Award Committee Chair Jeremy Taylor at jmgt@umich.edu.

- The Elizabeth L. Scott Award is presented biennially (even-numbered years) to an individual who has helped foster opportunities in statistics for women and exemplifies the contributions of Elizabeth Scott's lifelong efforts to further the careers of women in academia. Nominations should be submitted in PDF format by January 15, 2016, to Elizabeth Scott Award committee Chair Barry Graubard at barry_graubard@hotmail.com.

These awards are jointly sponsored by the American Statistical Association, Institute of Mathematical Statistics, Eastern and Western Regions of the International Biometric Society (ENAR and WNAR), and Statistical Society of Canada. They represent a discipline-wide acknowledgement of the outstanding contributions of statisticians, regardless of their affiliations with any professional society.

See <http://bit.ly/1MmBm4o> for specific information about the awards and their criteria. ■

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

Deadlines and Awards	Nominations	Questions
January 15, 2016		
COPSS Presidents' Award	http://bit.ly/1MmBm4o	
Elizabeth L. Scott Award	http://bit.ly/1MmBm4o	
February 1, 2016		
Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society	Pam Craven pamela@amstat.org	Paul S. Albert albertp@mail.nih.gov
ASA W. J. Dixon Award for Excellence in Statistical Consulting	Pam Craven pamela@amstat.org	
February 15, 2016		
Causality in Statistics Education Award	educinfo@amstat.org	
Harry V. Roberts Statistical Advocate of the Year Award	Pam Craven pamela@amstat.org	Mary J. Kwasny m-kwasny@northwestern.edu
ASA Samuel S. Wilks Memorial Medal	Pam Craven pamela@amstat.org	Lynne Billard lynne@stat.uga.edu
ASA Waller Distinguished Teaching Career Award	Pam Craven pamela@amstat.org	Bradley A. Hartlaub hartlaub@kenyon.edu
ASA Waller Education Award	Pam Craven pamela@amstat.org	Bradley A. Hartlaub hartlaub@kenyon.edu
ASA W. J. Youden Award in Interlaboratory Testing	Pam Craven pamela@amstat.org	Blaza Toman blaza.toman@nist.gov
February 20, 2016		
ASA Statistics in the Physical and Engineering Sciences Award	Philip J. Ramsey pjrstats@aol.com	Philip J. Ramsey pjrstats@aol.com
February 23, 2016		
ASA Gertrude M. Cox Scholarship	Pam Craven pamela@amstat.org	Eloise E. Kaizar ekaizar@stat.osu.edu
March 1, 2016		
ASA Edward C. Bryant Scholarship	Pam Craven pamela@amstat.org	Pushpal Mukhopadhyay pushpal.mukhopadhyay@sas.com
ASA Excellence in Statistical Reporting Award	Pam Craven pamela@amstat.org	Morteza Marzjarani mortkm2@yahoo.com
ASA Fellows	www.amstat.org	J. Jack Lee jjlee@mdanderson.org
ASA Mentoring Award	Pam Craven pamela@amstat.org	David R. Morganstein davidmorganstein@westat.com
ASA Outstanding Statistical Application Award	Pam Craven pamela@amstat.org	DuBois Bowman dubois.bowman@columbia.edu
March 15, 2016		
ASA Founders Award	Pam Craven pamela@amstat.org	David R. Morganstein davidmorganstein@westat.com

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sectionnews

Government Statistics

Morgan Earp, Program Chair-Elect

The Government Statistics Section has four invited sessions for JSM 2016:

1. Survey Costs and Survey Designs: Trade-Offs and Advances
2. Advances in Statistical Methods for Dissemination and Analysis of Official Statistics
3. Quality of Alternative Sources for Social, Economic, and Health Data
4. Computing for Nonlinear Methods with Large Data Sets

Details: www.amstat.org/meetings/jsm/2016/program.cfm.

Quality and Productivity

Members are invited to present and attend the annual Fall Technical Conference and Quality and Productivity Research Conference. The section also seeks nominations for the Gerald J. Hahn Q&P Achievement Award.

The 60th annual Fall Technical Conference (FTC) will be held at the Courtyard Downtown by Marriott in Minneapolis, Minnesota. The theme of the conference, “Statistics and Quality: Twin Pillars of Excellence.”

During the FTC, the Gerald J. Hahn Q&P Achievement Award will be presented to an individual who has demonstrated outstanding leadership in developing, promoting, and successfully improving the quality and productivity of products and organizational performance using statistical concepts and methods for 20 or more years. **Bill Meeker** from Iowa State University won the 2015 award, and nominations for the 2016 award are due February 28, 2016. For information, visit <http://bit.ly/1Yiuv1c>. Questions

may be directed to J.D. Williams at jdwilliamsphdstat@gmail.com.

In addition to FTC, the section is sponsoring the Quality and Productivity Research Conference (QPRC), which will take place June 14–16, 2016, in Tempe, Arizona. The goal of the conference is to stimulate interdisciplinary research among statisticians, scientists, and engineers in quality and productivity, industrial needs, and the physical and engineering sciences. This year’s theme is “Integrating Quality and Statistics: A Transformative Alliance.” Abstracts can be submitted to Connie Borrer at conni@asu.edu by March 1, 2016. Details: <http://bit.ly/1GZkFgw>.

Teaching of Statistics in the Health Sciences

Robert Oster, Section Publications Officer

Officers of the Teaching of Statistics in the Health Sciences (TSHS) Section recognized **Mine Çetinkaya-Rundel** of Duke University with the JSM 2015 Best Contributed Paper Award for “Teaching to, and Learning from, the Masses.” During 2016, the section will offer the Young Investigator Award, Outstanding Teaching Award, and Best Contributed Paper Award (at JSM 2016).

