AMSTATNEWS

Statistics Poster and Project Competition Winners

ALSO:

Science Establishes Dedicated Statistical Review Panel

The ASA Fellow Award: 2014 Update

AMSTATNEWS

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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.

features

columns

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

Harry

Contributing Editors
April Harry is a PhD candidate in statistics at Purdue University.

Troisi

Jeremy Troisi is StatCom director and a PhD candidate in statistics at Purdue University.
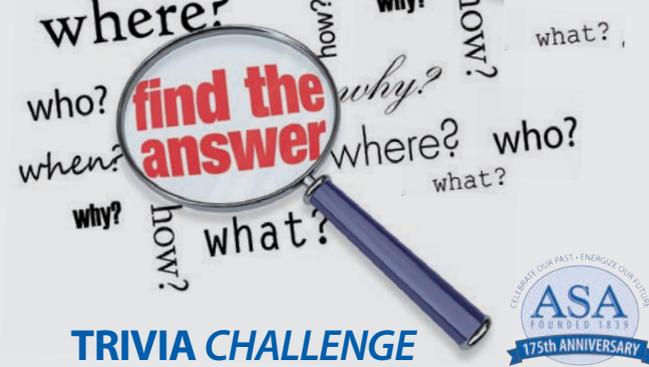
TRIVIA CHALLENGE

The ASA's Trivia Challenge is a fun way to read *Amstat News* and learn about the ASA. Every month, there will be three questions asked here, with the answers scattered throughout the magazine. Search for those answers while you're reading the issue and input your answers at www.amstat.org/asa175/triviachallenge.cfm. Whoever has the most correct answers at the end of each quarter will be entered into a drawing to win a 175th anniversary T-shirt!

1. Nat Schenker has visited several ASA chapters this year. They include:

    A.   Nevada, Southern California, Florida, and Connecticut

    B.   Philadelphia, Southern California, Albany, and Rhode Island

    C.   Boston, Florida, Connecticut, and Buffalo-Niagara

    D.   Nevada, Philadelphia, Albany, and Montréal

2. The key factor in being elected a Fellow of the ASA is the quality of the:

    A.   Individual's academic score

    B.   Individual's contributions

    C.   Nomination packet

    D.   Individual's activity in an ASA chapter

3. The first-place prize for the grades 10-12 poster went to Nazhath Sulthana and Sadie Wallner from Joplin High School. This is a special achievement because the school the students attended was destroyed in a fire.

    True

    False

The winner of this quarter's trivia contest is John McKenzie.

Online Article

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

The August issue of *Technometrics* features regression diagnostics, control charts, and Bayesian methods. To read the highlights from this issue, visit *Amstat News* online at *http://magazine.amstat.org/blog/2014/07/16/tech-highlights*.

This year marks the ASA's 175th birthday. To celebrate, the column "175"—written by members of the ASA's 175th Anniversary Steering Committee and other ASA members—will chronicle the theme chosen for the celebration, status of preparations, activities to take place, and—best yet—how you can get involved.

Contributing Editor

Mingxiu Hu is a vice president and head of global biostatistics at Takeda Pharmaceuticals, the largest pharmaceutical company in Asia. He was elected ASA Fellow in 2010 and serves as the ASA treasurer. He is on the ASA Board, ASA Executive Committee, and ASA Committee on Fellows.

Hu

departments
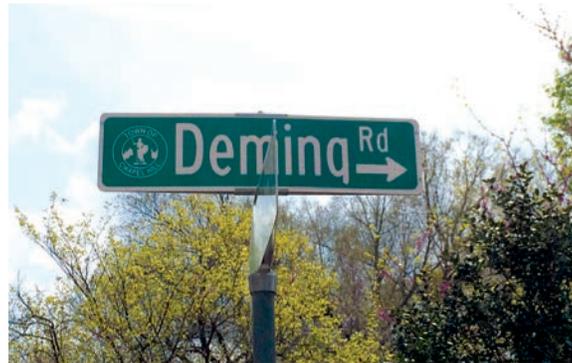
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member news

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ASA President Nathaniel Schenker (back row, far right) with members of the Florida Chapter during the chapter's 2014 annual meeting at the University of Florida, Gainesville
(Photograph by Renee Parks-James)

A Few Chapters in My Presidency

One of my favorite activities as ASA president has been visiting ASA chapters. During these visits, I've spoken about ASA initiatives and other topics in statistics, participated in chapter activities, met members, and found out what's happening in the ASA at the local level.

The ASA has 72 chapters across the United States and Canada, with a total of nearly 9,000 members. The broad objective of the chapters is to promote statistics and its applications. Chapters are designed to increase the unity and effectiveness of individuals within local geographical areas. They engage in many activities, such as holding meetings, producing publications, participating in educational efforts, providing information about the application of statistics, and making statistics of service to society while making society aware of statistics as a science.

The ASA and Council of Chapters (COC, *http://community.amstat.org/COC/Home*) offer many resources (see *http://community.amstat.org/coc/chapterresources*) to chapters, including the Chapter Visitation Program. Since last fall, I've visited the Nevada, Southern California, and Florida chapters, and I'll visit the Connecticut Chapter at the end of the summer. In addition, several other chapters have been or will soon be visited by the ASA executive director, members of the ASA board, or members of the COC Governing Board.

My speaking engagements have varied across the chapters. In Nevada and Southern California, I gave two talks each: one on the ASA's 175th anniversary and this year's initiatives and one on a topic in statistical methodology and applications. In contrast, I gave a banquet speech in Florida in which I tried to be "inspirational" and discuss the value of service to the profession; that is what I have planned for Connecticut, as well.

What Have I Learned from My Visits?

Geography: Some of the chapters cover entire states, such as Connecticut and Nevada, whereas others cover subareas of their states, such as the Florida Chapter, which covers the northern part of the state, and the Southern California Chapter, which covers Southern California outside of Long Beach, San Diego, and Orange County.

Membership: The composition of chapter membership varies quite a bit. The sizes range from fewer than 50 members in the Nevada Chapter to hundreds of members in the Southern California Chapter. In addition, some chapters have large contingents from one sector, such as the Florida Chapter, whose majority is professors and students, and the Connecticut
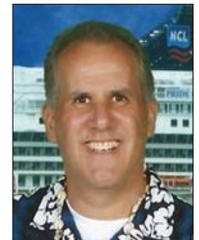
Nathaniel Schenker

Following the Nevada Chapter's 2013 Fall Symposium at the University of Nevada, Reno, ASA President Nathaniel Schenker dines with members of the chapter.
(Photograph by Alicia Hansen)
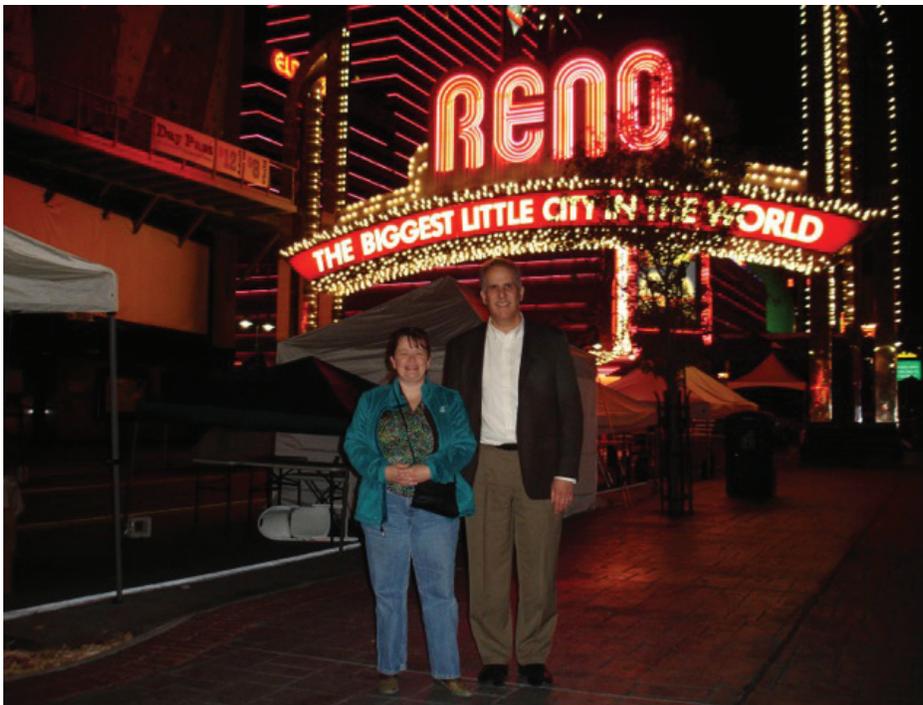
ASA President Nathaniel Schenker is given a tour of Reno by then chapter president Alicia Hansen.
(Photograph by Michael Hansen)

Chapter, with nearly 50% of its members from the pharmaceutical industry.

Activities: The chapters conduct a wide variety of activities. Each has an annual meeting/conference. The largest I attended was the Florida Chapter's annual meeting, which had about 13 hours of activities over two days, including paper and poster sessions, a student paper competition, and a dinner banquet. Examples of other activities include the Connecticut Chapter's poster competition, annual banquet, and Honor a Statistician Award; the Nevada Chapter's K–12 Statistics Poster Competition, chapter newsletter, periodic dinner speaker meetings, and fledgling mentoring program; and the Southern California Chapter's Applied Statistical Workshop, R group, Career Day, and high school statistical abstract competition.

Opportunities: The chapters offer local activities that are much more accessible to some members than are national activities like JSM. They also provide excellent opportunities for their members—and notably for students, isolated statisticians, and those early in their careers—to give talks and meet others in their profession. I benefited from such chapter-based opportunities myself when I moved to Washington, DC, after graduate school to work at the U.S. Census Bureau and then again when I moved across the country to teach at the University of California, Los Angeles.

Challenges: The chapters have some challenges related mainly to geography and membership. Issues include difficulties due to membership spread over large, albeit subnational, geographical areas; diversifying membership so a variety of sectors and

ASA President Nathaniel Schenker with members of the Southern California Chapter during the chapter's 2013 Fall Kick-Off Meeting at the City of Hope, Duarte, California
(Photograph by Joe Jiang)

topics are well-represented; and recruiting members in general, especially those interested in helping with activities and taking leadership roles.

Some Advice for Chapters

Keep on trucking: I've been impressed by the energy, camaraderie, and opportunities provided by the chapters I've visited. Clearly, it's a challenge to organize gatherings of people from large geographic areas, and there is "competition" from email, social networks, etc. But I continue to feel that, in many ways, there is no substitute for face-to-face get-togethers. So, keep doing what you're doing and consider mechanisms that might facilitate get-togethers, such as local sub-meetings, videoconferencing, and the use of Meetup (*www.meetup.com*).

Help the ASA with its Big Tent efforts: The ASA strives to be The Big Tent for Statistics (*www.amstat.org/about/strategicplan.cfm*), meaning it should welcome and provide value to a wide variety of people whose work is related to statistics. Chapters can aid substantially in this effort by working to

diversify their memberships (as some have already indicated a desire to do) and reaching out to underserved groups and people who work in emerging areas of practice, while continuing to serve their traditional constituencies.

Learn from each other: Based on my visits to a few chapters and conversations with members of other chapters, it is clear that many chapters have common desires and issues. So, there is an opportunity to help and learn from each other. Case in point: Mentoring has been a "hot" activity in the ASA, with new mentoring programs introduced at the Conference on Statistical Practice and JSM this year. As mentioned earlier, the Nevada Chapter has a fledgling mentoring program, which it is working to "get off the ground." During visits to other chapters, I've received questions regarding what mentoring resources exist. Perhaps several chapters could work together to develop a chapter-level mentoring program and/or to share their experiences in this area.

Don't be shy about asking for support: As mentioned earlier, the ASA and COC offer a variety of services to the chapters,

such as the visitation program, short courses, and event planning. Chapters should feel free to take advantage of this support. In particular, don't be shy about inviting ASA and COC officials to visit. Although it might have seemed like "seeking praise," I asked the chapters I've visited or will visit how, if at all, it is helpful to them to have a presidential visit. Benefits mentioned in the responses included learning about ASA initiatives and other topics, increasing prestige and visibility, providing inspiration to students, encouraging members to take on leadership roles, and helping recruit new members.

Conclusion

Chapters play an important role in our association, and they have been helpful to me throughout my career, especially early on. I have felt impressed, inspired, and proud in my visits to chapters so far, and I look forward to visiting others in the future.

Nathaniel Schenker

ASA Chapter Involvement Gives ROI

Marianne E. Messina

Messina

In 1977, I was a fresh graduate from the biostatistics master's program at the University of Vermont. I had no idea where to look for employment. The *Boston Globe* didn't have many, if any, of these jobs listed in the want ads. A close friend, also a statistician, suggested I attend JSM in Chicago.

I was an ASA member for just under two years, so I didn't know what to expect. They say "timing is everything," and attending this JSM afforded me the opportunity to see what was out there for career opportunities across a broad geographical area. I was fortunate! I met with my first manager, Ellen Naor, who offered me a position within the Bureau of Health Planning for the State of Maine. Of course, much has changed since 1977, and professional connections are much easier to make through our numerous social networks. People who know people who know people …

Since 1980, I have been working in the biopharmaceutical industry. When I moved to Connecticut in 1987 to join Bristol-Myers, another research and development group, I was pleased to learn that the local ASA chapter was active. By joining this chapter, I was able to meet statistical professionals, and this helped ease me into a new geographical location. It provided me the 30,000-foot scope to see what else was going on in my 'adopted' state.

The management within the biostatistics department I worked in encouraged staff to participate in ASA chapter activities. They supported us becoming officers and allowed us time to participate in events such as seminars, mini-conferences, and training. I've been lucky to serve as the Connecticut treasurer, vice president, president, and representative to the Council of Chapters (COC). In 2012, I was elected to become District 1 vice chair, serving New England, New York, and Canada. This afforded me an even greater view, with more opportunities to explore what concerns and issues working statisticians face. It also provided me the experience of visiting the ASA headquarters in Alexandria, Virginia, for the COC face-to-face meeting. This is where all district vice chairs share success stories and concerns. Again, another group of people from varied areas of interest (including academia, industry, and business) who want to make a difference in the field of statistics.

One other activity I feel strongly about is promoting math literacy through the ASA Annual Poster Competition. The Connecticut Chapter has been doing this for more than 15 years and I am always surprised at the questions raised by students and how they use data to come to conclusions. In the age of texting and instant gratification, it is important that students are still able to communicate their ideas, and this competition allows students to do this. This is an area I find not only fulfilling, but eye opening.

While it is easy to join the ASA, it is better to learn how to become active within the organization. The ASA is always looking for folks to volunteer. Each chapter is as good as its members. I have received a lot on my investment. I'm sure you will, too! ∎

What Is Simply Statistics?

The Amstat News *staff enjoys reading the blog "Simply Statistics," created and written by three biostatistics professors—Jeff Leek, Roger Peng, and Rafa Irizarry—so we interviewed them to find out more about it.*

Why did you start Simply Statistics? Has your mission evolved over the years?

At first, it was just the three of us sending links back and forth and talking in the halls. We realized that data analysis was becoming increasingly important in science, industry, and government and that it was a great time to be an applied statistician. Through our own experiences, being immersed in scientific projects, and using our statistical skills to be an integral part of solving real-world problems, we became particularly excited about the potential of our discipline. The motivation of the blog was therefore two-fold. First, we wanted to share with lay people that applied statistics has much to offer during this new era of data-driven initiatives. Second, we wanted to share our positive experiences developing specific solutions to specific problems and try to demonstrate to academic statisticians that our contributions can go beyond context-free methodology. That is how we came to the name Simply Statistics.

Over time, we realized there were other statisticians feeling the same excitement, which gave us the motivation to spend time writing. We also wanted to encourage statisticians to be more ambitious in terms of leading data-driven initiatives. With so many fields becoming data driven, statisticians had an opportunity to lead in these fields as opposed to just performing power calculations and approving *p*-values or serving as skeptical police. We also felt that, in many academic stats departments, software and applications were under-represented. As our readership grew, particularly among young statisticians and data scientists, we wanted to make them aware that applied work can have real statistical and scientific impact and that that work deserves equal importance in the statistical community.

