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AMSTATNEWS

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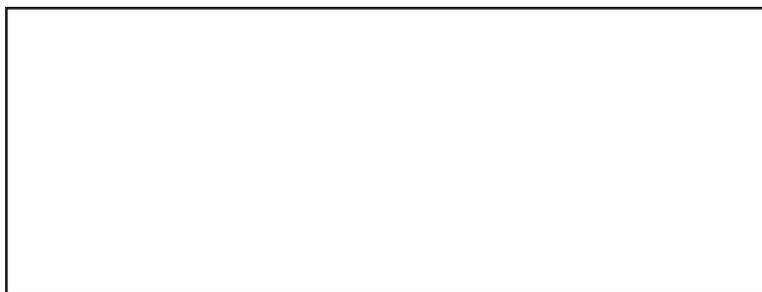


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This column is written for statisticians with master's degrees and highlights areas of employment that will benefit statisticians at the master's level. Comments and suggestions should be sent to Megan Murphy, *Amstat News* managing editor, at megan@amstat.org.



Adams

Contributing Editor

Jean Adams is a statistician with the U.S. Geological Survey - Great Lakes Science Center and the Great Lakes Fishery Commission, both headquartered in Ann Arbor, Michigan. She earned a master's degree in statistics from the University of Wisconsin - Madison and gained many valuable life lessons from two years with the Peace Corps in Papua New Guinea.

28 STATtr@k How to Do Statistical Research

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



Speed

Contributing Editors

Terry Speed is head of bioinformatics at the Walter & Eliza Hall Institute of Medical Research in Melbourne, Australia, and an active emeritus statistics professor at the University of California, Berkeley. His research interests lie in the application of statistics to genetics and genomics and to related fields such as proteomics, metabolomics, and epigenomics.

Online Articles

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

The 20th anniversary meeting of the Biopharmaceutical Applied Statistics Symposium (BASS XX) will be held November 4–7 at the Double Tree (by Hilton) Hotel in downtown Orlando, Florida. For more information, visit www.bassconference.org or contact the BASS registrar at rewhitworth@georgiasouthern.edu.

Nominations and applications are being sought for the **next editor of CHANCE magazine**. Working with the editorial board and the ASA's magazine staff, the editor will provide direction and vision for the magazine, which has been published by the ASA for more than 20 years. The editor's term will be from 2014 to 2016. Along with a curriculum vitae and the names of two references, applicants should provide a statement of vision for CHANCE. Nominations and applications should be submitted by June 24 to Megan Murphy, ASA communications manager, at megan@amstat.org.

The American Mathematical Society is pleased to announce the Blog on Math Blogs at <http://blogs.ams.org/blogonmathblogs>. Editors Brie Finegold of the University of Arizona and Evelyn Lamb, a freelance math and science writer, blog on blogs related to math in the news, mathematics research, applied mathematics, mathematicians, mathematics education, math and the arts, and more. Finegold and Lamb, both past AAAS-AMS Mass Media Fellows and PhD mathematicians, will write their thoughts about interesting blogs from around the world, as well as invite reactions from readers. Visit <http://magazine.amstat.org/blog/2013/06/01/ams-newblog> for details.

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

columns

30 175

Members Reveal Why They Have Remained with ASA for Three Decades

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



Chuang-Stein

Contributing Editor

Christy Chuang-Stein is chair of the 175th Anniversary Steering Committee and head of the Statistical Research and Consulting Center at Pfizer. She served as an ASA vice president from 2009–2011.

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The ASA and Big Data

Nathaniel Schenker, Marie Davidian, and Robert Rodriguez

This month's column is a team effort. President-elect Nat Schenker and Past President Bob Rodriguez join me in announcing a strategic initiative for the ASA.