The Young Investigator Award, presented annually, recognizes an outstanding young investigator (i.e., a current graduate student or a recent graduate who has received his/her terminal degree no more than seven years ago and who is in position with rank below associate professor and does not hold tenure or its equivalent) who is the first author of an abstract submitted to the TSHS Section for JSM. The abstract must be related to the use of effective methods in statistics education

or innovative statistics education research in the health sciences.

Consideration requires a nomination letter, copy of the abstract, an accompanying full paper for the submitted abstract, copy of the nominee’s curriculum vita (with particular emphasis on activities related to teaching or statistics education research in the health sciences), and a statement of the nominee’s philosophy of teaching or summary of the nominee’s program in statistics education research. Prior recipients of either this award or the section’s Distinguished Achievement Award are ineligible.

The Outstanding Teaching Award, presented annually, recognizes an outstanding statistics educator and mentor in the health sciences. Consideration requires a nomination letter summarizing the nominee’s teaching/training and mentoring record in the health sciences, copy of the nominee’s curriculum vita (with particular emphasis on activities related to teaching/training and mentoring in the health sciences), statement of the nominee’s philosophy of teaching, and three letters of reference submitted by colleagues of the nominee summarizing his/her teaching/training and mentoring accomplishments. Prior recipients of either this award or the section’s Distinguished Achievement Award are ineligible.

Nominations for these awards must be made with the nominee’s consent; self-nominations are allowed. The deadline for receipt of nominations is March 7, 2016.

Details: <http://community.amstat.org/TSHS/Home>.

Physical and Engineering Sciences

A message from 2015 Chair Stephanie DeHart outlining the past year’s activities can be found online at <http://bit.ly/1PqLw7X>. ■

To list your sections' news in Amstat News send an email to managing editor Megan Murphy at megan@amstat.org with the details.

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

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

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

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

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

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

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

RUTGERS

School of Public Health

Faculty Position in Biostatistics

The Department of Biostatistics at Rutgers School of Public Health invites applications for an open rank faculty position. With a new Dean, Dr. Jasjit S. Ahluwalia, the School is undergoing a rapid expansion. The successful applicant will be expected to develop and sustain an extramurally funded research program; contribute to the teaching mission; and mentor MPH, MS, and doctoral students. The School is recruiting applicants who can support expanded efforts in clinical and translational sciences (CTS) across Rutgers Biomedical and Health Sciences (RBHS). Applicants will participate in the design and conduct of collaborative studies, develop statistical methodology, and conduct research with an aim of obtaining extramural grants. Strong training and a track record in modern multivariate statistical methods, biocomputing, biomedical informatics, and experience in clinical and translational research are essential. The successful applicant will find a wide range of experts within the School of Public Health (sph.rutgers.edu) and Rutgers Biomedical and Health Sciences (RBHS; rbhs.rutgers.edu), including the Cancer Institute of New Jersey (cinj.org). The School of Public Health is located on the Rutgers University–New Brunswick and RBHS at Newark campuses, and is close to New York City and the beaches of the Atlantic Ocean. An attractive recruitment package will include a competitive salary and start-up funds. The successful applicant will have a doctoral degree (PhD or equivalent) and a demonstrated record of scholarship as appropriate to their faculty rank.

Applications will be received and reviewed until the position is filled. Please apply online at: <http://jobs.rutgers.edu/postings/13983>

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Arkansas

■ The math department at the University of Central Arkansas is seeking applications for tenure-track assistant professor in applied statistics, beginning August 2016. A PhD or equivalent required. Regular teaching load is 12 hrs/semester. Applicants should upload cover letter, CV, transcripts, teaching & research statements, and three reference letters to: <https://jobs.uca.edu> (F0472015). Review will begin December 7, 2015. More information: www.uca.edu/math. UCA is an EO/AA Employer. UCA is an EO/AA Employer.

■ The Agricultural Statistics Laboratory, a unit of the University of Arkansas' Agricultural Experiment Station, has an opening for a tenure-track assistant professor. PhD in statistics or biostatistics is required. Duties include statistical and collaborative research, teaching, statistical consulting, and professional service. Submit application materials at <https://jobs.uark.edu>. For questions, contact egbur@uark.edu. Review of applications will begin January 4, 2016. Anticipated starting date is August 15, 2016. EOE. All applicants are subject to public disclosure under the Arkansas Freedom of Information Act and persons hired must have proof of legal authority to work in the United States.

California

■ Department of statistics and applied probability, University of California, invites applications for a visiting assistant professor position in statistics, starting July 1, 2016. Qualifications: Research/teaching excellence; PhD in statistics, biostatistics or related fields. Candidates who can contribute to the diversity of excellence of the academic community through research, teaching and service are particularly encouraged to apply. Additional information at: <https://recruit.ap.ucsb.edu/apply/JPF00561>. An EO/AA employer.

District of Columbia

■ The Georgetown University Department of Mathematics and Statistics invites applications for an assistant professor position beginning August 2016. Applicants must have a

PhD/DSc in statistics or a related field by July 31, 2016. For more information and to apply, go to www.mathjobs.org/jobs/jobs/7843. Questions may be directed to the search committee chairperson at stat_hire@georgetown.edu. Application materials should be submitted by January 10, 2016. Georgetown University is an Equal Opportunity, Affirmative Action employer fully dedicated to achieving a diverse faculty and staff.

Georgia

■ University of Georgia, starting August 2016. Requires PhD in statistics. To apply, visit <http://facultyjobs.uga.edu/postings/443>. Applications received by January 2, 2016, are assured consideration. University of Georgia is an Equal Opportunity/Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, gender identity, sexual orientation or protected veteran status.

Indiana

■ The Purdue University Department of Statistics has multiple faculty positions beginning August 2016. All applicants should hold a PhD in statistics or a related field, be committed to excellence in teaching, and have demonstrated strong potential for excellence in collaboration and research. For more information about the positions and how to apply, please visit www.stat.purdue.edu/hiring/index.html. Purdue is a dual-career–friendly employer. A background check will be required for employment in this position. Purdue University is EOE/AA employer. All individuals, including minorities, women, individuals with disabilities, and protected veterans are encouraged to apply.