What progress have you made on your original goal(s)?

Originally, our goal was to just get people excited. Then, as more people started to read and comment, our ambitions grew and we wanted to have an impact on the way people think about statistics. It is hard to tell for sure, but we think we are going in a positive direction. We have noticed that some of our posts have made it to Wikipedia (including in the definition of data science) and have been picked up by aggregators. We also get a lot of positive feedback when we travel, in particular from younger statisticians. Finally, we have built a large readership of thousands of daily readers, with a large audience of students and postdocs. Our recent Unconference on the Future of Statistics drew more than 10,000+ viewers from around the world.
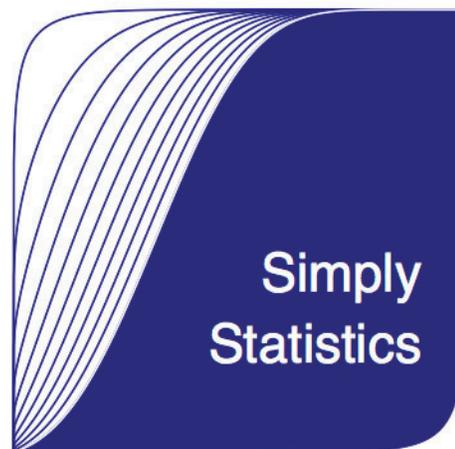
Any objectives for the next year toward your overall goal?

For the moment, we just want to keep the ball rolling with good content. We are also considering a few creative ideas like the Unconference, so stay tuned.

What have been some of your more popular blog entries?

Our most popular blog entries are always the ones we least

expect to be popular. Some recent popular entries are:

- 10 Things Statistics Taught Us About Big Data Analysis
  http://bit.ly/S1ma4Z

- The Real Reason Reproducible Research Is Important
  http://bit.ly/1nof4PQ

- On the Scalability of Statistical Procedures: Why the *P*-Value Bashers Just Don't Get It
  http://bit.ly/1kMZEsp

What successes are you most proud of?

Well, we are just happy the thing is still around :-). When we first set out to start the blog, one of our primary goals was to get our point of view out into the world and give like-minded people a familiar place to go to on the Web. Almost three years later, we feel like we've tapped into a tremendous community of people who read the blog and discuss our ideas. It's helping bring this community together that we're most proud of. We're also really proud of our interview series and the way it highlights the contributions of up-and-coming statisticians.

To what do you attribute the popularity of Simply Statistics?

Having done no market research whatsoever, keep in mind this answer is pure speculation. That said, I think the popularity stems, in part, from the fact that we're trying to show that statistics is important for real-world problems and not just theoretical food for thought. There is a huge community growing up around R, Bioconductor, and other applied analysis and we think we fit in well with that community.

What recommendations do you have for students considering a career in statistics?

Work on real problems that involve analyzing data. Don't be afraid to collaborate on problems that won't necessarily lead to a context-free general methodology. Without being exposed to real-world problems, it will be difficult to develop useful statistical methods. If you do develop methodology, make sure to provide software that disseminates your ideas. Make use of social media to advertise your work. Don't rely exclusively on academic journals. You also want to develop strong computational skills so that you are not restricted to working on problems that do not require this expertise. Data are becoming increasingly complex. ∎

Caucus for Women at JSM

The Caucus for the Women in Statistics would like to invite you to join them during the following events at the Joint Statistical Meetings in Boston:

- JSM First-Time Attendee Orientation and Reception, August 3, 12:30 p.m. to 2:00 p.m.

- "Cracking the Glass Ceiling" Roundtable, August 4, 7:00 a.m. to 8:15 a.m.

- Caucus for Women in Statistics Reception and Business Meeting, August 5, 6:30 p.m. to 8:30 p.m.

- "Negotiating in Statistical Careers" Invited Panel, August 6, 8:30 a.m. to 10:20 a.m.

- "Analytical Challenges and Statistical Thinking in Analyzing High-Throughput 'Omics' Data" Invited Paper, August 6, 2:00 p.m. to 3:50 p.m.

Don't forget to attend the Deming Lecture given by Sharon Lohr and the COPSS Awards and Fisher Lecture given by Grace Wahba. This is an exciting year for women in statistics and we look forward to seeing you at JSM.

Science Establishes Dedicated Statistical Review Panel

Jeff Myers, ASA Public Relations Coordinator

Science magazine editor-in-chief, Marcia McNutt, recently announced the July 1 appointment of a new statistical board of reviewing editors (SBoRE)—composed of prominent members of the statistical community—that will help address reproducibility issues and increase confidence in the papers published in the magazine.

"So why is *Science* taking this additional step? Readers must have confidence in the conclusions published in our journal, and that we have taken reasonable measures to verify the accuracy of those results," said McNutt in a recent editorial (*http://bit. ly/1seUSaY*). "We believe that establishing the SBoRE will help avoid honest mistakes and raise the standards for data analysis, particularly when sophisticated approaches are needed."

The statistical experts appointed to five-year terms on the newly created SBoRE are:

- **Ron Brookmeyer**, professor of biostatistics at the University of California at Los Angeles's School of Public Health (*http://bit.ly/1rlz1Mm*)

- **Alison Motsinger-Reif**, associate professor of statistics at North Carolina State University (*http://bit.ly/1oVFZqo*)

- **Giovanni Parmigiani**, professor of biostatistics at the Harvard School of Public Health and chair of the Dana-Farber Cancer Institute's Department of Biostatistics and Computational Biology (*http://bit.ly/1qYsIPH*)

- **Richard L. Smith**, professor of statistics and biostatistics at The University of North Carolina and director of the Statistical and Applied Mathematical Sciences Institute (*http://bit. ly/1oXBDgS*).

- **Jane-Ling Wang**, professor of statistics at the University of California at Davis (*http://bit. ly/1rlza2r*)

- **Chris Wikle**, professor of statistics at the University of Missouri-Columbia (*http://bit. ly/1maJ29U*)

- **Ian Wilson**, professor of structural biology and chair of the department of integrative structural and computational biology at The Scripps Research Institute (*http://bit.ly/1n2oCpt*)

Last year's ASA president, Marie Davidian, whose initiatives included raising the profile of statistics within the American Association for the Advancement of Science (the publisher of *Science* magazine) and whom was asked by McNutt to recommend individuals for the SBoRE, praised *Science*'s efforts: "I commend Dr. McNutt and her colleagues for addressing reproducibility issues and for recognizing the important role of statisticians in doing so. As one of the most influential scientific journals in the world, *Science* should be a leader in publishing scientific articles of the highest quality. The SBoRE and the magazine's complementary moves are critical steps in achieving that objective."

Regarding the ASA's assistance, she added, "I am pleased the ASA and I could assist in these efforts. I also thank the talented members of our profession who are serving on this board for their service to the statistical community and, more generally, to science."

McNutt requested the ASA's assistance during a meeting last September. Davidian had requested the meeting to discuss how statisticians could be helpful to *Science*, especially with reproducibility and reviews of scientific papers, and talk about ways to familiarize the science community with the expertise of statisticians. The ASA contingent did not have to do much convincing, finding McNutt and her team appreciative of the important role of statisticians in advancing scientific research.

The long-established board of reviewing editors (BoRE) is a critical part of *Science*'s review process for the approximately 250 manuscripts it receives each week (of which 7% are eventually published). The magazine's editors read all the manuscripts, and BoRE members review 70% of the manuscripts received.

The primary charge of the new review panel is to improve the statistical rigor of papers published in *Science*. Its members will be brought into the editorial review process after a manuscript is deemed a contender for publication.

SBoRE members will discharge their responsibilities by reviewing the data analysis in a paper and recommending whether the analysis warrants further scrutiny by a statistical expert in the given field. If so, the SBoRE member will recommend one or more independent expert reviewers and provide a summary of the specific statistical issues that warrant a more careful examination.

In those instances when a manuscript has a statistical advance as its primary focus, a designated SBoRE member will join the review process at the initial stage of screening for appropriateness for publication. In these instances, he or she will function as a member of *Science*'s regular BoRE in scoring the manuscript.

During the September meeting, McNutt also encouraged ASA members to submit to the magazine papers that review or propose new statistical methodology. Information about submitting a paper to *Science* can be accessed at *www.sciencemag.org/site/feature/contribinfo/index.xhtml*. ∎

The ASA Fellow Award: 2014 Update

Katherine Monti

The 2014 ASA Fellow awards were presented at JSM in Boston, Massachusetts, on the occasion of the 175th anniversary of the association. This year, we had a record high of 63 new Fellows, selected from a near-record high of 118 nominations. The maximum number of fellowships awarded each year is limited by our bylaws to one-third of one percent of the membership, so the maximum number of awards grows with the membership.

What follows is an update to previous articles by Robert Starbuck appearing in *Amstat News*, most recently in the August 2012 issue (see *http://magazine.amstat.org/blog/2012/08/01/fellowsrevisit712*).

Employment Sector

Between 2004 and 2014, the percentage of ASA members in each employment sector has remained relatively stable: 42% academe, 47% business/industry, and 11% government. These rates were reported in 2012 and the approximations are still valid.

The number of ASA Fellow awards given by employment sector for the most recent 11 years is presented in Table 1 and Figure 1.

The percentages of Fellows awarded by employment sector relative to the percentages of ASA membership are shown in Figure 2. From Table 1 and Figure 2, it is clear that those in academe have been nominated at a consistently high rate and those in business/industry have been nominated at a consistently low rate relative to their respective proportions of membership. Government nominations have fluctuated the most in relative terms due to the smaller proportion of members; that is, a given change in the numerator of the ratio plotted is relatively influential for government compared to the other sectors because the denominator is so much smaller (11%) than those of the other two sectors (42% and 47%).

The yearly number and percentage of Fellow nominations in each employment sector are shown in Table 2. The 118 nominations received in 2014 made up the second-highest number of nominations submitted since 2004, exceeded only by the 120 nominations in 2007. Although more nominations in business/industry were submitted in 2014 than in any year in the previous decade, the proportion of nominations remained low. There were a high number of nominations from academe this year, while both the number and percentage of nominations from government were low.

One question of continuing interest is the rate of success for the nominations in each sector. As shown in Table 3 and Figure 3, nominations submitted from the business/industry sectors fared relatively well in the last two years, whereas academe has tended to have the highest success rate over the years summarized overall.

Table 1—Number and Percentage of ASA Fellow Awards in Each Employment Sector by Year

| Year | Employment Sector (% of Membership) | | | Total |
	Academe (42%)	Business/Industry (47%)	Government (11%)	
2004	36 (64.3)	11 (19.6)	9 (16.1)	56
2005	38 (67.9)	8 (14.3)	10 (17.9)	56
2006	50 (83.3)	5 (8.3)	5 (8.3)	60
2007	37 (62.7)	11 (18.6)	11 (18.6)	59
2008	32 (60.4)	13 (24.5)	8 (15.1)	53
2009	36 (63.2)	15 (26.3)	6 (10.5)	57
2010	43 (81.1)	5 (9.4)	5 (9.4)	53
2011	45 (77.6)	8 (13.8)	5 (8.6)	58
2012	37 (77.1)	7 (14.6)	4 (8.3)	48
2013	41 (69.5)	11 (18.6)	7 (11.9)	59
2014	44 (68.8)	15 (23.8)	4 (6.3)	63
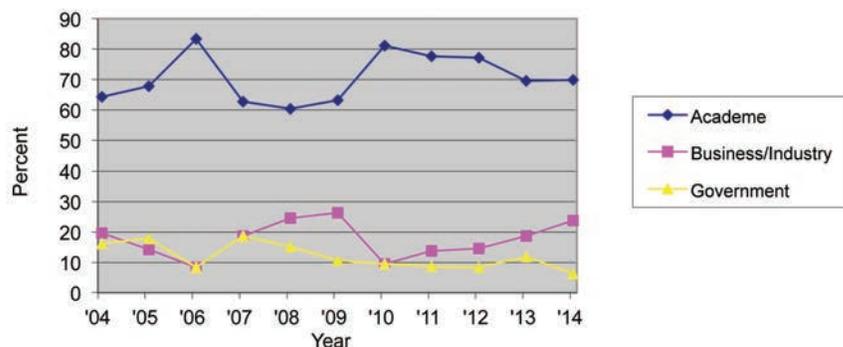
Figure 1. Percentage of ASA Fellows awarded in each employment sector by year

Table 2—Number and Percentage of ASA Fellow Nominations in Each Employment Sector by Year

| Year | Employment Sector (% of Membership) | | | Total |
	Academe (42%)	Business/Industry (47%)	Government (11%)	
2004	44 (58.7)	16 (21.3)	15 (20.0)	75
2005	51 (57.3)	22 (24.7)	16 (18.0)	89
2006	81 (73.0)	19 (17.1)	11 (9.9)	111
2007	79 (65.8)	22 (18.3)	19 (15.8)	120
2008	60 (64.5)	18 (19.4)	15 (16.1)	93
2009	59 (62.1)	23 (24.2)	13 (13.7)	95
2010	71 (72.4)	13 (13.3)	14 (14.3)	98
2011	76 (72.4)	18 (17.1)	11 (10.5)	105
2012	62 (75.6)	14 (17.1)	6 (7.3)	82
2013	71 (71.7)	15 (15.2)	13 (13.1)	99
2014	86 (72.9)	24 (20.3)	8 (6.8)	118
Average	67.9	18.9	13.2	

Table 3—Percentage of Successful ASA Fellow Nominations in Each Employment Sector by Year

| Year | Employment Sector | | |
	Academe	Business/Industry	Government
2004	81.8	68.8	60.0
2005	74.5	36.4	62.5
2006	61.7	26.3	45.5
2007	46.8	50.0	57.9
2008	53.3	72.2	53.3
2009	61.0	65.2	46.2
2010	60.6	38.5	35.7
2011	59.2	44.4	45.5
2012	59.7	50.0	66.7
2013	57.7	73.3	53.8
2014	51.2	62.5	50.0
Average	60.7	53.4	52.5
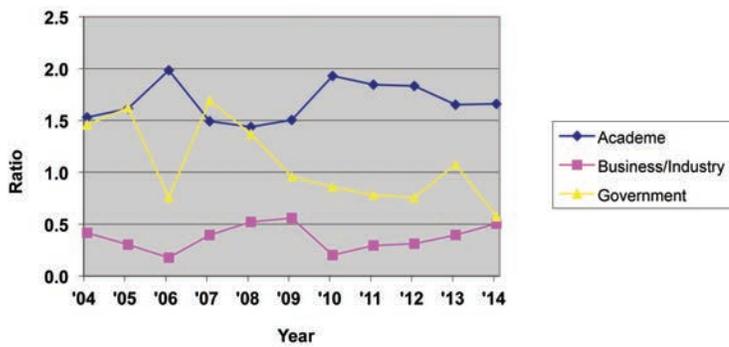
Figure 2. Percentage of Fellows awarded in each employment sector relative to the percentage of ASA membership in that sector by year
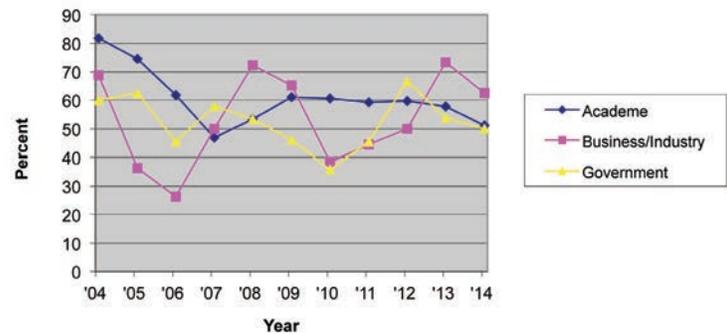