As Bob discussed in his June 2012 column (<http://bit.ly/16xpHNA>), Big Data is a Big Topic. It is almost impossible to avoid the daily barrage of media accounts (<http://on.wsj.com/ZwxBBD>), conference announcements (www.asesite.org/conferences/bigdata/2013), and events such as the recent Big Data Week (<http://bigdataweek.com>) focused on Big Data. Last year, President Obama announced a major Big Data research and development initiative (www.whitehouse.gov/blog/2012/03/29/big-data-big-deal) and, last month, the White House hosted a Big Data workshop. The National Institutes of Health created the position of associate director for data science (www.nih.gov/news/health/jan2013/od-10a.htm), and a new book—*Big Data: A Revolution That Will Transform How We Live, Work, and Think*—(<http://n.pr/14wRacs>), which explores the explosion of digital information, has received extensive press coverage.

Big Data are data on a massive scale in terms of volume,

intensity, and complexity, and their promise for transforming business, health care, scientific discovery, public policy, and a host of other areas has been proclaimed widely. But, despite the enormous potential for contributions by statisticians, our profession and the ASA have not been very involved in Big Data activities. We are often missing from Big Data discussions in the media.

There are three reasons for this disconnect. First, the media and public lack a general understanding of what statisticians contribute to society (the issue that motivated the International Year of Statistics, www.statistics2013.org). Second, few statisticians are engaged in Big Data projects or have the special skills necessary to handle Big Data challenges.

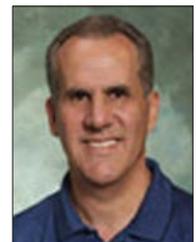
Third, the statistical community is disconnected from the new (and vaguely defined) community of data scientists, who are completely identified with Big Data in the eyes of the media and policymakers. Data science (<http://nyti.ms/ZjRFob>) is frequently

described as an amalgam of computer science, mathematics, data visualization, machine learning, distributed data management—and statistics. Data scientists must be innovative modelers and programmers; they also must be exceptional communicators who have a deep understanding of the problem domain and can formulate key questions, uncover novel insights, and use this information to guide high-impact decisionmaking. Other disciplines have been quick to identify themselves with data science and are routinely featured in media accounts. Although statistics is mentioned in passing, statisticians are nearly invisible.

Ideally, statistics and statisticians should be the leaders of the Big Data and data science movement. Realistically, we must take a different view. While our discipline is certainly central to any data analysis context, the scope of Big Data and data science goes far beyond our traditional activities. As Bob noted in his column, the sheer scale and velocity of the data being



Marie Davidian



Nathaniel Schenker



Robert Rodriguez

The goal is to prepare members of our profession to collaborate on Big Data problems.

generated from multiple sources requires new data management and computational paradigms. New techniques for analysis and visualization must be developed. And communication and leadership skills are critical.

We believe we should focus on what we need to do as a profession and as individuals to become valued contributors whose unique skills and expertise make us essential members of the Big Data team. The ASA is already providing opportunities for statisticians to hone their communication and leadership skills. Through Bob's career success factors initiative, discussed in his October 2012 column (<http://bit.ly/12xNuaO>), a high-quality presentation skills course is now available. And Nat has proposed development of a leadership skills course in 2014. We likewise must take steps to enhance our profession's role in Big Data practice. We know statistical thinking—our understanding of modeling, bias, confounding, false discovery, uncertainty, sampling, and design—brings much to the table. We also must be prepared to understand other ways of thinking that are critical in the Age of Big Data and to integrate these with our own expertise and knowledge.

We have had many discussions—among ourselves and with ASA members who are familiar with Big Data—about strategies

for achieving this preparation and integration. These discussions have led to our joint ASA presidential initiative to establish the statistical profession as a valued partner in Big Data activities and to position the ASA in a proactive and facilitating role. The goal is to prepare members of our profession to collaborate on Big Data problems. Ultimately, this preparation will bridge the disconnect between statistics and data science.

We recognize we cannot tackle the breadth of this challenge all at once. Accordingly, we have launched three projects that focus on the knowledge base—beyond fundamental statistical training—that statisticians need to succeed in Big Data efforts.