■ Position at the rank of lecturer in Indiana University’s Department of Statistics (www.stat.indiana.edu). Teach five courses per year, contribute to various degree programs, participate in faculty governance. PhD in statistics

or related field required at time of hire. Commitment to teaching excellence essential. Interest/experience in teaching business statistics is especially desired. Apply by January 11, 2016 at: <http://indiana.peopleadmin.com/postings/1953>. Address questions to Kelly Hanna, khanna@indiana.edu. EOE.

■ The IPFW Department of Mathematical Sciences invites applications for a tenure-track position in statistics, applied statistics, or actuarial science. A PhD in statistics or related field is required by fall 2016. Preference areas are multivariate analysis, discrete data analysis, or stochastic processes. Send letter of application, curriculum vita, graduate transcripts, evidence of teaching effectiveness with philosophy, and three reference letters to mcfarlas@ipfw.edu. Indiana-Purdue University Fort Wayne is an EOE.

■ Tenured associate or full professor in Indiana University’s Department of Statistics (www.stat.indiana.edu).

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Applicant's research program in data science should complement department's existing strengths in machine learning, spatial statistics, and Bayesian inference. Seeking renowned scholars with demonstrated commitment to teaching excellence and department service. Apply by December 11 at PeopleAdmin: <http://indiana.peopleadmin.com/postings/1948>. Address questions to Kelly Hanna, khanna@indiana.edu. Indiana University is an AA/EOE.

Maryland

■ The National Cancer Institute Biometric Research Branch is seeking candidates with statistics or computational biology PhD. BRB scientists conduct research in biostatistics, bioinformatics, and/or computational biology; provide statistical leadership for national and international research programs. Experience in clinical trials statistics, or next-gen sequencing analysis, advantageous. This is a pre-application announcement to gauge interest. Send résumé to Richard Simon, Chief BRB, rsimon@nih.gov. Additional information at <http://brb.nci.nih.gov.br>. DHHS, NIH and NCI are Equal Opportunity Employers. Applicants must be U.S. citizens.

■ Applications are invited for a tenure-track assistant professor position in statistics beginning in fall 2016. The department seeks candidates with a PhD in statistics who are able to demonstrate the potential for significant scholarly activity and excellence. To apply, please go to <https://careers.loyola.edu> to electronically submit a cover letter, CV. Please have three letters of recommendation emailed directly to pts@loyola.edu. Loyola University is an EOE.

■ ICF International, a firm in Rockville, Maryland, that conducts survey research on a wide variety of topics for government, non-profit, and commercial clients, is seeking a PhD statistician in survey sampling. Interest in a wide variety of statistical applications associated with survey research including survey design, adaptive design, ABS, nonresponse

adjustment, calibration methods, imputation techniques, and small-area estimation. Send resumes to maria.schwartz@icfi.com. EOE.

Massachusetts

■ The University of Massachusetts Amherst (www.umass.edu/sphbs) seeks a tenure-track faculty in biostatistics (assistant/associate) starting September 2016. Minimum requirements: terminal degree (PhD, DrPH), experience or potential as principal investigator of independent and collaborative research, and interest and ability in teaching. Review of applications begins November 13, 2015. Submit curriculum vita, description of research and teaching interests, and three names of reference online: <http://umass.interviewexchange.com/candapply.jsp?JOBID=64579>. The University of Massachusetts is an affirmative action/equal opportunity employer. Woman and members of minority groups are encouraged to apply.

■ Tenure Track Assistant/Associate Professor, Mathematical Sciences. Bentley University, a private business university outside Boston, invites applications for a full-time position in applied statistics or related field for fall 2016. Bentley offers degrees in mathematical sciences, actuarial science, MS in business analytics, and a business PhD. Doctoral degree required in applied statistics or a related field by fall 2016. Interested applicants visit: www.bentley.edu. Bentley University is an Equal Opportunity Employer, building strength through diversity.

■ BU Mathematics/Statistics invites applications for a tenured statistics professor. PhD required. Begins July 1, 2016, pending final budgetary approval. Strong commitment to teaching and research essential. The ideal candidate would be interested in serving as director, program in statistics. Submit cover letter describing research and teaching



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EOE

Statistical Career Opportunities with Westat

Westat is an employee-owned corporation headquartered in 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 is a leader in the statistical services field.

We are currently recruiting for the following positions:

Senior Survey Sampling Statistician This position requires a master's degree in survey sampling, statistics, survey research, or a related field with 12 or more years in sample survey work or a Ph.D. in survey sampling, statistics, survey research, or a related field and 10 or more years in sample survey work.

Senior Manager, Statistical Computing Unit This position requires candidates to have a strong statistical or other quantitative background and at minimum a master's degree in computer science, statistics, math, physics, or a related data science degree coupled with at least 10 years of experience in statistical or other data-intensive computing. Five years of supervisory experience is also required.

Statistical Analyst This position requires a master's degree in statistics, survey research, or other related quantitative field coupled with 5 or more years in sample survey analysis or a Ph.D. in statistics, survey research, or other related quantitative field and 3 or more years in sample survey analysis.

Survey Sampling Statistician This position requires a master's degree in survey sampling, statistics, survey research, or a related field with 5 or more years in sample survey work or a Ph.D. in survey sampling, statistics, survey research, or a related field and 3 or more years in sample survey work.

Data Scientist The position requires candidates to have a computational and applied statistical background. At a minimum a master's degree in statistics, survey methodology, computer science, or a related applied quantitative social science field coupled with at least 3 years of experience in statistical computing.