Figure 3. Percentage of successful ASA nominations in each employment sector by year
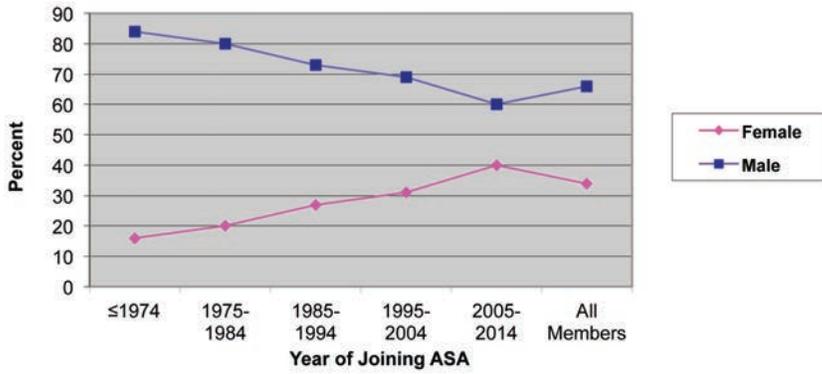
Figure 4. Percentage of current ASA members of each gender by year of joining the ASA

Table 4—Percentage of ASA Membership by Gender and Year of Joining

Year Joined ASA	Female	Male
≤ 1974	16	84
1975 - 1984	20	80
1985 - 1994	27	73
1995 - 2004	31	69
2005 - 2014	40	60
All Members	34	66
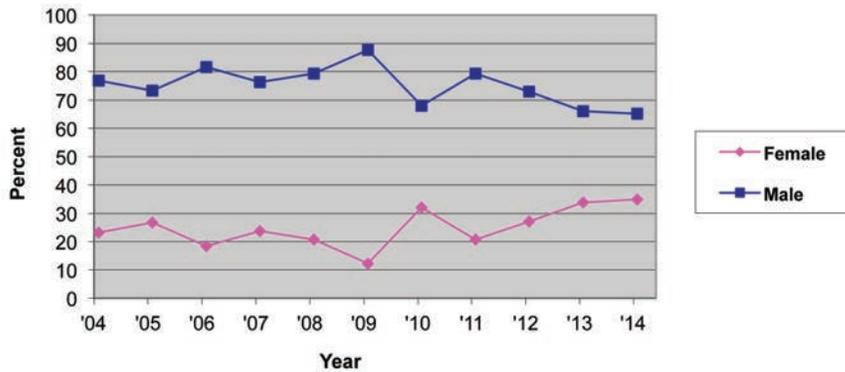
Figure 5. Percentage of ASA Fellow awards for each gender by year

Table 5—Number and Percentage of ASA Fellow Nominations for Each Gender by Year

| Year	Female	Male	Total
2004	14 (18.7)	61 (81.3)	75
2005	24 (27.0)	65 (73.0)	89
2006	25 (22.5)	86 (77.5)	111
2007	22 (18.3)	98 (81.7)	120
2008	16 (17.2)	77 (82.8)	93
2009	12 (12.6)	83 (87.4)	95
2010	24 (24.5)	74 (75.5)	98
2011	19 (18.1)	86 (81.9)	105
2012	19 (23.2)	63 (76.8)	82
2013	31 (31.3)	68 (68.7)	99
2014	32 (27.1)	86 (72.9)	118
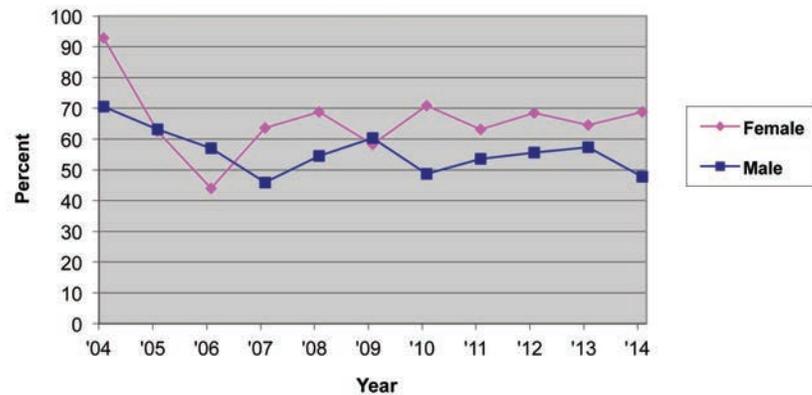
Figure 6. Percentage of successful ASA Fellows nominations for each gender by year

Table 6—Number and Percentage of ASA Fellow Awards for Each Gender by Year

Year	Female	Male	Total
2004	13 (23.2)	43 (76.8)	56
2005	15 (26.8)	41 (73.2)	56
2006	11 (18.3)	49 (81.7)	60
2007	14 (23.7)	45 (76.3)	59
2008	11 (20.8)	42 (79.2)	53
2009	7 (12.3)	50 (87.7)	57
2010	17 (32.1)	36 (67.9)	53
2011	12 (20.7)	46 (79.3)	58
2012	13 (27.1)	35 (72.9)	48
2013	20 (33.9)	39 (66.1)	59
2014	22 (34.9)	41 (65.1)	63

Gender

Table 4 and Figure 4 summarize the current ASA membership by gender and year of joining the ASA (or, if membership lapsed, rejoining the ASA). The summary is based on available data; more than 15% of ASA members have declined to enter their gender on their membership form. Among the current members who provide data, there is a definite trend over time in the proportion of female members.

The number and percentage of ASA Fellow nominations for each gender in each year from 2004 through 2014 are presented in Table 5. The majority of the newly joined members are most likely relatively young (i.e., less mature in their careers) compared to most Fellow nominees, who tend to be mid-career. While there is a fair amount of year-to-year variability in the proportion of female nominations, there is an overall slight increase in the proportion of nominations for females over the last 11 years, which is consistent with the change in the proportion of females who are current members and who joined roughly 10–30 years prior to the year of award. This conclusion assumes that year of joining the ASA is a reasonable proxy for duration of career, the number of departures from ASA membership has been proportional to gender over time (i.e., females and males are equally likely to discontinue or retain ASA membership regardless of year of joining), and the reporting of gender also has been proportional to gender over time.

The number and percentage of ASA Fellow awards from 2004–2014 are presented by gender in Table 6, and the percentages are presented in Figure 5. Again, the increase in percentage of awards over time is consistent with the increase in female membership, with the percentage of awards increasing from about 23% (2004–2008) to 27% (2010–2014); 2009 was an outlier.

Among nominees, the chance of success has generally been higher for females in the range of years summarized (Table 7, Figure 7).

Conclusion

A key factor in being selected as a Fellow of the ASA is the quality of the nomination packet, but an essential factor is being nominated: no nomination, then no selection. Therefore, the number of nominations from a given employment sector or gender is an important determinant of the number of awards from that sector. Academe has both the highest nomination rate relative to membership and the highest rate of successful nominations. The business/industry sector has consistently been substantially under-represented in the number and percentage of awards given relative to the membership (Figure 2) largely due to the drastically lower nomination rate (Table 2). Compare the ratio of 67.9% percent of nominations to 42% of members in academe (ratio = 1.62*) with the ratio of 18.9% of members to 47% of members in business/industry (ratio = 0.40) to determine that the chances of being nominated have been, on average, about four times higher in academe than in business/industry (1.62 ÷ 0.40 ~ 4); the chances over time have been three times higher in government than in business/industry (ratio = 13.2 ÷ 11 = 1.20 for government, with 1.20 ÷ 0.40 = 3).

The ASA Fellow award is a significant recognition of contributions to the statistics profession and one that should reflect the constituency of the ASA's membership. If you or others you know of are deserving of this award, participate in and encourage others to participate in the award nomination process. If you are early in your career, plan ahead: keep a log (at least quarterly) of your accomplishments and contributions; become active in ASA sections, chapters, committees, or publications (e.g., reviewer, associate editorship); publish your work that is not confidential; and generally use your creativity to expand your "job" into a meaningful career and make a notable difference. We encourage those planning a submission to review tips on the ASA website (*www.amstat.org/awards/fellows.cfm*) for guidance. ∎

In this case, the ratio of the averages—such as the 1.62 value computed above—is the same as the average of the yearly ratios because the denominator of 42% is used in each year and overall.

Table 7—Percentage of Successful ASA Fellow Nominations for Each Gender by Year

Year	Female	Male
2004	92.9	70.5
2005	62.5	63.1
2006	44.0	57.0
2007	63.6	45.9
2008	68.8	54.5
2009	58.3	60.2
2010	70.8	48.6
2011	63.2	53.5
2012	68.4	55.6
2013	64.5	57.4
2014	68.8	47.7
Average	66.0	55.8

Astrostatistics: A New Interest Group

Jessi Cisewski, David Van Dyk, and Thomas C. M. Lee

Recent decades have witnessed a steady and sustained increase in collaborative research efforts between statisticians and astronomers. The result is a new dynamic subdiscipline that is rich in data, sophisticated models, and interdisciplinary activities. Astrostatistics has reached a level of maturity and a critical mass that requires a more formal organization of researchers within the ASA. To meet this growing need and to encourage astrostatistical research to flourish, the ASA Astrostatistics Interest Group recently formed (*http://community.amstat.org/astrostats/home*).

The interest group will join a growing network of astrostatistics-related organizations. For example, the American Astronomical Society has established the Working Group on Astroinformatics and Astrostatistics, with 80 members (*http://aas.org/comms/working-group-astroinformatics-and-astrostatistics-wgaa*). There are more than 700 members registered with the Astrostatistics and Astroinformatics Portal (ASAIP, *https://asaip.psu.edu*) and more than 400 members in the International Astrostatistics Association, which represents 46 countries with 150 members from the United States. The ASA interest group is the first professional organization devoted to astrostatistics within a scholarly association of statisticians.

Astrostatistics has abundant, challenging, and intriguing problems that many ASA members already have had the opportunity to explore. Statistical challenges in astronomy, astrophysics, cosmology, solar physics, and astroparticle physics include problems related to Bayesian methodology, classification, dimension reduction, hierarchical modeling, hypothesis testing, nonparametric and semiparametric modeling, spatial and time series methods, and uncertainty quantification, just to name a few. What exactly do astrostatisticians work on? The list of recent astrostatistics papers maintained by ASAIP will give you a flavor of the variety of statistical topics and applications you can explore in astrostatistics (*https://asaip.psu.edu/recent-papers*).

There are a number of astrostatistics meetings held throughout the world, including "Statistical Challenges in 21st Century Cosmology" (*http://sccc21.sim.ul.pt*) and "ExoStat2014," a follow-up workshop to "Modern Statistical and Computational Methods for Analysis of Kepler Data" (*www.stat.cmu.edu/~cisewski/ExoStat/index.html*). Also, Penn State's Center for Astrostatistics held its 10th summer school in June (*http://astrostatistics.psu.edu*). Many more meetings can be found at *https://asaip.psu.edu/meetings*. Within the ASA, there will be an introductory overview lecture and three invited sessions at JSM 2014 (Bayesian Astrostatistics, Big Data in Astrostatistics, and Statistical Analysis of Kepler Data at SAMSI).

There are many opportunities for statisticians to get involved in astrostatistics. We welcome anyone with a desire to explore these problems to join the ASA's newest interest group at *http://community.amstat.org/astrostats/home*. Another great way to get connected is to contact one of your local astronomers—many are eager to begin collaboration with statisticians! ■

BASS XXI on Tap for November

The 21st meeting of the Biopharmaceutical Applied Statistics Symposium (BASS XXI) will be held November 3–7 at the Crowne Plaza Washington DC-Rockville. At least 16 one-hour tutorials on diverse topics pertinent to the research, clinical development, and regulation of pharmaceuticals will be presented November 3–5 by speakers from academia, the pharmaceutical industry, and the Food and Drug Administration (FDA). Two parallel two-day short courses will be presented November 6–7.

Popular features of BASS XXI are the keynote address on November 4, with reception following, and the November 5 FDA Biometrics session.

BASS is a nonprofit entity established for the purpose of fundraising to support graduate studies in biostatistics. To date, BASS has provided support to more than 50 master's or doctoral degree graduate students in biostatistics.

For further information, visit *www.bassconference.org* or contact the BASS registrar at *Rewhitworth@gmail.com*, Andreas Sashegyi at (317) 532-7414 or *aisasheg@lilly.com*, or Karl Peace at (912) 681-6980 or *peacekarl@frontier.com*.

Report: Future of Statistical Science Remains Healthy

Jeffrey A. Myers, ASA Public Relations Coordinator

Statistical science is as healthy as it ever has been, with robust growth in student enrollment, abundant new sources of data, challenging problems to solve and related opportunities to grasp over the next century, summarizes a recent report on the future of the field.

Statistics and Science: A Report of the London Workshop on the Future of the Statistical Sciences (*http://bit.ly/londonreport*) is the product of a high-level meeting in London last November attended by 100 statisticians from around the world. This invitation-only summit was the capstone event of the International Year of Statistics, a year-long celebration during 2013 that drew as participants more than 2,300 organizations from 128 countries.

The report is written in an accessible style so people who are not experts in statistics can understand its messages and the field's impact on society. It can be used as a resource by students interested in studying statistics at university, by policymakers who want to better understand the value statistics provides society and by the general public to learn more about the misunderstood field of statistical science.

Among the greatest challenges noted in the report is the rise of Big Data, which are databases that dwarf in size any databases statisticians previously encountered. It is a challenge for several reasons: problems of scale, different kinds of data, the "look-everywhere" effect, privacy and confidentiality concerns and reinventing the "statistical" wheel by collectors of Big Data.

The advent of Big Data also has forced the statistical field to confront a question of its own identity. "The companies that work with Big Data are hiring people they call 'data scientists.' The exact meaning of this term is a matter of some debate; it seems like a hybrid of a computer scientist and a statistician," notes the report.

This new job category brings both opportunity and risk to the statistics community. The value statisticians can bring to the enterprise is their ability to ask and answer such questions as these: Are the data representative? What is the nature of the uncertainty? It may be an uphill battle even to convince the owners of Big Data that their data *are* subject to uncertainty and, more importantly, bias.

On the other hand, it is imperative for statisticians not to be such purists that they miss the important scientific developments of the 21st century. "'Data science' will undoubtedly be somewhat different from the discipline to which statisticians are accustomed. Perhaps statisticians will have to embrace a new identity. Alternatively, they might have to accept the idea of a more fragmented discipline in which standard practices and core knowledge differ from one branch to another," continues the report.

Section 2 of the report—titled *Current Trends and Future Challenges in Statistics: Big Data*—presents an in-depth report on Big Data, the most-discussed trend at the London workshop, and offers this advice to current and future statisticians: "Big Data should not be viewed only as a challenge or a nuisance. It is also an opportunity for statisticians to re-evaluate their assumptions and bring new ideas to the forefront."

Other challenges and opportunities presented in the report include reproducibility of scientific research, updating the randomized controlled trial, statistics of climate change, statistics in new venues, communication and visualization, education and professional rewards. These are covered in detail in Section 3.

Section 1 presents seven case studies that show how statistics is used throughout our world for the betterment of society. These include the development of randomized controlled trial methodology and methods for evaluating such trials, and the discovery through statistical methods of biomarkers–genes that confer an increased or decreased risk of certain kinds of cancer.

The report concludes with a quote by Nilrey Cornites, a recent statistics graduate from the Philippines: "I am still amazed by the power of statistics…. Because of statistics, we are able to have a glimpse of the future, to understand…the significant effect of a new product or medicine, and to understand the weather. Statistics saves lives, lowers the costs, helps ensure success and improves things and processes."

The Workshop on the Future of the Statistical Sciences and the resulting report was organized by a committee comprised of members of the American Statistical Association, Royal Statistical Society, Bernoulli Society, Institute of Mathematical Statistics, International Biometric Society, and International Statistical Institute. These groups were the lead organizers of the International Year of Statistics. Workshop lectures are available for free at *www.statisticsviews.com* (registration required). ∎

ASA Adopts Statement Urging U.S. Ratification of the Convention on the Rights of Persons with Disabilities

The ASA Board of Directors recently approved a statement (see *www.amstat.org/policy/pdfs/DisabilitiesConvention.pdf*) urging the U.S. Senate to ratify a United Nations convention clarifying the rights of persons with disabilities.

The ASA statement—adopted during the board's summer meeting—reads as follows:

"The American Statistical Association (ASA) is the world's largest community of statisticians, representing members in more than 90 countries and striving to 'increase the contribution of statistics to human welfare without prejudice toward any person or group.' It is with this objective in mind that the ASA supports the people with disabilities who engage in the profession or practice of statistics and the study of disability as a topic of research. Through activities of promoting the education of statistics in schools, increasing the public awareness of statistics, and supporting the use of statistics in making sound public policy, the ASA seeks to help make education, employment, and other opportunities available to all people regardless of disability status. The ASA Committee on Statistics and Disability, established in 1991, is tasked with advancing the study of disability within the field of statistics and promoting the study of statistics among people with disabilities.

"The Convention on the Rights of Persons with Disabilities, which was adopted by the United Nations General Assembly in 2006, provides a framework for nations to address the rights of persons with disabilities. The Convention recognizes that those with disabilities have the right to live independently, move freely, and participate in the community, and calls on nations to make education, healthcare, and employment available to all those who seek it. The Convention also explicitly calls on parties to 'collect appropriate information, including statistical and research data, to enable them to formulate and implement policies' to realize the rights listed.

"The United States played a key role in the development of the Convention, modeling it after the Americans with Disabilities Act, which already provides rights to more than 56 million people with disabilities. The majority of the world's nations, representing about 1 billion people with disabilities, have become party to the Convention, sharing in the common purpose of providing dignity and equal opportunity to all people with disabilities.

"The ASA Board of Directors calls on the United States to ratify the Convention on the Rights of Persons with Disabilities." ∎

Funding Opportunities Group Enters Second Year

The Funding Opportunities Group entered its second year this spring, having grown to 130 members. The group was created by the ASA Committee on Funded Research in April 2013 to inform ASA members of funding opportunities from federal agencies and other sources and to provide advice for applying for such funding.

During its first year, most of the 100 messages to the group were for NSF and NIH solicitations, but there also were messages from the Department of Energy, DARPA, IARPA, Patient-Centered Outcomes Research Institute, Army, National Institute of Justice, and Department of Education.

To learn how the committee could improve the Funding Opportunities Group, the committee surveyed the membership this spring. The 19 respondents, who were mostly at research universities and within 15 years of completing their PhDs, were satisfied with the frequency and scope of the messages, though they welcomed more information about the application process and scientific interests of funders, as well as advice from program officers and awardees. Most of the respondents (94%) received their research funding information from funders' websites, but nearly as many (82%) learned about funding opportunities from colleagues.

Each year, the ASA Committee on Funded Research sponsors a JSM meeting during which attendees can hear from agency representatives about funding opportunities or fellow ASA members who have received funding from an agency.

The committee, assisted by ASA Director of Programs Lynn Palmer and Director of Science Policy Steve Pierson, also maintains an external funding resources website at *www.amstat.org/careers/efs.cfm*, which lists potential sources of funding and *Amstat News* articles on funding. The Funding Opportunities Group is more dynamic, mentioning specific funding solicitations as the deadlines approach.

To join the Funding Opportunities Group, sign into the ASA Community and search for "Funding Opportunities." Email Steve Pierson (*pierson@amstat.org*) with questions about joining the group.

ESRA Winner Talks About Statistics at Work, Play

Morteza Marzjarani

Alan Schwarz is a national correspondent for *The New York Times* whose series of more than 100 articles about concussions in sports was a finalist for the 2010 Pulitzer Prize for Public Service. He is the author of *The Numbers Game: Baseball's Lifelong Fascination with Statistics*, with more than 25,000 copies sold. He is also a 1990 graduate of the University of Pennsylvania and holds a BA in mathematics. He was the 2013 winner of the Excellence in Statistical Reporting Award (ESRA).

When did you become interested in statistics? Who inspired you?

Robert Conti, my 9th- and 10th-grade math teacher at Scarsdale (NY) High School, was by far my favorite teacher ever—in part because he introduced me to basic probability. I loved figuring out how many poker hands had four clubs in them, six-person roundtables had two girls sitting next to each other, the whole bit. (I'm pretty sure I was the only kid in the school who actually liked hearing the word "urn"). This was not part of the official curriculum; Mr. Conti just tossed this stuff into the regular pre-calculus program for fun. I was hooked immediately.

That was my start. I adored reading Bill James, the baseball writer who pioneered the use of advanced metrics and statistical thought in the 1980s. (His field was not statistics per se, but the spirit was similar—using past performance of players to predict future performance.) Then, perhaps my junior year at the University of Pennsylvania, I read *Innumeracy* by John Allen Paulos. That little book was to me what *Common Sense* was to the Founding Fathers—it transformed how I saw the world and wanted to experience it.

What challenged you intellectually?

The most basic stuff—card hands, balls with replacement, waits on lines, that stuff—came so easy to me. My greatest academic accomplishment at Penn came when I woke up at 9:22 for my 8:30 Statistics 101 final exam. I scrambled to the classroom, got there at 9:28, had only 62 minutes rather than 120, and still got the best grade in the class.

Schwarz

I honestly didn't go a whole lot past what ASA members would consider laughably basic, perhaps one level past Advanced Placement high school stuff. Discriminate function analysis and multidimensional scaling didn't interest me much at all. I delighted in stuff like the Birthday Problem, truels (duels among three people), hot hands in sports, and other silliness. But that silliness has a tremendous amount of application to going through life with a mathematical mindset, especially as a journalist who tries to navigate seas of statistics used both dopily and deceptively. So I think what challenged me intellectually was not the statistics itself, which was basic, but exploring ways to use it in my work—in sports, in stories involving epidemiology, in scrutinizing methods and statements used in scientific studies that were just bogus.

What do you think about ESRA?

I've been privileged to win more than my share of honors over the past several years, but nothing comes close to ESRA. It validated how I've tried to navigate my career—with a respect for telling people what the data say and a responsibility to report what they don't say, too. Ever since I was a kid, I wanted to be a high-school math teacher. I majored in mathematics at Penn so that I could become one. However, I wound

up trying journalism—which meant I went from the most altruistic profession (teaching) to perhaps the most hedonistic (baseball writing). I carry around a good deal of residual guilt from that decision, but ESRA, to me, says that perhaps I've been a decent math teacher, just at a different blackboard.

What have you done since you won the award?

For the past two years I have done a major investigation into the overdiagnosis and overmedication of attention deficit hyperactivity disorder, mostly in young people—and while I work with real-life people and issues, numbers continue to be my primary divining rod. So many spurious arguments are debunked by mathematical common sense. One example: Child psychiatrists like to brush off concern about the issue by saying, "ADHD is both overdiagnosed and underdiagnosed." What they mean, of course, is that there are too many kids being diagnosed, yes, but also lots of kids running around who deserve the diagnosis and aren't getting it—so basically it's a wash, no big deal. But hold on, fellas! That means that the kids who are getting diagnosed are the wrong ones! When you work out the numbers, you find out that at least half, perhaps more, of kids being diagnosed with ADHD actually don't have it. I'll spare the details on this next one, too, but I figured out that most epidemiological studies on ADHD have actually been using the wrong metric for decades, something that has obscured and impeded debate on the issue. This kind of garbage both drives me nuts—and drives me, period.

What are your future plans for using statistics in your journalism?

It's hard to say that the future will be much different than most of my career. When the National Football League tried to downplay the discovery that four retired players had a really rare brain disease by saying it was "only four cases"—when it was not just four cases, but *the first four players even examined*—I knew from ridiculously basic probability that they were wrong. (As will everyone who just read that sentence.) When I see studies that claim that Ritalin and Adderall are not really cognitive enhancers because one-week trials show no benefit *on average*, I go to great lengths to prove that that's just a stupid and reckless conclusion. There are a lot of preposterous—and often harmful—statements out there that are rooted in faulty mathematical thought. If I can detect them, correct them, and inform better debates about public health, then perhaps I chose the right blackboard after all. ∎

STAT*tr@k*

Service-Oriented Statistics

April Harry and Jeremy Troisi, Purdue University

Statistics in the Community (StatCom) is a student run organization that was established at Purdue University in 2001. StatCom's goals include providing free statistical services such as survey/sample design, experimental design, and data analysis to nonprofit groups and government agencies. Since its inception, it has expanded to campuses around the country and continues to be a valuable resource to local communities.

As statisticians, our education prepares us for using statistics in professional settings. However, service-oriented statistics requires additional skills: effectively conveying the need of our expertise and clear conceptual explanation of a statistical analysis.

How Would We Find a Statistician Useful?

Anecdotally, statisticians have observed that a prevailing view among those less exposed to the field is that statistics is perplexing, frustrating, or, worse, useless. Some nonstatisticians have been flummoxed by an introductory stats course; others have never seen the concepts at all.

This mindset is one reason many potential clients are unaware of what statisticians do, let alone how a statistician can be a resource for their organization. However, often in their own work, these potential clients are interested in conducting customer satisfaction surveys with little idea of how to construct the survey or interpret the results. Considering that they may not know they need help in the first place, the responsibility of educating the public about the importance of statistical consulting lies squarely on the statistician. In convincing the public about the utility of statistics, it is important to provide concrete examples.

For example, a clear explanation about uncertainty when generalizing results to a larger population can help a nonstatistican understand why confidence intervals are a good idea. Further, though the client may not understand how to conduct a t-test, communicating the concept of "significant difference" is a sufficient argument for why such tests are necessary and lend credibility to their analyses.

In addition to providing statistical consulting, one of the goals of StatCom is P–12 outreach for increasing public awareness of statistics. In events involving children, what may seem like fun games or riddles can actually introduce concepts such as summary statistics or probability. Additionally, when StatCom participates in volunteer opportunities such as judging school science fairs for special statistics-related prizes, we establish the importance of statistics in the minds of the next generation of scientists and professionals.

We Have a Statistician Working. What Is the State of the Analysis?

As with any client/consultant interaction, communication is important in keeping the client up to speed. While it is of the utmost importance to produce accurate and high-quality results, the statistician also must be sure to communicate effectively from the initial client meeting to the end of analysis.

A black box, data in/numbers out approach without client involvement does not build the client's understanding of the usefulness of the analysis to the organization. While it may not be practical for the client to be present during the entire analysis process, regular interaction and updates—whether face-to-face meetings, calls, or a short email—can go a long way toward making clients more comfortable with the statistical insight to be gained from the project. After the project is done, the relationship with the client should be maintained so the helpfulness of statisticians won't be far from their minds the next time they encounter a situation that could benefit from collaboration.

How to Get Involved

There is value in service-oriented statistics, and that value shows in increased quality of results and communication between the statistical community and the community at large. If you are interested in improving the visibility of statistics through service in your area or want to learn more about StatCom, please visit *www.stat.purdue.edu/statcom* or contact us at *statcom@stat.purdue.edu*. ∎

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Serve ASA and Enhance Your Influence

Mingxiu Hu, Takeda Pharmaceuticals

You are the CEO of your own life, and you can chart your own path. Great leaders build positive influence, develop broad networks, and have constant access to new ideas. If you are interested in leadership, the ASA is an excellent place to try out skills and bold ideas that you may be reluctant to showcase at your workplace.

In 2002, four years into my professional career, I started my volunteer work for the ASA, first as the Connecticut Chapter treasurer and then as chapter vice president and president. In 2004, I was appointed to the ASA Committee on Membership Recruitment and Retention and became its vice chair and chair during the last four years of six years of service on the committee. Other volunteer activities include being a member of the International Chinese Statistical Association (ICSA) Board of Directors, co-chair of the 2012 ICSA Applied Statistical Symposium, founder of the ASA Section for Statistical Programmers and Analysts, organizing committee member for various statistical conferences, and reviewer for many statistical journals. As an ASA member readying to celebrate the ASA's 175th anniversary, I was asked to share a few thoughts about why I spend so much time volunteering for statistical societies and what this has accomplished for me.

Practice Leadership and Influence Skills

The ASA provides a safe environment for statisticians to practice their leadership and influence skills. The ASA always welcomes new ideas and initiatives. Best of all, it is very forgiving, and the consequences for failed attempts are minimal. No one will criticize you for trying. It will not affect your career or reputation and you will still learn something valuable from the experience. Failure at your work place can be different. It might affect your performance evaluation and take a while for your manager to trust you again. On the other hand, success in both your work place and your volunteer work has a similar effect. It builds confidence and raises your profile.

When I was on the ASA Membership Committee, I proposed establishing the ASA Section for Statistical Programmers and Analysts. At the onset, I wasn't sure whether I would be able to get 100 people (the number required to establish an ASA section) to sign up for this section, but I decided to try it anyway because I thought it was good for the ASA and statistical programmers. I also didn't think I had much to lose, even if I failed. It turned out that the interest level was much higher than I expected. I was able to establish the section successfully with the help of an initial group of 25 leaders I recruited via my network in the pharmaceutical industry and other organizations. Now the section is very active and has almost 1,000 members. This success at an early stage of my career significantly bolstered my confidence, which had a positive impact on my career advancement.

Build a Network

Serving the ASA offers excellent opportunities for getting to know your fellow statisticians, building your professional network, enhancing collaboration opportunities, and raising your profile. By regularly networking and pushing

yourself to talk to people you don't know, you can enhance your interpersonal and communication skills. Networking is good for sharing ideas and information, which helps you expand your knowledge and allows you to see the world from other perspectives. It is also likely that within the network there are individuals who have already encountered challenges similar to what you may be experiencing. Their experiences can provide an opportunity for you to learn and help you avoid some of the mistakes they made. In addition, networking can naturally result in opportunities for scientific collaboration. As a manager with demanding responsibilities in the private sector, I find it challenging to devote undisturbed time to research, but collaboration with other statistical experts allows me to follow through on important research topics.

Access New Ideas

As we travel through this changing world, we have to keep learning how to make ourselves relevant and successful. We live in a world in which 90% of all existing data were created in the past two years. Technology advances at an amazing speed. Machine learning, adaptive design, personalized medicine, text mining, next gene sequencing, and Big Data, to name a few advancements relevant to our profession, did not exist a couple of decades ago. ASA is the "big tent" that houses experts from whom you may be able to learn new advancements. I have learned many novel ideas from my network and have successfully applied some of them to clinical trials. These applications have been invaluable for improving drug development efficiency in my company.

These are just a few important reasons why I spend time serving the ASA and other statistical societies. It also has been working out well for me personally. I am sure we all agree that a stronger ASA will make our profession more influential and relevant in the scientific world. It will create more opportunities for all statisticians. The ASA relies on volunteers to keep it running efficiently. I encourage ASA members to contribute to our association to make it even more effective than it is today. We cannot sit still and wait for others to do the job for us. ∎

Emory's Department of Biostatistics and Bioinformatics to Celebrate its 50th Anniversary, October 17–18, 2014

The department of biostatistics and bioinformatics at the Rollins School of Public Health, Emory University, will be celebrating its 50th anniversary with a reunion October 17–18, 2014. All current and former faculty, students, and staff are invited to attend. On Friday, October 17, there will be a luncheon, session on the history of the department, technical session highlighting faculty and former students, and a poster session. A gala banquet will be held that evening with testimonials and awards. The inaugural Mike Kutner Service to the Profession Award for an alumnus of the department will be presented. Ron Wasserstein, executive director of the American Statistical Association, will attend. On Saturday, October 18, there will be a wrap-up brunch with additional testimonials and Emory logo gifts presented to attendees. All former faculty, students, and staff are encouraged to attend this gala. Current faculty, students, and staff are planning to attend and participate in the planned activities. Please see the following website for registration materials and meeting details: *http://sph.emory.edu/departments_centers/bios/anniversary-celebration.html.*

Statistics Poster and Project Competition Winners

The American Statistical Association is pleased to announce the winners of the 2014 Poster Competition and Project Competition. First-place winners received $200, a plaque, a plaque for their school, and grade-appropriate graphing calculators for the students and advisors provided by Texas Instruments. Second-place winners received $100 and a plaque; third-place winners received $50 and a plaque; and honorable mentions received a plaque.