Westat is an Equal Opportunity Employer and does not discriminate on the basis of race, creed, color, religion, sex, age, national origin, veteran status, disability, marital status, sexual orientation, citizen status, genetic information, gender identity, or any other protected status under applicable law. To apply, go to www.westat.com/careers.

www.westat.com

interests, CV, contact information for three references: mathjobs.org. Direct questions to Tasso Kaper, tasso@bu.edu. Review will continue until filled. Boston University is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law. We are a VEVRAA Federal Contractor.

Michigan

■ The Eastern Michigan University Department of Mathematics invites applications for two tenure-track positions at the level of assistant professor beginning in August 2016. A PhD in the mathematical sciences or related quantitative field is required. The department is seeking candidates with a strong background in applied statistics or data science. To apply or for more information, go to www.emich.edu/jobs. EOE.

Minnesota

■ The biostatistics division, school of public health, University of Minnesota, seeks applicant for tenured associate director of the division's Coordinating Center for Biometric Research. Requirements include leadership experience in coordinating/conducting multi-center clinical trials. Candidates should have a research record in clinical trial design, conduct, and analysis, as well as a history of externally funded collaborative research. Longer ad: www.sph.umn.edu/biostatistics. Applicants should apply online: <https://goo.gl/NUfMmy>. EOE.

■ The biostatistics division, school of public health, University of Minnesota, seeks applicants for two asst/assoc tenured/tenure-track faculty positions. Especially interested in individuals with academic and research records in methods, and software for handling Big Data in the biomedical sciences, especially using machine learning techniques, or

spatial/spatiotemporal statistics, especially as applied in environmental or climatological science. Longer ad: www.sph.umn.edu/biostatistics. Applicants should apply online: <https://goo.gl/dkBHwf>. EOE.

Mississippi

■ Assistant professor requirements include a doctoral degree in statistics or biostatistics, a commitment to effective teaching and research. Applicants must apply online www.jobs.msstate.edu (PARF 9281), complete the Personal Data Information Form, submit a detailed CV, transcripts, a summary of research plans, a statement of teaching philosophy, and three letters of recommendation to: Statistics Chair, Mathematics and Statistics, P.O. Box MA, Mississippi State, MS 39762. MSU is an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, ethnicity, sex (including pregnancy and gender identity), national origin, disability status, age, sexual

ASSISTANT / ASSOCIATE RESEARCH PROFESSOR Clinical Trial Statistician / Biostatistician

With an opportunity for substantial leadership responsibility in studies of international public health import.

The Biostatistics Center of The George Washington University, founded in 1972, is a leader in the statistical coordination of clinical trials conducted by the National Institutes of Health. We manage NIH research funding totaling over \$60 million per year for major studies in cardiovascular disease, diabetes, maternal/fetal medicine, osteoporosis, urology, and the genetic basis for various diseases. The center has a staff of over 115 with 35 biostatisticians/epidemiologists, including 13 faculty. We are recruiting a Ph.D. level research faculty position to participate in these and future studies. Please visit our web site at www.bsc.gwu.edu to learn more about our research.

Assistant / Associate Research Professorial Position with responsibilities at the Biostatistics Center and in the Department of Epidemiology and Biostatistics. Position involves: serving as Co-Investigator on an existing grant studying youth-onset type 2 diabetes. The successful candidate will join a highly competent team of academic biostatisticians and epidemiologists, contribute to the design and analysis of major medical studies, seek substantive scientific and statistical responsibility, interact with medical investigators, participate in the publication of major papers in leading medical journals, and make an impact on issues important to public health. The candidate will be expected to develop expertise in the design, conduct, analysis, and report of multi-center collaborative research, with the ultimate goal of acquiring funding as a coordinating center principal investigator. As a member of the faculty of the Department of Epidemiology and Biostatistics, the candidate will be expected to participate in Milken Institute School of Public Health faculty activities as well as educational activities at the graduate level. The research projects also provide an environment rich in methodological problems, with opportunities for collaboration between faculty and graduate students.

Basic Qualifications: Applicants must have a Doctorate in Statistics, Biostatistics, or Epidemiology with strong credentials in statistical methodology.

Application Procedures: To be considered please complete an online faculty application at <http://www.gwu.jobs/postings/29015> and upload a Curriculum Vitae, a letter that includes a synopsis of your experience and qualifications, including any medical scientific presentations or publications, and a statement of career goals and how this position can help you achieve those goals. Please send three letters of reference to researchjobs@bsc.gwu.edu or by U.S. Post to Manager of Human Resources, The Biostatistics Center, The George Washington University, 6110 Executive Blvd., Suite 750, Rockville, MD 20852.

Only complete applications will be considered. Review of applications will begin on November 5, 2015 and is ongoing until the position is filled. Rank/position title and salary commensurate with experience and qualifications. Tuition benefits for employees (including Ph.D. in Statistics, Biostatistics and Epidemiology) and for spouse and dependent children. Employment offers are contingent on the satisfactory outcome of a standard background screening.

The George Washington University is an Equal Employment Opportunity/Affirmative Action employer that does not unlawfully discriminate in any of its programs or activities on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity expression, or on any other basis prohibited by applicable law.

THE GEORGE
WASHINGTON
UNIVERSITY
WASHINGTON, DC

orientation, genetic information, protected veteran status, or any other characteristic protected by law.

New York

■ Leader, Statistics & Analytics - New York City or Albany Office* NYSEERDA seeks a Leader of Statistics & Analytics to manage the development of statistical, logical and analytical tools and subsequent analysis of data to assess both performance and opportunities. For more details & to apply visit: <http://www.nyserda.ny.gov/About/Careers-at-NYSEERDA/Leader-Statistics-and-Analytics>. Send resume, cover letter & salary expectations to recruiter@nyserda.ny.gov. EOE.

■ Are you an experienced SAS Biostatistician / Senior Biostatistician with proven abilities in statistical analysis, programming and SAS within the life sciences industry? If so, Regeneron invites you to visit careers.regeneron.com

to view all our Biostatistics and Data Management opportunities. Apply today and learn more about Regeneron's unwavering commitment to combining good science & good business. Regeneron is an equal opportunity employer.