The poster and project competitions are directed by the ASA/NCTM Joint Committee on Curriculum in Statistics and Probability. **Tim Jacobbe**, **Douglas Whitaker**, **Catherine Case**,

and **Steven Foti**—all from the University of Florida—served as co-leaders of the poster competition, while **Daren Starnes** of the Lawrenceville School served as head project competition leader and **Nathan Kidwell** of Dubuque Senior High School served as associate project competition leader. K–12 posters are due every year on April 1. Projects (written reports) for grades 7–12 are due every year on June 1. Visit *www.amstat.org/education/posterprojects* for information, including previous winners, entry forms, instructional webinars, and a rubric of how the posters and projects are judged.

2014 National Project Competition Winners

Each year, the Statistics Project Competition attracts a variety of submissions in which students from grades 7–12 conduct creative studies. The submission deadline for the project competition is June 1 to enable participation from high-school students who may have been preparing for the AP Statistics exam administered in mid-May. This deadline also makes it possible for teachers who might otherwise be busy at the AP reading to assist with the competition judging. The statistical project competition was especially useful for these students because it provided them with opportunities to apply all the statistical skills they had acquired throughout the school year to solve real-world problems of interest to them. Results of the project competition and a list of judges can be found at *http://magazine.amstat.org/blog/2014/08/01/poster-winners.*

2014 National Poster Competition Winners

Grades K–3
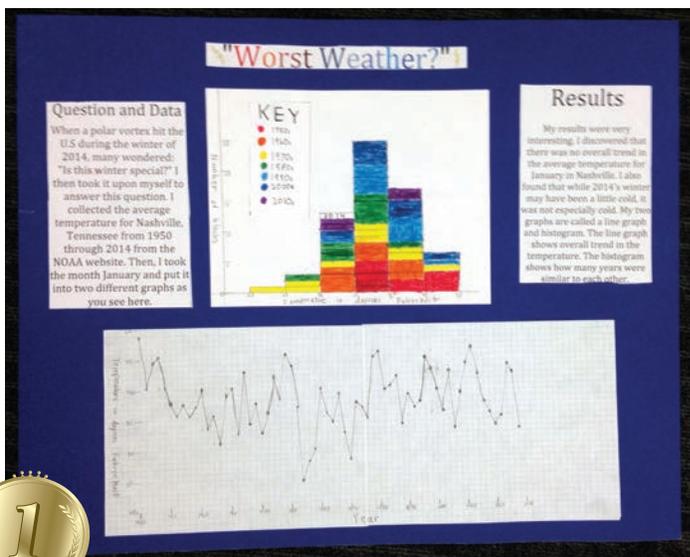
FIRST PLACE
Isaac Wai-Yun Cheng
Worst Weather?
Cheng Homeschool
Nashville, TN

SECOND PLACE
Joseph McClelland
Time Out!
Ada Vista Elementary
Ada, MI
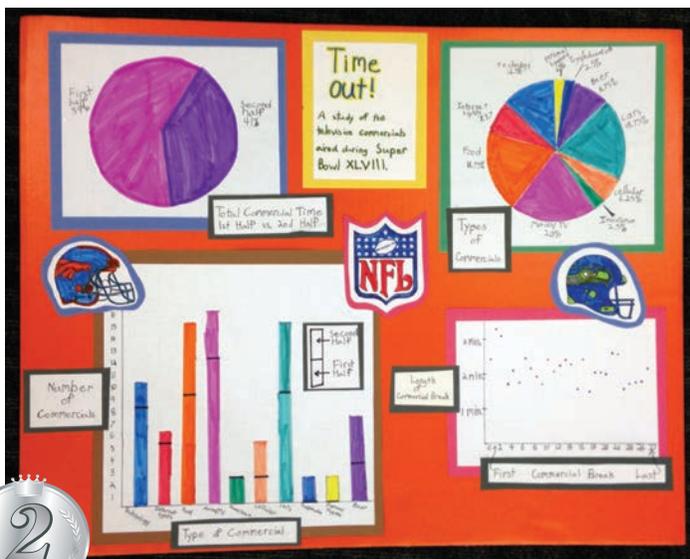
THIRD PLACE
Sebastian Masterson
The Force of Weather on an Angry Bird's Flight
Westmont Elementary School
Johnstown, PA

HONORABLE MENTION

Dilara Anne Godfrey
Books Galore
JM Hill Elementary
East Stroudsburg, PA

Aaron Wai-Chi Cheng
Throwing a Football
Cheng Homeschool
Nashville, TN

Lee Rosenberger
Boo! What Scares You?
East Pike Elementary School
Indiana, PA

Grades 4–6

1 FIRST PLACE

Anthony Aronson, Gino Bartolini, and Brooke Shirley
It's in the Bag
Saltsburg Elementary School
Saltsburg, PA

2 SECOND PLACE

Miranda Guthrie and Michael Shirley
Read It Right?
Saltsburg Elementary School
Saltsburg, PA

3 THIRD PLACE

Cameron Albert
The Carrot Trick
Ben Franklin Elementary School
Indiana, PA

HONORABLE MENTION

Ashley Jocham and Jamie Blair
No Bones About It
Southwest Elementary School
Lebanon, PA

Timmy Allshouse, Angelo Bartolini, Raychel Cass, and Madison Prenni
Dactylodata
Saltsburg Elementary School
Saltsburg, PA
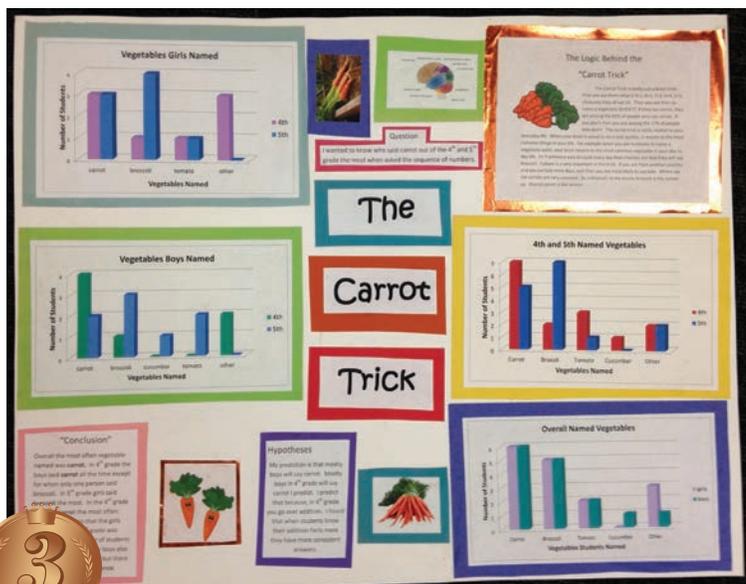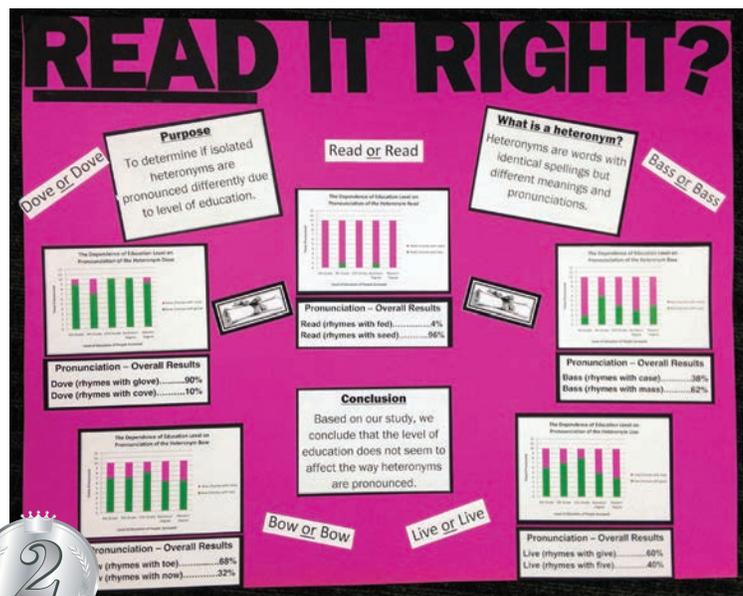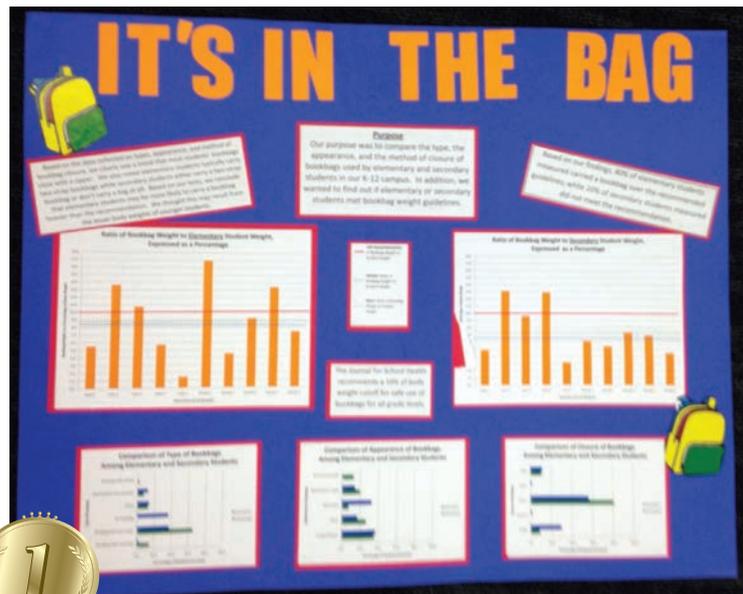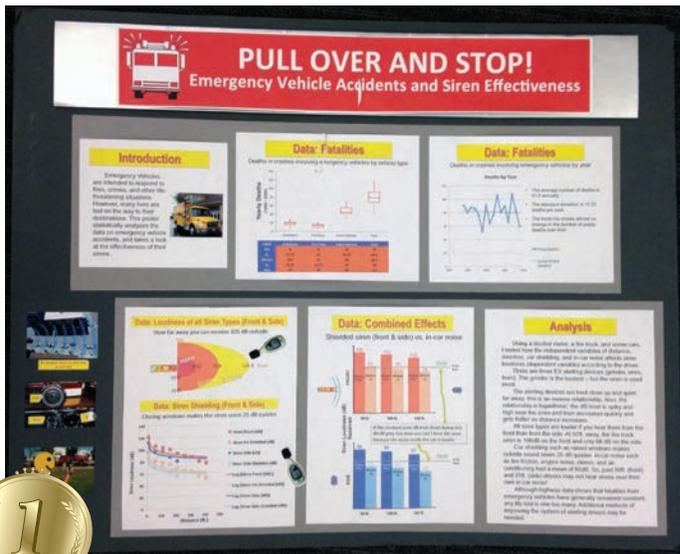
Grades 7–9

FIRST PLACE

Ian McCue
Pull Over and Stop—Emergency Vehicle Accidents and Siren Effectiveness
McCue Home School
Las Vegas, NV

SECOND PLACE

Anik Patel
Need for Speed
Hyde Park Middle School
Las Vegas, NV

THIRD PLACE

Julius Meier
Does Temperature Affect the Strength of a Magnet?
The Campus School of Carlow University
Pittsburgh, PA
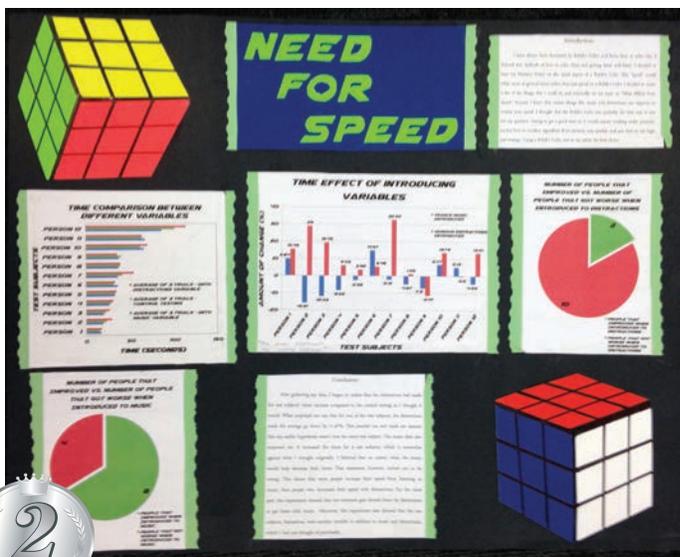
Grades 10–12

FIRST PLACE

Nazhath Sulthana and Sadie Wallner
Is This for a Grade?
Joplin High School
Joplin, MO

SECOND PLACE

Theresa Doan, Megan Hollingsworth, and Betsy Slagel
Hungry for Some Information?
Fox Chapel Area High School
Pittsburgh, PA

THIRD PLACE

Annie Lee
Does Time of Day Affect Flexibility?
Saline High School
Saline, MI

HONORABLE MENTION

Michelle Wong
Racial Profiling: Analyzing Racial Discrepancies in Traffic Stop Likelihoods and Practices
Classical Academy High School
Escondido, CA

Brendon Trybus
Are Spinal Fractures More Common in Older Patients?
Bishop Guilfoyle Catholic High School
Altoona, PA