North Carolina

■ Applications are invited for a tenure-track assistant professorship in statistics at UNC Charlotte starting August, 2016. Requirements include: PhD degree or equivalent in statistics, biostatistics, financial statistics or a related field, commitment to establishing a research program, and excellent teaching at the undergrad/graduate levels. Submit at <https://jobs.uncc.edu> (position #004661). Applicants must email three reference letters to Sarah Hornbeck (srhornbe@uncc.edu). Applicants subject to background checks. EOE/AA.

■ The UNC Department of Statistics and Operations Research is seeking

ACADEMIA SINICA

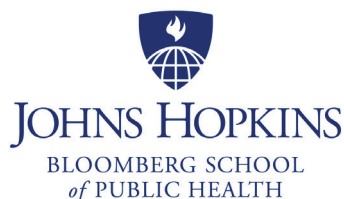
INSTITUTE OF STATISTICAL SCIENCE Regular Research Positions

The Institute of Statistical Science, Academia Sinica, is seeking candidates for tenure-track or tenured research positions at the level of assistant, associate or full research fellow available in 2016. Candidates in all areas of Statistics will be considered. Candidates should have a PhD degree in statistics or areas related to data science. Application materials must include (1) a curriculum vitae, (2) three letters of recommendation, and (3) representative publications and/or technical reports. Additional supporting materials such as transcripts for new PhD degree recipients may also be included. Except for the letters of recommendation, electronic submissions are encouraged. Applications should be submitted to:

Dr. Hsin-Cheng Huang

Chair of the Search Committee
Institute of Statistical Science, Academia Sinica
128 Sec. 2 Academia Road, Taipei 11529,
Taiwan, R.O.C.
Fax: +886-2-27831523
E-mail: hchuang@stat.sinica.edu.tw

Applications should be received by
December 30, 2015 for consideration.



DEPARTMENT OF BIOSTATISTICS

The Department of Biostatistics at the Johns Hopkins Bloomberg School of Public Health is seeking an outstanding applicant to join our tenure track faculty. Rank of appointment will be commensurate with experience. New PhDs and recent postdoctoral fellows are encouraged to apply. Candidates should have a PhD or equivalent in statistics, biostatistics, or a comparable field. Women and under-represented minority candidates are particularly encouraged to apply.

-Track Faculty Positions

The Hopkins Department of Biostatistics, founded in 1918, was the first degree-granting department of statistical science in the US and has ranked among the best throughout its history. The Johns Hopkins Health Institutions (Schools of Public Health, Medicine, and Nursing, and the Johns Hopkins Hospital) are among the top worldwide and provide a research environment in which energetic faculty can achieve scientific excellence. Today, the Department comprises 21 tenure track faculty members, 17 research track faculty members, 13 postdoctoral fellows, 50 PhD students, 14 full-time master degree students, and 12 students pursuing joint master degrees together with doctorates in other departments. Emphases of the department address a diverse variety of public health and medical specialty areas and stages of the lifespan: they include statistical inference and methods, massive and real-time measurement, data science, educational innovation, and subject-area content for genomics, population health, environmental health, and behavioral health. For detailed information, please visit www.biostat.jhsph.edu.

TO APPLY

Email cover letter, CV, letters from three references, a statement of research interests and goals, a teaching statement, and two manuscripts or articles representing your most important work to: Faculty Search Committee at margo@jhu.edu. Interviews commence in mid-December and continue into early winter.

The Johns Hopkins University is an affirmative action/equal opportunity employer.

applications for tenure-track faculty position in probability to start in the fall of 2016. Applicants should have strong training in probability, the potential to maintain a strong research program in this field and the ability to collaborate with other faculty members. For more information and to apply, click <http://unc.peopleadmin.com/postings/85020> University of North Carolina, Chapel Hill is an EOE.

Pennsylvania

■ West Chester University invites applications for an assistant/associate tenure track professor of statistics. All areas of statistics are encouraged to apply. For more details and to apply online visit <http://agency.governmentjobs.com/wcupal/default.cfm>. West Chester University is an Affirmative Action/Equal Opportunity Employer. Women, minorities, veterans and persons with disabilities are encouraged to apply.

The filling of this position is contingent upon available funding.

■ The Statistics Department at the Fox School, Temple University seeks internationally renowned scholars with excellent track records in research, teaching, external funding and dissertation advising for a senior faculty position, in Fall 2016. Candidates are expected to maintain a rigorous research program. A research focus on Big Data with interdisciplinary applications/collaborations is desirable. Salary is highly competitive and commensurate with qualifications. Please visit www.fox.temple.edu/cms_academics/dept/statistics. EOE.

■ The Wharton Department of Statistics, University of Pennsylvania, is seeking full-time, tenure-track faculty at any level: Assistant, Associate, or Full Professor, appointment beginning July

2016. Applicants should show outstanding capacity in research and teaching. Applicants must have a PhD (expected completion by June 30, 2017 is acceptable) from an accredited institution. Please visit our website to apply: <https://statistics.wharton.upenn.edu/recruiting/facultypositions>. Questions should be sent to statistics.recruit@wharton.upenn.edu. The University of Pennsylvania is an EOE. Minorities/Women/Individuals with disabilities/Protected Veterans are encouraged to apply.

Rhode Island

■ Roger Williams University seeks an Assistant or Associate Professor in Statistics. This is a tenure-track position. The successful candidate will display an active and demonstrated interest in teaching at the undergraduate level, a commitment to ongoing curriculum development, a willingness to supervise



UNC
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Faculty Positions in Biostatistics

The Department of Biostatistics at The University of North Carolina at Chapel Hill is seeking applications for two non-tenured positions in the Collaborative Studies Coordinating Center (CSCC) beginning spring or fall 2016. The track (research, clinical, or practice) will depend on qualifications and research focus of the applicant. A doctoral degree in Biostatistics or equivalent is required. Applicants should have broad research interests, potential to direct multi-center clinical trials and epidemiological studies, and ability to engage in collaborative research.

One position is at the Associate or Full Professor rank, depending on qualifications. Evidence of success in competing for coordinating center grants and/or contracts and directing applied research projects in an academic setting is highly desirable. One position is at the Assistant Professor rank.

Preference will be given to candidates with expertise in innovative applications of big data and/or new technology, including but not limited to electronic health records, data linkage and integration, "omics" data, precision medicine, mobile devices and adaptive clinical trials.

The CSCC is the longest-running NIH-funded Coordinating Center, with a diverse portfolio of clinical trials and observational studies, innovative data management technology, and close collaboration with tenured Biostatistics faculty.

Review of applications will start in December 2015. The positions will remain open until filled. Apply at <http://unc.peopleadmin.com/postings/85750> and upload PDF versions of your CV, cover letter, and research statement. Arrange for three letters of recommendation to arrive via email at bennett@bios.unc.edu addressed to:

CSCC Faculty Search Committee
c/o Vera Bennett
Department of Biostatistics
University of North Carolina at Chapel Hill

The University of North Carolina at Chapel Hill is an equal opportunity and affirmative action employer. All qualified applicants will receive consideration for employment without regard to age, color, disability, gender, gender expression, gender identity, genetic information, national origin, race, religion, sex, sexual orientation, or status as a protected veteran.

undergraduate research projects, and an established and ongoing program of scholarly activity. To apply and view full details please visit www.Click2Apply.net/f679yzfsw7. EOE.

Tennessee

■ Department of Mathematics and Statistics at East Tennessee State University: tenure-track, assistant professor in statistics, fall 2016. PhD in Statistics by August 15, 2016. Apply online at <http://jobs.etsu.edu>. Preference will be given to candidates with interest in statistical consulting, interdisciplinary collaborations or use of statistical/machine learning methods. Review of applications will begin on December 1, 2015, and will continue until the position is filled. AA/EOE Employer.

Texas

■ Tenure-track assistant professor position in statistics or biostatistics beginning fall 2016 (www.math.ttu.edu/FacultyStaff/stat-ad.shtml). A PhD degree is required. Apply for Requisition ID5154BR at www.texastech.edu/careers. Have three letters of reference sent to Misty Rangel, Department of Mathematics and Statistics, Texas Tech University, Lubbock, TX 79409-1042. As an Equal Employment Opportunity/Affirmative Action employer, Texas Tech University is dedicated to the goal of building a culturally diverse faculty committed to teaching and working in a multicultural environment. We actively encourage applications from all those who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the academic community at Texas Tech University. The university welcomes applications from minorities, women, veterans, persons with disabilities, and dual-career couples.

■ The University of Houston - Clear Lake invites applications for a tenure-track position in Statistics, beginning in fall 2016, at the rank of assistant professor.

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- Design sample surveys and analyze the data collected.
- Design and analyze experiments to improve survey questionnaires and interview procedures.
- Improve statistical methods for modeling and adjustment of seasonal time series.
- Perform research on statistical methodology that will improve the quality and value of the data collected.
- Publish research papers and technical documentation of your work.

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, click on Jobs@census, Headquarters and NPC Employment Opportunities, Mathematical Statistician

The U.S. Census Bureau is an Equal Opportunity Employer.

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ASSISTANT/ASSOCIATE BIostatistician FACULTY POSITIONS

**Department of Epidemiology and Biostatistics
The University of Texas Health Science Center at San Antonio,
San Antonio, TX**

The Department of Epidemiology and Biostatistics (DEB) at The University of Texas Health Science Center at San Antonio (UTHSCSA) seeks two experienced, doctorate-level faculty biostatistician for two tenure-track faculty positions at the rank of Assistant or Associate Professor. Candidates are expected to have expertise in longitudinal data, survival analysis, methods for large healthcare databases, statistical genomics applied to clinical outcomes, or clinical trial design. These positions provide an opportunity to collaborate with a multidisciplinary research team as well as to lead independent methodological research in a setting with access to a large, ethnically diverse population. The UTHSCSA is situated in the dynamic city of San Antonio; a wonderful place to live and work that is rich with both culture and history.

The DEB at UTHSCSA has 20 full-time faculty and 46 staff with a number of additional affiliate faculty. Research interests of the faculty include translational science, clinical- and population-based investigation, the application of epidemiological and biostatistical principles to clinical problem solving, formulation of health policy, and the development of new epidemiological and statistical methods for clinical trial design, analysis of "Big Data", clinical decision support systems, and statistical genomics.

The mission of the DEB is to develop and enhance population-based, clinical and translational research in clinical and community settings, to develop epidemiologic, biostatistical and medical informatics resources, and to promote the educational mission of the School of Medicine by teaching epidemiology, biostatistics, and critical appraisal of the medical literature to students, house-staff, and faculty. The DEB is also the home of the Biostatistics and Informatics Core which includes faculty and Masters trained researchers who serve the UTHSCSA, along with public, community, and private health entities by providing data management, biostatistical and epidemiological support for projects and programs that involve clinical or health data.

The DEB plays an integral role in UTHSCSA's research and educational missions by enhancing the programs to prevent disease, to promote health, to deliver quality health

care, and to inform health policy decisions. Depending on the research interests of the selected candidate, there are opportunities to collaborate with colleagues within the medical, nursing, and dental schools as well as other health sciences departments. For candidates interested in cancer research, there are research opportunities with the Cancer Therapy Research Center (CTRC), one of four NCI-designated Cancer Centers in Texas and the only NCI designated center in South Texas. The Department also has strong research and educational collaborations with the San Antonio Regional Campus of The University of Texas School of Public Health.