Josie Kaderly and Isabella Hagen
Social Media
Lamar High School
Lamar, MO
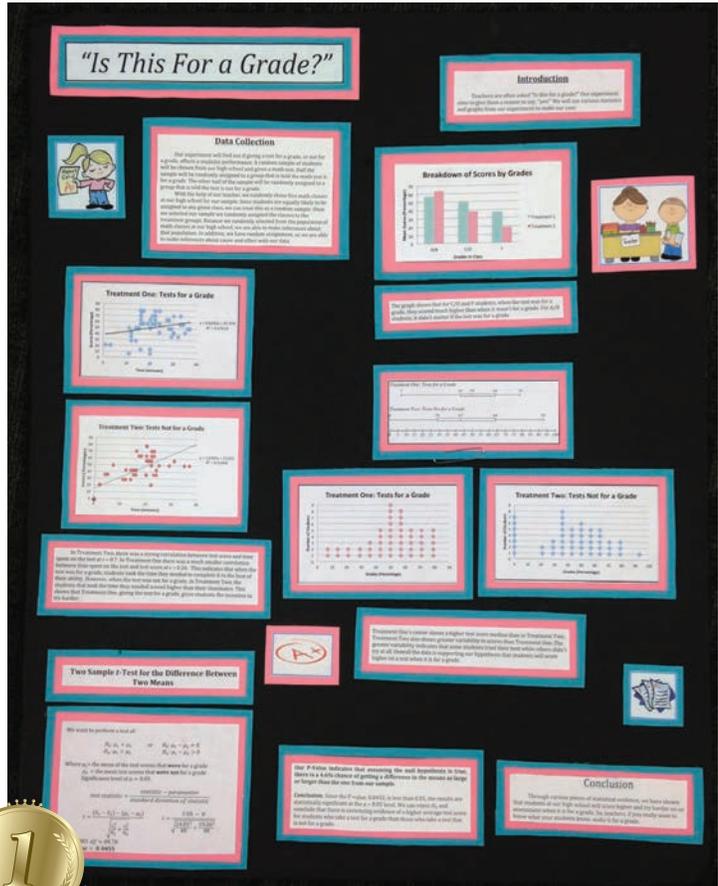
(outside)
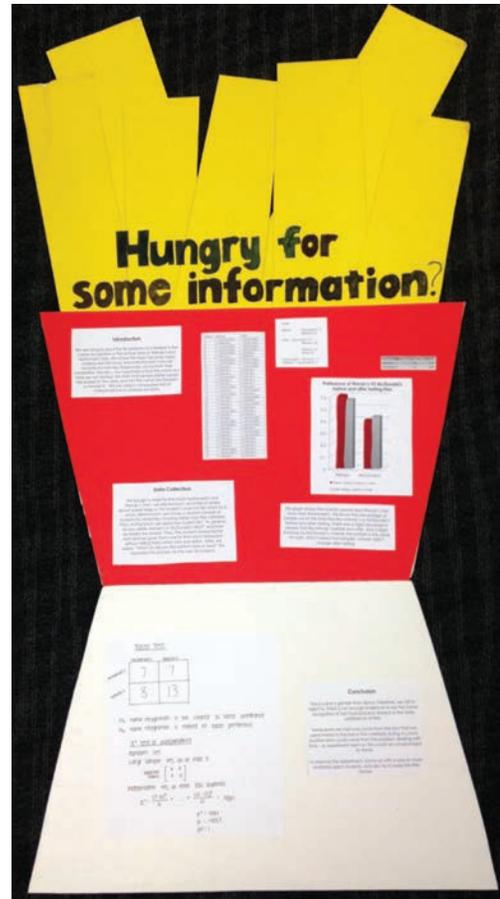
(inside)
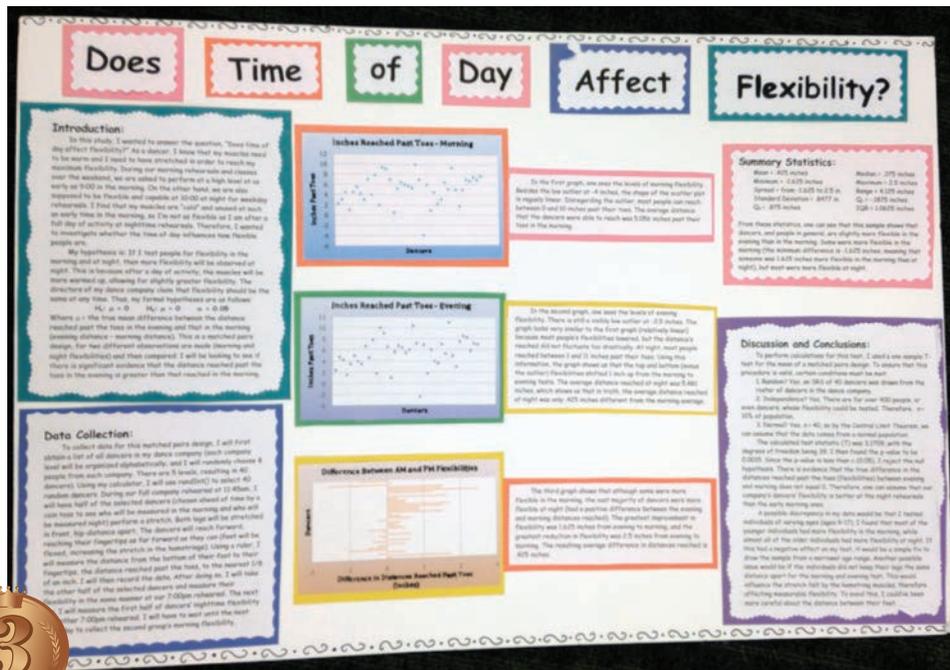
Two Students from Joplin, Missouri, High School Win First Place in Poster Competition

Three years ago, Joplin was hit by an EF-5 tornado and many public buildings, businesses, homes, and automobiles were damaged or destroyed. Teacher Adam Bennett was injured and underwent a long period of rehabilitation. Several schools were destroyed, including the high school, which was temporarily relocated to the Joplin shopping mall. School started without delay in fall 2011 and, three years later, the high school will move to a new facility in the fall. Winning first place in the national poster competition is a testament to the students' and Bennett's courage and dedication.

2014 Regional Poster Competition Leaders

- **Connecticut Chapter Statistical Poster Competition**
  Marianne E. Messina, Bristol-Myers Squibb
  www.amstat.org/chapters/Connecticut/home/Poster/poster_index.htm

- **Kansas/Missouri Statistics Poster Contest**
  Ananda Jayawardhana, Pittsburg State University
  www.pittstate.edu/department/math/stats_poster.dot

- **Michigan Statistics Poster Competition**
  Dan Frobish, Grand Valley State University
  www.gvsu.edu/stat/mspc-home-30.htm

- **Nevada K–12 Statistics Poster Competition**
  David Thiel, Thrivent Financial
  www.amstat.org/chapters/nevada

- **Ohio Statistics Poster Competition**
  Linda Quinn, Cleveland State University
  Jerry Moreno, John Carroll University
  www.bio.ri.ccf.org/ASA/poster.html

- **Pennsylvania Statistics Poster Competition**
  Pete Skoner, Saint Francis University
  http://francis.edu/pa-statistics-poster-competition

- **Pullman, Washington Statistics Poster Competition**
  Dean Johnson, Washington State University
  dean_johnson@wsu.edu

- **Washington Statistical Society Poster Competition (DC Metro Area)**
  Barnali Das, Westat
  www.amstat.org/education/posterprojects

- **ASA National Poster Competition**
  Tim Jacobbe, University of Florida
  Douglas Whitaker, University of Florida
  Catherine Case, University of Florida
  Steven Foti, University of Florida
  www.amstat.org/education/posterprojects

Students outside the regional competition areas submit their posters directly to the ASA office, which are then separately judged by the Washington Statistical Society as part of the Other Region category. The best posters from each region are sent to the national judging. Information about regional poster competitions and winners is available on the individual regional poster competition websites.

Get Involved

For information about how you can start a regional poster competition or mentor students in your area, see the July 2011 *Amstat News* article at *http://magazine.amstat.org/blog/2011/07/01/poster-comp-how-to*. You also can download a flyer about the ASA poster and project competitions and other K–12 statistics education programs and resources at the bottom of *www.amstat.org/education*. For additional information, contact ASA Director of Education Rebecca Nichols at *rebecca@amstat.org*. ∎

Students, Teachers, Community Pull Off Successful Poster Competition

H. Dean Johnson, Washington State University

In April, I had the pleasure of holding a statistics poster competition for third- and fourth-graders at Jefferson Elementary School in Pullman, Washington. Representing and interpreting data are part of the third and fourth grades common core curriculum in Washington. My goal in organizing the poster competition was to generate excitement about statistics in young children. On Page 32 is the article about the competition that appeared in the local Pullman newspaper, along with a couple of pictures taken.

From the article and picture, one can see that the event was a success. As I reflect on the event, it was the enthusiasm of the community, the teachers, and, of course, the third- and fourth-grade students that made the competition such a success.

Prizes were provided by Palouse Discovery Science Center, Pullman Aquatic Center, Schweitzer Engineering Laboratories, the

Washington State University Mathematics Department, and Zeppos Bowling Alley. They included the following:

- Math-related books and puzzles provided by the Washington State University Mathematics Department

- Bowling gift cards

- Certificates for a free visit to the Palouse Discovery Science Center

- Certificates for a free visit to the Pullman Aquatic Center

- Certificates of participation printed by Schweitzer Engineering

Without the help of the third- and fourth-grade teachers, the competition wouldn't have been so successful. They met with me on several occasions after school hours to work out the details of the competition and fitting the poster competition into the students' already full curriculum.

With the main purpose of the competition being to generate enthusiasm for statistics, I was delighted to see the school was buzzing with excitement on the day of the awards ceremony. One student who was walking down the hall even stopped me to proudly show his poster to me. And a student from the school newspaper asked me if he could interview me about the competition. When I asked students what they enjoyed most, the hands of 30–40 students enthusiastically went up.

The other day, I ran into a poster competition participant at the grocery store and she spoke with me for about 10 minutes, expressing how much she enjoyed the event. With the success enjoyed this year, I look forward to holding another poster competition in the future. ∎

Students Learn Even Statistics Can Be Fun

Jefferson students enthusiastically create posters from survey data

By Anthony Kuipers, *Moscow-Pullman Daily News* staff writer

This article is referenced on Page 30 and appears courtesy of the *Moscow-Pullman Daily News*.

W hat's your favorite animal? What technology would you like to see in the classroom? These were the type of inquiries posed on colorful posters lining the walls of Jefferson Elementary this week. Also filling the posters were graphs, charts, and numbers that represented the data collected when Jefferson third- and fourth-graders asked those questions of fellow students.

The students surveyed their peers about a question of their choice, and then analyzed the data to make conclusions about their findings. Washington State University provided the poster materials.

Dean Johnson, WSU math professor, said the project aims to "generate some excitement" about math and statistics while introducing students to methods of collecting and summarizing data.

He was joined by fellow WSU math professor Xueying Wang, who said the project helped students learn how surveys can broaden their view of what others think about certain issues.

"You see things from another perspective," she said.

As a bonus, the students were given awards Wednesday during an assembly for their work.

Third-grader Megan Limburg won first prize—a pass to Palouse Discovery Science Center and a math-related storybook—for her poster.

She spent a week surveying 30 of her peers on what playground equipment they liked the most. The top choice was the painted area on the playground designated for the popular game of four square.

From that data, she, like her classmates, used an online program to create a pie chart and tables of the results. The hardest aspect, she said, was making sure the graphs stood out.

"I had to see what looked good and what colors fit together," she said.

Her favorite part of the process was going out to recess with her friends to survey students. She thought her chances of winning the competition were 50-50.

"I thought I might win, but there was a good chance I might not win," she said.

Limburg said she was "really happy" and "excited" when Johnson called out her name during the assembly.

Johnson said her poster best followed the scoring rubric used by the American Statistical Association's national statistics poster contest. They looked for posters

Third-grader Megan Limburg talks about her winning poster (top center) in the statistics poster competition at Jefferson Elementary School in Pullman, Washington.
Photo by Geoff Crimmins

that were eye-catching and creative, used graphs correctly, and were easy to understand. Students also received points for writing out their process for gathering the data, as well as their conclusions.

Third-grade teacher Elaine Kelly said Limburg's poster also stood out because she gave a recommendation based on her data, as any good statistician would.

"The data's collected for the purpose to improve our world," she said.

That recommendation, of course, was for the school to paint more four squares.

Other students asked about favorite books, pets, and sports. The majority of students said they wanted to see more iPads and other tablets when asked what technology they wanted in their classrooms.

Some even delved into more complicated issues. One asked students about thoughts on health care spending, while another asked what they knew about endangered species.

Johnson said some of the Jefferson posters will be submitted in the national competition, where they could win money and a plaque for their school.

During the assembly, the students responded with a resounding "Yes!" when Johnson asked if they wanted to do the project again next year. He said it was encouraging to see them so enthusiastic about being young statisticians.

"At this age, it's nice to see," he said.

Students Earn National Attention, Confidence

Eric Lee, Teach for America - Arkansas '12 Corps Member

Cherry Valley is a rural town located in Northeast Arkansas about 45 minutes east of Memphis, Tennessee. Similar to most communities in this area, it is not unusual to spot airplanes overhead crop-dusting fields and tractors occupying two lanes on a highway. Located within the 1 square mile city of Cherry Valley is Cross County High School, which contains about 350 students of which 76% qualify for free or reduced lunches. Though many students in this school deal with poverty every day, four of its brightest students have been recognized nationally for their collective achievement.

Juniors Allison Burch, Jordan Johnson, Brianna Lace, and Riley Stephens won honorable mention in the ASA Regional Poster Competition and their work proceeded to receive national attention. Their work examined the susceptibility of varsity athletes to injuries and whether competing in a sport led to more people getting hurt. To answer this question, the group constructed a hypothesis, selected students from each grade randomly to examine instances of injuries, and performed a test to see if there was evidence that athletes are more likely to have serious injuries than non-athletes.

The winning poster board showed a blend of science and statistics in its presentation over a brightly decorated image of a basketball court. When the group was put together, Stephens noticed a connection. "We noticed that all of us play a sport within our school and we have seen friends deal with serious injuries. We wanted to test if being on a varsity team increased the chances of getting an injury," Riley said.

To capture data, the four juniors randomly selected two samples of 45 students among the student body—one group of varsity athletes and another group of non-athletes. Sustaining bodily damage that impaired a person from daily activities for more than two weeks met the requirement for being injured. The group hypothesized that there would be significantly more injuries in the sample of athletes than in the sample of non-athletes simply because of the intense nature of varsity sports. However, after capturing survey responses and performing a hypothesis test, the group could not find enough evidence to draw a conclusion that athletes are more prone to injury.
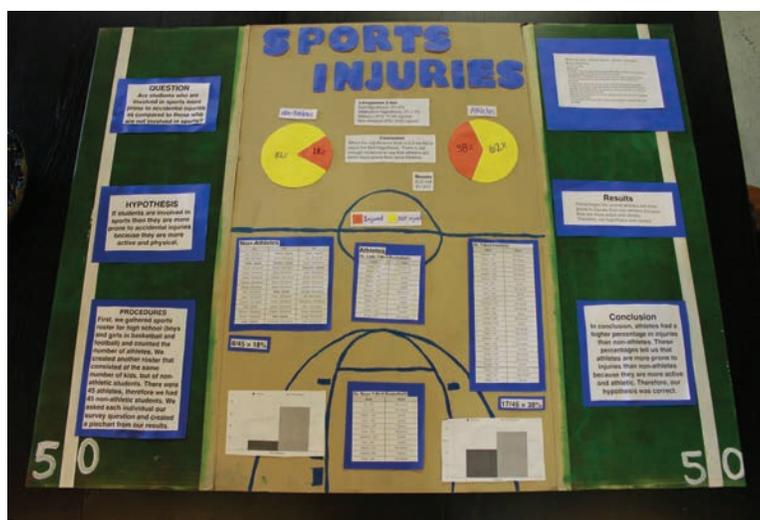
Four juniors from Cross Country High School won honorable mention for their poster about sports injuries.

Math usually consists of a barrage of math problems and scenarios; however, the ASA Poster Competition generated motivation based on the freedom to explore. This eventually led to students having to dedicate more effort to planning and implementing a thorough study. Lace attributed success to extra nights after school working on the poster with the group. "We worked really, really hard in and out of class. This included inviting my group over to my house and working on the project until midnight," Lace said. "We had outside feedback from people outside of class. Listening to critical feedback and making revisions helped us become successful."

While the poster submission required a deep level of understanding in statistics, it also required analytical thinking, technological literacy, and collaboration. These skills are the core values of Cross County High School, a New Tech School, which actively uses project-based learning. Conceptual understanding of various subjects is driven through authentic projects that challenge students to draw connections between what they learn and what they experience. Progress on a project requires each team member to create a plan and identify what the group needs to learn. The result of this effort is a product that demonstrates the application of subject matter and professional skills seen in a work environment.

Carolyn Wilson, superintendent of Cross County School District, has seen the benefits of this curricular philosophy. "Project-based learning has challenged our students to become better communicators, collaborators, and workers. As a result, our students are gaining self-confidence and developing skills that can make them successful in the future," noted Wilson. "We have set the goal for our students to expect to attend college and we are seeing the fruits of our efforts."

Jennifer McFarland, principal of Cross County High School, added, "Students are beginning to see beyond the challenges in their lives and it has influenced the culture positively. These challenges should not prevent a student from succeeding, but students need to be given the skills to meet challenges in innovative ways."

School administration, faculty, and staff members recognize the challenges confronting the students in Cross County. In addition to the majority of students who require free or reduced lunch during the school day, more than 19% of the student population is considered homeless by the State of Arkansas and 13% require alternative or special education. Developing and facilitating projects demands a considerable amount of effort from all who work with the students. Cherry Valley is void of industries or farms capable of offering employment opportunities.

However, in spite of these challenges, the students are capable of reaching extraordinary achievements. From the creation of the idea to the eventual submission, Burch, Johnson, Lace, and Stephens have demonstrated creativity and application of complex statistical concepts. They also have managed to stand out in a region that includes schools from across 40 states in the nation. Upon recognition of the award, parents were first to express their happiness for their children. "I am very proud of Riley. If he was not a part of the school, then he would not have been given the opportunity/challenge," said Wendy Stephens.

Other parents also have seen the growth the school has caused in their children. Penny Lace said, "Project-based learning gives students a chance to really show their creative side. I think it is wonderful that our small rural school is getting the same education that is found in much larger schools around the nation and our students are just as competitive. I have seen my daughter mature during her junior year. She has become more responsible and attentive to her work."