These positions are tenure-track and a 12-month appointment. Appointments are open rank (Assistant or Associate level). Preference will be given to someone with a demonstrated ability to both collaborate on multidisciplinary research teams and to successfully lead their own research program. Applicants must have a doctoral degree (PhD or equivalent) in Biostatistics or Statistics, excellent communication skills, and a strong interest in interdisciplinary collaboration.

Review of applications will begin immediately and continue until the positions are filled. Salary will be commensurate with qualifications. Information about the DEB is available here: <http://deb.uthscsa.edu/>. For full consideration applicants should send electronically or via mail: 1) a cover letter stating career goals and the relevance of the candidate's training and experience to the position; 2) a current CV; 3) a personal statement describing the candidate's research plan and teaching experience; and 4) names and contact information of three references to gelfondjal@uthscsa.edu or by mail to: Jonathan Gelfond, M.D., Ph.D., Associate Professor and Biostatistics Search Committee Chair, UT Health Science Center at San Antonio, Department of Epidemiology and Biostatistics, 7703 Floyd Curl Dr.--MSC 7933, San Antonio, TX 78229-3900.

All faculty appointments are designated as security sensitive positions. The University of Texas Health Science Center at San Antonio is an Equal Employment Opportunity/Affirmative Action Employer including protected veterans and persons with disabilities.

The successful candidate should have a PhD by the time of appointment and is expected to teach nine hours in regular semesters; conduct scholar research; and contribute service to university community. For more information, please see www.uhcl.edu/scelstat for details.

Virginia

■ James Madison University invites applications for Dean of the College of Science and Mathematics. To view the position description and apply go to JobLink.jmu.edu and reference posting number 0407001. James Madison University is an equal opportunity employer and does not tolerate discrimination or harassment on the basis of age, color, disability, gender identity, genetic information, national origin, parental status, political affiliation, race, religion, sex, sexual orientation or veteran status.

International

■ Applications are invited for regular faculty positions at any level in statistics and data science. A PhD in Statistics or a related field is required. Applicants should send an application letter, a CV and arrange for 3 reference letters to be sent to: Search Committee, Statistics & Applied Probability Department, National University of Singapore, E-mail: stasec@nus.edu.sg. For more information, please visit our website: <http://www.stat.nus.edu.sg/lopencms>. National University of Singapore is an EOE.

■ Wang Yanan Institute for Studies in Economics & School of Economics, Xiamen University, China. Full-time, tenure-track/tenured professorship positions in statistics beginning September 2016. Preferred areas of specializations are theoretical and applied statistics. PhD in statistics or probability theory must be completed by August, 2016. Send applications, including cover letter, CV, samples of research work, and three reference letters, to recruit.wise.xmu@gmail.com before June 30. EOE.

PRANAB K. SEN DISTINGUISHED VISITING PROFESSORSHIP



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The Department of Biostatistics at the University of North Carolina at Chapel Hill (UNC-CH) is seeking to recruit an aspiring international scholar in statistical science for the Pranab K. Sen Distinguished Visiting Professorship in Biostatistics. The position is for the fall semester beginning August 2016 for a period lasting up to five months. Preference will be given to applicants from developing countries as defined by the Departments of Biostatistics and Statistics and Operations Research and in consort with the dean of the Gillings School of Global Public Health. The visiting faculty, who will come from an area of statistical science, broadly defined, including bioinformatics, will come to UNC-CH to conduct research, possibly teach, and interact with faculty, students, and the university community. The major benefit will be an intensive interaction of the visitor's strong methodology background with applications to interdisciplinary research underway at UNC-CH. The visiting professorship, at the assistant, associate or full professor level, offers salary support commensurate with the rank. Financial support for other expenses such as travel is negotiable. Ideally, the visiting scholar will return to his or her home country for at least one year upon completing the appointment to further expand the reach of interdisciplinary work begun in Chapel Hill. Applicants should hold a PhD in statistics or biostatistics or have commensurate educational background.

To apply, upload your CV, cover letter, and research statement in the application at <http://unc.peopleadmin.com/postings/79598> Candidates must also arrange for three letters of recommendation to arrive via email to Betsy Seagroves (bseagro@bios.unc.edu.) The deadline for applications is March 1, 2016.

Washington University School of Medicine in St. Louis

Exciting Opportunity for a Mid-Career Faculty Position in Biostatistics

Washington University School of Medicine in St. Louis, among the world's premier health research institutions, is committed to advancing human health. As noted leaders in patient care, research, and education, our outstanding faculty have contributed many discoveries and innovations to science and medicine.

The Division of Biostatistics at Washington University School of Medicine, in collaboration with the Institute for Clinical and Translational Sciences (ICTS), invites applications for a mid-career faculty position in Biostatistics. Rank is commensurate with experience. The successful candidate will join a highly productive Biostatistics Division that plays critical roles in supporting several centers and institutes at the forefront of research in clinical and translational sciences. The Division of Biostatistics faculty conduct cutting edge research in statistical sciences as applied to a range of biomedical and genomic projects including observational studies, clinical trials, and statistical genetics. It also offers a growing graduate training program in biostatistics.

The mid-career faculty position offers an excellent opportunity for individuals with leadership capabilities and a commitment to excellence, innovation, and originality combined with the desire to engage in cutting-edge research on statistical methods and their application in health sciences. Candidates with extensive experience in observational studies and clinical trials would be preferred.

Applicants must have a PhD in biostatistics, statistics, or a related field in quantitative sciences with an exceptional track record of collaborative research and a commitment to supporting/leading collaborations in diverse areas of clinical and translational research. Additional expectations include: a strong record of collaborative publications as well as some substantive ones demonstrating academic excellence; some experience with grant writing; serving in a leadership capacity on collaborative grants (preferably as a Multiple PI or playing key roles which used to be recognized as "Co-PI"); excellent skills in statistical consulting and communication including experience in pre-award statistical consulting; some leadership experience in leading Biostatistics Core facilities is desirable; and a passion for teaching and mentoring graduate students and junior faculty. The ideal candidate will have strong leadership characteristics to guide and contribute to the growth and success of the Division and be willing to serve on various academic activities and committees. Leadership opportunities exist.