Most importantly, the competition introduced a host of new opportunities for the group. Students reach in their college aspirations and expect to achieve more as a result. Stephens expressed during a presentation, "[The award] let us know we can do anything we really want to do." ∎

ASA Group Reviews MAA Guidelines

The American Statistical Association was invited by the Mathematical Association of American (MAA) to provide feedback regarding the draft documents of MAA's *2015 CUPM Curriculum Guide to Majors in the Mathematical Sciences.* CUPM refers to the MAA's Committee on the Undergraduate Program in Mathematics.

The ASA organized a review group with representatives from ASA committees, sections, and workgroups related to undergraduate statistics education and teacher preparation. The ASA review group focused on the curriculum overview, undergraduate statistics programs, statistics and probability courses, and documents relating to preparing future middle- and high-school teachers. Other ASA members are involved in writing the curriculum guide documents.

The ASA review group is in favor of the CUPM curriculum guide recommendation to have all mathematical sciences majors obtain the equivalent of the content in an applied data analysis course. The review group also was pleased the recommendations for preparing middle- and high-school teachers followed the Mathematical Education of Teachers II (MET2 - *http://cbmsweb.org/MET2*) recommendations for increased statistics preparation.

The CUPM writers are aware of the upcoming ASA Statistics Education of Teachers (SET) report (*http://magazine.amstat.org/blog/2014/03/01/education-of-teachers*). The documents related to statistics programs were based on the ASA's curriculum guidelines and will share that the updates of the ASA curriculum guideline recommendations will be available later this year (*http://magazine.amstat.org/blog/2014/03/01/pres-column-03-14*).

Committee Members

Amy Froelich - Chair, Iowa State University

KB Boomer, Bucknell University

Nancy Boynton, SUNY Fredonia

Beth Chance, Cal Poly San Luis Obispo

Laura Chihara, Carleton College

Stephen Cohen, National Science Foundation

Chris Franklin, University of Georgia

Robert Gould, University of California, Los Angeles

Nicholas Horton, Amherst College

Tim Jacobbe, University of Florida

Roger W. Johnson, South Dakota School of Mines and Technology

Shonda Kuiper, Grinnell College

Rebecca Nichols, ASA

Kari Lock Morgan, Duke University

Michael Posner, Villanova University

Roxy Peck, Cal Poly San Luis Obispo

Sue Schou, Idaho State University

The 2004 curriculum guide is available at *www.maa.org/cupm*. The MAA anticipates releasing the 2015 curriculum guide after the MAA Board of Governors reviews the guidelines in January. The document will be available online at the CUPM site and a printed report also will be distributed by MAA. In addition to the course area and program area reports posted, the MAA CUPM expects online community discussion groups will add additional material to help keep the guide current.

For more information, contact ASA Director of Education Rebecca Nichols at *rebecca@amstat.org*. ∎

Mary Batcher to Become Chair of NISS Board of Trustees
Robert Rodriguez Named Vice Chair

Batcher

Mary Batcher of Ernst and Young will become chair of the National Institute of Statistical Sciences (NISS) Board of Trustees July 1, 2015. Robert Rodriguez of SAS Institute has been named vice chair. Also serving on the executive committee will be ASA members Christy Chuang-Stein of Pfizer, Rebecca Doerge of Purdue, Susan Ellenberg of the University of Pennsylvania, Roger Hoerl of Union College, and Fritz Scheuren of NORC at the University of Chicago.

Ellenberg and Hoerl have served as chair and vice chair of the board since 2011. Alan Karr, director of NISS, said "It has been great for NISS to have Susan and Roger lead the board for the past three years, and it will be equally great to have Mary and Bob guiding the board in its efforts to help NISS move forward. Susan and Roger's willingness to remain on the executive committee ensures continuity and allows NISS to continue to benefit from their wisdom."

Chuang-Stein, Tim Hesterberg of Google, and Tommy Wright of the U.S. Census Bureau were elected to three-year terms on the NISS Board of Trustees starting July 1, 2014. Chuang-Stein and Wright are joining the board for the first time.

Batcher is executive director of quantitative economics and statistics at Ernst & Young in Washington, DC. She is responsible for all aspects of statistical sampling used in tax filings, including the technical merits of firm samples, review of IRS proposed samples, and review of samples developed by other firms for its audit clients. Batcher joined the board in July 2013.

Rodriguez is senior director of R&D for SAS Institute. He has long been active with the NISS affiliates program, of which SAS is one of the original members.

Chuang-Stein is vice president and head of the Statistical Research and Consulting Center at Pfizer. She was a founding editor and serves on the editorial board of *Pharmaceutical Statistics*. Chuang-Stein is a member of many collaborative working groups and has been promoting good statistical practice in the pharmaceutical industry for more than two decades.

Wright is chief of the U.S. Census Bureau's Center for Statistical Research and Methodology. He earned a master's degree and PhD in statistics from The Ohio State University. He also earned a master's degree in mathematics from the University of Tennessee and a bachelor's degree in mathematics from Knoxville College. ∎

On the Street Where You Live
Ingram Olkin

On a recent trip to Chapel Hill, I was pleased to see two street signs of famous statisticians: Hotelling Court and Deming Road.

Harold Hotelling was the founding chair of the department of mathematical statistics at Stanford in 1946. He was the originator of principal components analysis, canonical correlations, Hotelling's T-square, and more. He also made significant contributions to economics. There are several available reviews of his contributions and of his life. Hotelling invited faculty and students once a month to his house to what became known as Hotelling's Tea. The area where his house was located has now been redeveloped, but the new street is in the same location.

W. Edwards Deming was known for his work in sampling and his theories of total quality management. I am not sure why this street carries his name, because I don't recall that he visited Chapel Hill during my years at UNC. However, it is still nice to have a street honoring a statistician. Deming wrote a number of books and his history is well documented.
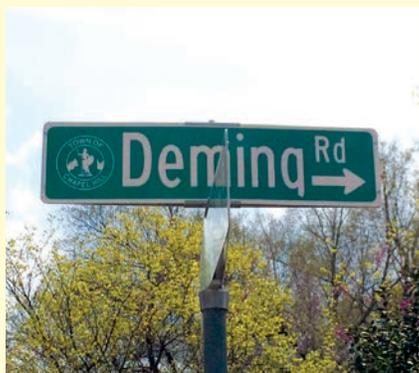
This month in ASA's history …
AUGUST

1947

The American Statistician was introduced as a publication that attempted to implement the growth of American statisticians. It was established to provide an editorial medium for the association and carry the official and unofficial announcements of the association, including new projects, meetings, and activities of the association's sections.

1971

The ASA Board and Council endorsed the establishment of an ad hoc Committee on Women in Statistics.

1988

CHANCE

In the summer of 1988, the publishing company Springer-Verlag and editors William F. Eddy and Stephen Fienberg produced the first issue of *CHANCE*. The purpose of the magazine was to entertain and focus on topics in statistics and the uses of computing. The first cover story was "Gentleman Tasting Pastrami," based on R. A. Fisher's *Lady Tasting Tea*.

1990

The ASA Center for Statistical Education held its first Poster and Project Competition for K–12 students interested in statistics. The winning posters were displayed at the Joint Statistical Meetings in Anaheim, California, that August.

1991

On August 13, W. Edwards Deming attended the unveiling of his newly painted portrait and dedication of the Deming Library at the ASA headquarters in Alexandria, Virginia.

The ASA office gets email! Thanks to Dan Horvitz of NISS, Jim Wright of Research Triangle Institute, and Ed Wegman of George Mason University, the main ASA office could receive and accept email messages. The address was *asa@sybil.rti.org* and ran on a VAX system administered by Research Triangle Institute.

ASA FOUNDED 1839
CELEBRATE OUR PAST · ENERGIZE OUR FUTURE
175th ANNIVERSARY

Famous August Birthdays
Egon Pearson, Florence N. David

Alan Karr to Step Down as NISS Director

Alan Karr, director of the National Institute of Statistical Sciences (NISS) since 2000, has announced he will leave NISS at the end of August. In September, he will become director of the Center of Excellence for Complex Data Analysis (CoDA) at RTI International.

Karr

Informing the board of trustees of his departure, Karr said, "My new position at RTI is a unique opportunity for me to help shape the future of statistics at one of the world's premier statistical organizations, and I look forward to it with great excitement.

"My twenty-two years at NISS have been immensely challenging and satisfying. What has made the experience truly special [are] the people with whom I have been privileged to work. Among them are several dozen collaborators on NISS projects from academia, government, and industry; more than 75 eager and talented postdoctoral fellows; an extraordinary staff; and more than 200 community leaders who have served on the board of trustees and corporation since I came to NISS in 1992."

Susan Ellenberg, chair of the NISS board, said, "Speaking for the board, we all have been really impressed with what Alan has been able to accomplish as NISS director. He has been a wonderful partner to the board, a highly effective leader, and a responsible steward of NISS. We wish him the best in his new role at RTI."

Ellenberg has appointed a committee to search for the new director of NISS co-chaired by outgoing and incoming board vice-chairs Roger Hoerl and Bob Rodriguez; the other members are Daniel Solomon, Jessica Utts, and Karr. ∎

Conference Honors Ghosh's 70th Birthday

Bhramar Mukherjee, Yan Li, and Rebecca Steorts

Graduate students and junior collaborators gather to celebrate Malay Ghosh's 70th birthday during a conference at the University of Maryland, College Park.

A conference in honor of Malay Ghosh, titled "Frontiers of Hierarchical Modeling in Observational Studies, Complex Surveys, and Big Data," was hosted by the Joint Program in Survey Methodology (JPSM), University of Maryland at College Park, May 29–31 at the College Park Marriott Hotel and Conference Center. More than 200 people celebrated Ghosh's outstanding contributions to statistics and his dedicated role as a teacher and mentor.

Several areas to which Ghosh made substantial contributions were represented, including small-area estimation, objective Bayesian inference, hierarchical Bayesian modeling, and statistical inference for case-control studies. There were nine plenary, seven invited, two contributed, and one poster session during the three-day conference.

The conference started off with a welcoming reception. The scientific program began the following morning with remarks by the director of JPSM, Fred Conrad, and the two head organizers, Partha Lahiri and Gauri S. Datta, both former PhD students of Ghosh. The day continued with presentations by several of Malay's doctoral students and other eminent scholars, including Ghosh's dissertation advisor, Pranab K. Sen. J.N.K. Rao also presented current trends in small-area estimation,

followed by discussions from Graham Kalton and Danny Pfeffermann. Highlights of the day included a luncheon for students and young researchers, a plenary session with three-minute speed oral presentations by poster presenters, and a two-hour poster session by students and young researchers.

The next day opened with a panel discussion on Bayesian model uncertainty by James Berger, Mike Daniels, Edward George, Jayanta K. Ghosh, and Brunero Liseo. Following this was a plenary session, titled "Future of Bayesian Methods in Sample Surveys," by Roderick J. A. Little and Joseph Sedransk with a discussion by Alan Dorfman.

Saturday morning featured a rich discussion on integrated likelihood, profile likelihood, and various associated variants and their subtle properties by Thomas Severini, Nancy Reid, Donald Fraser, and Judith Rousseau. There were several other outstanding plenary lectures and discussions by Sanat Sarkar, Xihong Lin, Bimal Sinha, Gauri S. Datta, Thomas Louis, Partha Lahiri, Carl Morris, James Zidek, Bradley Carlin, and Glen Meeden. The quality of the scientific program was uniformly strong and featured both Bayesian and frequentist work.

The banquet on Friday night, anchored by Edward George and Rebecca Steorts, featured tributes from many of Ghosh's colleagues, students, and mentees. Opening remarks were given by Ghosh's son, Debashis Ghosh, a distinguished statistician himself. Other speakers for the banquet included J.N.K. Rao, Pranab K. Sen, Glen Meeden, Ralf Muennich, Isabela Molina, Rebecca Steorts, Bhramar Mukherjee, and Shibashis Dasgupta. The evening ended with a touching speech by Ghosh, who shared his broad view on the changing landscape of statistics over time and thanked his professors in India and abroad, as well as his students, collaborators, and family. Ghosh's wife, Dola, and his younger son, Debadyuti, also were present.

Ghosh supervised 49 doctoral students during his career; 16 were at the conference, with some traveling internationally. The conference was a fitting tribute to Ghosh's numerous contributions to the profession and, in particular, allowed many to celebrate the legacy he has created in terms of his research and mentoring. ∎

ASA Fellow **Karen Kafadar**, a statistics professor at Indiana University, recently was appointed to the Forensic Science Standards Board (FSSB) jointly by the National Institute of Standards and Technology and U.S. Department of Justice. The panel of experts will identify and foster development and adoption of standards and guidelines for the nation's forensic science community. Kafadar, who will become professor and chair of the department of statistics at the University of Virginia this month, joins 16 other academic researchers and forensic science experts on the FSSB. Visit *www.nist.gov/forensics/first-forensic-science-standards-board-062614.cfm* for more information. ∎

Bin Yu, chancellor's professor in the departments of statistics and electrical engineering and computer science at the University of California, Berkeley was recently elected to the National Academy of Sciences. Those elected bring the total number of active members to 2,214 and the total number of foreign associates to 444. For details, visit *www.nasonline.org/news-and-multimedia/news/april-29-2014-NAS-Election.html*. ∎

Denise Lievesley, King's College London professor of statistics and head of the School of Social Science and Public Policy (SSPP), was named by Queen Elizabeth as a Commander of the British Empire for her services to social science. "I'm delighted to receive the award, which is a great tribute to the excellence and influence of social science at King's," said Lievesley. An ASA Fellow and former board member, Lievesley is past president of the Royal Statistical Society and International Statistical Institute. She joined King's in 2008 and, during her tenure, the SSPP has grown significantly in student number and staff. ∎

President Obama has appointed ASA member and former U.S. Census Bureau Director **Robert Groves** to the National Science Board, the policymaking body of the National Science Foundation and advisor to Congress and the president on science and engineering policy. Groves, who currently is provost at Georgetown University, will serve a six-year term. The board's 24 members, who are drawn primarily from universities and industry and represent a variety of science and engineering disciplines, are selected for their eminence in research, education, or public service. For details, visit *www.whitehouse.gov/the-press-office/2014/06/13/president-obama-announces-more-key-administration-posts-0*. ∎

The American Statistical Association recently announced the appointment of new editors for three of its professional journals. The two new editors and two co-editors appointed by the ASA's Board of Directors are the following:

Nicole Lazar, a professor of statistics at the University of Georgia, will be the editor of *The American Statistician* (*TAS*) for a three-year period beginning January 1, 2015. She will start a transitional period later this year.

Daniel McCaffrey, principal research scientist at Educational Testing Service, and **Li Cai**, a professor in the Advanced Quantitative Methodology program in the University of California, Los Angeles Graduate School of Education and Information Studies, will co-edit the *Journal of Educational and Behavioral Statistics* (*JEBS*) beginning in January. *JEBS* is a joint publication of the ASA and American Education Research Association.

Mark Glickman, research professor of health policy and management at Boston University's School of Public Health, is the new editor in chief of the *Journal of Quantitative Analysis in Sports* (*JQAS*). His three-year stewardship begins January 1, following a transition period that starts in July.

To read more about these new editors, visit *www.amstat.org/newsroom/pressreleases/2014_NewJournalEditors.pdf*. ∎

Recruiting Workshop Allows for Discussion of Best Practices

Katherine Kantner, SAMSI and NISS, and Snehalata Huzurbazar, SAMSI

Pedro Torres-Saavedra, Kim Weems, and Kyndra Middleton serve as members of a panel.

(Photograph by Donald Cole)
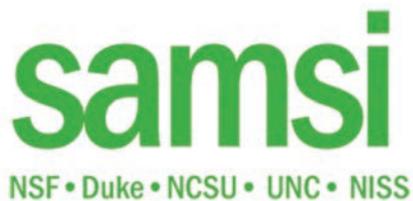
"Recruiting and Retaining Graduate Students in the Statistical Sciences and Applied Mathematics" was the title of an interactive workshop June 5–6 at the Statistical and Applied Mathematical Sciences Institute (SAMSI) in Research Triangle Park, North Carolina.

The workshop was organized in conjunction with the National Alliance for Doctoral Studies in the Mathematical Sciences with the goal, as stated by Alliance Director Phil Kutzko, to increase the number of students in doctoral programs in the mathematical sciences from "families, regions, and ethnic backgrounds that have had little prior contact with the profession and culture of the mathematical sciences." SAMSI supported this workshop as part of its effort to help increase diversity in the statistical and mathematical sciences.

Alliance members Kutzko, Kathryn Chaloner, Leslie McClure, and Kim Weems, along with SAMSI Deputy Director Snehalata Huzurbazar, organized the event. The SAMSI workshop had 12 participants from four universities. Three other alliance members helped as facilitators.

The working goals, as described by Weems from North Carolina State University, were to share current best practices for broadening access for and enhancing the success of U.S. students, especially of women and members of under-represented minority groups (URM), and to formulate new strategies. She emphasized that thinking outside the box and being open to new and bold ideas were important; participants were expected to leave with a plan for their departments.

The first day started with an introduction to the alliance by Kutzko. The Math Alliance (*www.mathalliance.org*) started in 2001 as a partnership between a handful of mentors from three doctoral-granting universities in Iowa and four historically black colleges and universities. It is organized as a community of mentors and students. Over the years, the alliance has evolved in structure and membership to include more than 400 faculty mentors from pre-doctoral and doctoral departments representing 154 institutions. The pre-doctoral mentors teach at undergraduate colleges and universities with significant percentages of students from under-represented minority groups (URMs). There have been more than 1,000 pre-doctoral students, and there are 26 math sciences doctoral-granting departments

that form the alliance's graduate program groups. The alliance builds community with partnerships between the pre-doctoral and doctoral mentors committed to mentoring and training students from URMs, thus enhancing the possibilities for the students' academic and professional success.

Until recently, alliance members were primarily from mathematics departments; however, under the statistics initiative of the alliance led by Kathryn Chaloner, Leslie McClure, and others, the expansion to statistics and biostatistics departments is taking place. In her talk, Chaloner contrasted the demographics of PhDs in mathematics with those in statistics and biostatistics departments. From 1995–2009, math departments awarded 50%–60% to U.S. citizens. The percentage in statistics was lower at 28%–55%, and 45%–75% in biostatistics. Among the U.S. citizens, the percentages of PhDs awarded to URMs are drastically low, with the 2009 numbers around 8% in math and biostatistics and 4% in statistics.

The audience next heard from Weems, Kyndra Middleton, and Pedro Torres-Saavedra. They discussed their experiences transitioning from a minority undergraduate institution to a majority research institution. They stressed how important mentoring was to their success and described different aspects of the cultural differences they encountered. Ensuring success sometimes meant making up weak courses from their undergraduate education, but this was possible because they were given good advice and mentoring.

In the next panel, experienced alliance mentors Kutzko, McClure, and Donald Cole discussed best practices for mentoring. Important points made were that a mentor is different from an advisor and mentoring, though time consuming, is important for all students. It was noted that mentoring comes naturally to some, but successful mentors can be trained. Mentors can be instrumental in helping students, especially those from URMs, feel comfortable in the culture of academia, and this helps students make progress in their programs. Peer mentoring, where a senior graduate student is paired with an incoming graduate student also was discussed as a successful strategy. Panel members also pointed out that mentors, whether faculty members or peers, help students understand and deal with underlying cultural issues and differences, and this has proved to be key to student success in various departments.

The remainder of the day was spent with team members and facilitators formulating plans for the teams' departments. The following morning, the teams presented their plans with much discussion and input from other teams and alliance mentors. The workshop ended with a motivating talk by Kutzko about changing the culture in the mathematical sciences to create a new culture, more reflective of the composition of the United States in 2014.

Overall, the participants were impressed with what they learned and with the networking opportunities

> ... [A] mentor is different from an advisor and mentoring, though time consuming, is important for all students.

the workshop presented. The atmosphere was casual, and though the day and a half was intense, it resulted in focused discussion of common problems encountered in different departments.

For more information about the workshop, visit *www.samsi.info/recruitment*. ∎

section news

Quality and Productivity

David J. Edwards, Conference Chair

Members of the Quality and Productivity Section (Q&P) invite you to attend this year's Fall Technical Conference in Richmond, Virginia, from October 2–3. The conference is the premier forum in which to discuss topics at the interface of statistics and quality, leading to a more effective use of statistics to improve quality.

The theme for this year is "Statistics and Quality: Empowering Success." The program includes a range of talks about subjects such as experimental design, reliability analysis, statistical engineering, Big Data, and statistical process control. Highlights include a plenary address by Michael Hamada from Los Alamos National Laboratory and the W. J. Youden Memorial Address by Connie Borror from Arizona State University.

The Q&P invited session on statistical engineering features Roger Hoerl of Union College, who will give a talk titled "Application of Statistical Engineering to Mixture Problems with Process Variables," and Jin Xia of GE Global Research, who will give a talk titled "Application of Statistical Engineering to Analysis of Large and Complex Data Sets."

Q&P also is sponsoring a short course on October 1 titled "Definitive Screening Designs: What, Why, and How," which will be taught by Bradley Jones and Christopher Nachtsheim. Definitive screening designs (DSDs) are a new class of designs for factor screening that Doug Montgomery has called "probably the most important development in design of experiments in the last 50 years." This course will introduce each aspect of DSD construction with a practical example including data. Ideas for analysis that take full advantage of the special capabilities of these designs will be provided.

For more information and the complete program, visit *http://asq.org/conferences/fall-technical*.

Georgia

■ ADS Alliance Data Systems, Inc. has a position in Atlanta, GA; Senior Analytic Consultant: Design, estimate & interpret statistical techniques; statistical analysis, predictive modeling, logistics & linear regression; & other skills/duties. Mail Resume to Andrea Brown - Recruiting Coord, Alliance Data, 601 Edgewater Dr., Wakefield, MA 01880 & note Job ID# AD-GA14-SRAC. EOE.

Iowa

■ The department of statistics at Iowa State University is seeking a director of statistical consulting to coordinate consulting activities, supervise/develop graduate student consultants, and support statistical computing. PhD in Statistics or PhD in related field with 5 years experience. Submit application letter, CV, and contact information for three references to *www.iastatejobs.com*, under Professional & Scientific vacancy #140546. More information at *www.stat.iastate.edu*. Iowa State University is an Equal Opportunity/Affirmative Action employer.

Maryland

■ Seeking PhD/experienced master's statisticians for Center for Devices and Radiological Health, FDA, HHS in Silver Spring, MD. Grapple with rich array of statistical issues in clinical trials for new technologies, from LASIK and artificial hearts to genetic tests and robotic surgery. Review statistical design/analysis issues in medical devices from invention to postmarket. Email CV to Greg Campbell, *greg.campbell@fda.hhs.gov*. Identify residency/visa status in application. *www.fda.gov/cdrh/index.html*. FDA is a smoke-free environment and an Equal Opportunity Employer.

Massachusetts

■ The University of Massachusetts Amherst (*www.umass.edu/sphhs*) seeks a tenure track faculty in Biostatistics (open rank) starting September 2015. 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 September 2, 2014. Submit curriculum vitae, description of research and teaching interests, and

three letters of reference online: *https:// umass.interviewexchange.com/candapply. jsp?JOBID=50138#pageTop* EOE.

Michigan

■ Department of statistics and probability, Michigan State University, invites applications for a tenure stream associate or full professor. Requirements include a PhD in statistics or a related field, a sustained strong record of funded research in statistics. A strong record of interdisciplinary research is desirable. Applicants should submit CV, research and teaching statements, contact information of at least four references at *https://jobs.msu.edu/applicants/jsp/shared/ frameset/Frameset.jsp?time=1392128327750.* MSU is an affirmative-action, equal-opportunity employer. MSU is committed to achieving excellence through a diverse workforce and inclusive culture that encourages all people to reach their full potential. The university actively encourages applications and/or nominations of women, persons of color, veterans and persons with disabilities.

NISS

The Statistics Community
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NISS Seeks Director

The National Institute of Statistical Sciences (NISS) was established in 1990 by the national statistics societies and the Research Triangle universities and organizations, with the mission to identify, catalyze and foster high-impact, cross-disciplinary and cross-sector research involving the statistical sciences.

Today, NISS seeks a talented statistical scientist to serve as its director and chief executive officer. The director is appointed by the Board of Trustees and is responsible for every aspect of the institute's vision and operation. Central among these, the director:

- Develops and carries out the scientific program of NISS, ensuring the independence, quality, relevance and timeliness of NISS research.
- Generates resources to support NISS infrastructure and carry out NISS programs.
- Maintains the centrality of the affiliates program to NISS.
- Nurtures and strengthens community engagement in NISS, in particular by serving as its most articulate and persuasive advocate.
- Works to conserve and build the NISS-SAMSI relationship at every level.
- Safeguards the fiscal health of NISS.

The director also oversees the scientific staff of NISS, as well as the support staff. She or he leads the selection, mentoring and career advancement of postdoctoral fellows, and sets the tone and style of NISS as an employer.

The director plays a strong role in the ongoing development of NISS' sister institute, the Statistical and Applied Mathematical Sciences Institute (SAMSI). She or he may in addition hold a faculty appointment at one of the parent universities of NISS—Duke University, North Carolina State University and the University of North Carolina at Chapel Hill.

Criteria for the position include a Ph.D. in the statistical sciences or a related discipline; a strong record of scientific accomplishment; experience in assembling, securing resources for, and managing cross-disciplinary and multi-organization collaborations; superb communication skills; and commitment to the NISS mission.

Additional information about NISS and SAMSI is available on their web sites: www.niss.org and www.samsi.info.

The goal is to fill the position by July 1, 2015. Applications and nominations should be sent to **directorsearch2014@ niss.org**. Board of Trustees chair Mary Batcher and search committee co-chairs Roger Hoerl and Robert Rodriguez may be contacted at this address with questions and inquiries. Applications should contain a letter of interest, CV and names of five references. Review of applications will begin at once, and will continue until the director is appointed. Women and members of under-represented minorities are strongly encouraged to apply.

*NISS is an AA/equal opportunity employer.

■ The department of statistics at the University of Michigan, Ann Arbor, invites applications for an assistant professor to begin September 1, 2015. Candidates at higher ranks will be considered subject to additional approval from the administration. Applicants are expected to have demonstrated outstanding research potential and excellence in teaching. Review of applications will begin on November 1, 2014. For more information, visit *http://jobs.amstat.org/jobs* EOE.

New Jersey

■ Merck is seeking a senior scientist, biostatistics to be responsible for statistical planning, design, and data analysis of clinical trials, in particular late phase studies from phase II onwards. Requires a solid knowledge of statistical methodology, experimental design, and some knowledge in computing software and data management & PhD in statistics or related field. To apply, please visit *www.merck.com/careers*. Job# BIO003969. EOE.

New York

■ Statistician–NYU School of Continuing and Professional Studies. Seeking a statistician with a minimum of 5 years of experience in educational of social science research to plan, conduct and present results of research and complex descriptive and inferential statistical analysis of institutional data to enrollment, student success, program effect effectiveness, and revenue projections. Apply to *www.nyucareers.com*, #20096536. We only accept online applications. EOE/AA.

Tennessee

■ Tenure-Track Assistant Professor in Biostatistics. The School of Public Health at the University of Memphis invites applications for a tenure-track assistant professor position in biostatistics. The position is in the Division of Epidemiology, Biostatistics and Environmental Health. PhD in biostatistics or related field is required. For details and application submission, visit *https://workforum.memphis.edu* or *https://workforum.memphis.edu/postings/5366*. For questions, contact Hongmei Zhang, *hzhang6@memphis.edu*. AA/AOE. ■

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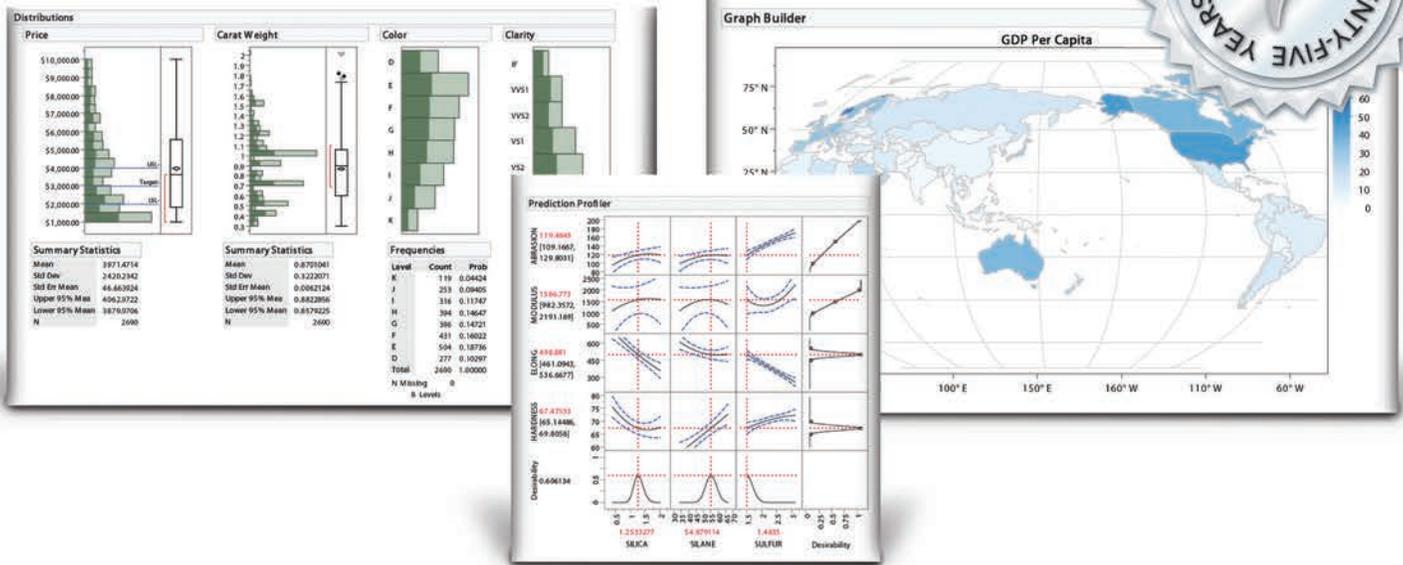
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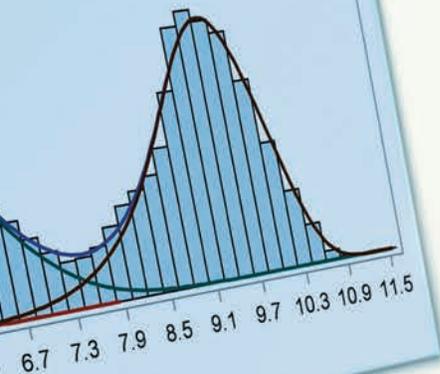
Statistics

Two releases of SAS/STAT® software this year means even more statistical capabilities. Highlights include:

SAS/STAT 13.2

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Analysis for spatial point patterns. Understand locations of random events, such as crimes or lightning strikes, and how other spatial factors influence event intensity.

Proportional hazards regression models for interval-censored data. Apply Cox regression models when you have interval-censored data.

Nested multilevel nonlinear mixed models. Fit hierarchical models often used in the analysis of pharmacokinetics data.

SAS/STAT 13.1

Sensitivity analysis for multiple imputation. Assess sensitivity of multiple imputation to the missing at random assumption with pattern-mixture models.

Survival analysis for interval-censored data. Compute nonparametric estimates of the survival function for interval-censored data.

Bayesian choice models. Use Bayesian discrete choice analysis to model consumer decisions in choosing products or selecting from multiple alternatives.

Competing risk models. Analyze time-to-event data with competing risks using the method of Fine and Gray (1999).

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