We strongly encourage women and underrepresented minorities to apply; Washington University is an equal opportunity/affirmative action employer. Interested candidates are encouraged to apply by January 15, 2016 with a statement of research interests, CV, and three letters of recommendation to: Biostatistics Search Committee, Division of Biostatistics, Washington University School of Medicine, 660 South Euclid, Campus Box 8067, St. Louis, MO 63110-1093. Application materials may also be e-mailed to facultysearch@wubios.wustl.edu.



Washington
University in St. Louis
SCHOOL OF MEDICINE

Assistant Professor or Associate or Full Professor Faculty Positions

Division of Biostatistics and Epidemiology
 Department of Healthcare Policy and Research
 Weill Cornell Medical College, Cornell University
 New York City, New York

The Division of Biostatistics and Epidemiology within the Department of Healthcare Policy Research at Weill Cornell Medicine invites applications for 2-3 faculty positions at any level (Assistant, Associate or Full Professor) to start in 2016. These are tenure-track or tenured positions with rank and salary commensurate with qualifications. We seek outstanding candidates with an established record of collaborative and methodology research. Individuals must also have experience or interest in teaching graduate level courses. Preference will be given to individuals with experience or interest in the area of (1) analysis of large data sets/data science, or (2) analysis of imaging data.

Weill Cornell Medical College is among the top-ranked clinical and medical research centers in the country and is located in New York City. Weill Cornell Medical College is the fastest growing medical school in the country based on information provided by the Association of American Medical Colleges. Biostatistics is critical to what Weill Cornell Medical College does best: outstanding education, cutting-edge research, and exceptional patient care. The Division of Biostatistics and Epidemiology has a growing research and teaching program. Faculty members collaborate with clinical, translational, and basic science researchers across the medical college and affiliated institutions. They are also engaged in conducting methodology research and teaching graduate level courses.

The successful applicant will have a PhD or equivalent in Biostatistics, Statistics, Computer Science, or a related field, and a record of significant research accomplishments, obtaining and sustaining extramural funding, and demonstrated ability to mentor students, post-doctoral researchers, and junior faculty. The successful candidate will also have experience or interest in curriculum development and teaching in a biomedical data science program. The candidate should have a strong track record of interdisciplinary work, and willingness to foster collaborative opportunities in research, education, service, and innovation with other divisions, departments and partner organizations, including faculty and staff at the Medical College, New York-Presbyterian Hospital, and/or Cornell Tech. Candidates should have strong communication skills and contribute to the mission of the Biostatistics and Epidemiology Division. The tenure home will be in the Department of Healthcare Policy and Research with the possibility of joint appointments with other institutes, divisions, and departments across Weill Cornell Medicine and Cornell University.

Weill Cornell Medicine is an affirmative action and equal opportunity employer. All qualified applicants will receive consideration for employment without regard to, among other things, race, religion, color, national origin, sex, age, status as protected veterans, or status as qualified individuals with disabilities.

Interested applicants should submit a letter of interest highlighting their research and teaching interests, practical experience, and career goals, a curriculum vita, and names of 3 professional references to the search committee chair:

Karla Ballman, PhD
Chief, Division of Biostatistics and Epidemiology
Department of Healthcare Policy and Research
Weill Cornell Medicine
402 East 67th Street
New York, NY 10065
kab2053@med.cornell.edu

Review of applications will begin immediately and will continue until the positions are filled. Questions should be directed to Dr. Karla Ballman (**kab2053@med.cornell.edu**).

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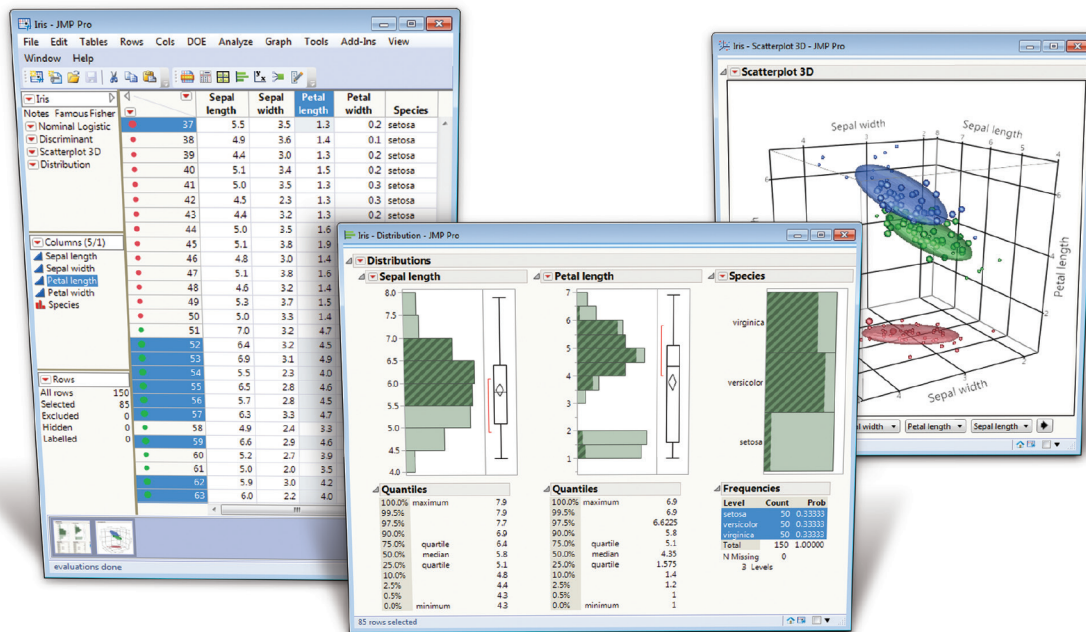
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