Curriculum Development

A workgroup will be formed to identify issues, approaches, and models for curriculum development in statistics programs that equip students with the knowledge and experience needed to work in Big Data applications. A panel session will be developed for JSM 2014 that will discuss the findings and present recommendations. The workgroup and panel will include academic representatives involved in introducing Big Data into their curricula, together with government and business leaders who are hiring the Big Data work force. The workgroup will develop a report summarizing these discussions and disseminate it to the profession. The report will serve as a roadmap for integrating Big Data skills and knowledge into statistical training.

Engagement with External Stakeholders

The ASA will sponsor a series of one-day meetings, each involving leaders at the forefront of some aspect of Big Data in which statisticians and the ASA are not

engaged, along with ASA representatives interested in pursuing Big Data initiatives. For example, a meeting could be held in Silicon Valley with Big Data leaders from the business and technology sectors; another could take place in Washington, DC, with Big Data stakeholders in government. A major goal is to develop networks that will both help the ASA to better understand the Big Data knowledge that interested statisticians must gain and to promote statistical thinking among Big Data leaders. The ASA participants will recommend next steps toward bridging the “disconnect.”

Continuing Professional Development

The ASA will offer short courses in text analytics for interested statisticians at the Conference on Statistical Practice and JSM in 2014. As Bob discussed in his June 2012 column, an understanding of how to acquire and analyze unstructured text data is critical for Big Data work because so much data arise from sources such as electronic health records and social network interactions. To develop these courses, it will be necessary to identify the specific training that would most benefit statisticians and to collaborate with outside experts in natural language processing and text analytics.

Work on these activities has already begun. This initiative will form the foundation for a continuing strategy focused on Big Data beyond 2014 that will highlight the value statistics can bring to Big Data and engage statisticians in successful collaborations.



Highlights of the April 2013 ASA Board of Directors Meeting

Ron Wasserstein, ASA Executive Director

ASA President Marie Davidian led the board through a tightly packed agenda during the first meeting of the year from April 5–6 at the ASA Office in Alexandria, Virginia. Here are the highlights of the meeting:

- The board approved the recommendations of the respective search committees and the Committee on Publications for the following editorial appointments:
 - *JASA Theory and Methods* co-editors: Nicholas Jewell, University of California at Berkeley, and David Ruppert, Cornell University. Term: 2015–2017, with full year of transition beginning in 2014.
 - *JASA/TAS* Reviews editor: David van Dyk, Imperial College, London. Term: 2014–2016, transition to begin mid-2013
 - *SBR*: José Pinheiro, Johnson & Johnson. Term: 2014–2016, transition to begin mid-2013
- The board approved the appointment of Steven B. Cohen to serve as chair of the ASA Nominating Committee for 2014.
- The board approved funding for five proposals received from the Member Initiative Program.
- Treasurer Keith Ord reviewed the status of ASA investments, noting they have done well as compared against relevant benchmarks. Associate Executive Director and Director of Operations Steve Porzio reviewed 2012 financial reports for the ASA, and the board accepted the 2012 audit report, thanking the staff for yet another clean audit.
- The board also participated in its annual training session on how to read and understand non-profit financial statements. The purpose of the annual training is to help board members fulfill their fiduciary responsibilities effectively, both for the ASA and for any other volunteer boards on which they might serve.
- A recommendation from the Finance Committee to refinance the mortgage on the ASA office building to take advantage of better interest rates was reviewed and approved.
- The board conducted its annual review of journal subscription rates and set the rates for 2014.
- The 175th Anniversary Steering Committee updated the board on its progress in planning for the ASA's anniversary celebration next year.
- The board endorsed the recommendations of the 2012 strategic workgroup on master's degree outcomes. (See Page 21)
- As part of its regular strategic planning activities, the board heard and discussed the initiatives being considered by President-elect Nat Schenker for 2014. Board feedback is used to further shape and define these initiatives, which will be announced later in the year.
- The board heard a report on follow up from the 2012 strategic workgroup on the future of electronic publications. (<http://magazine.amstat.org/blog/category/publication-series>)
- A recommendation to start a new electronic open-access journal on statistical issues in public policy was adopted in principle by the board, with details to be worked out by the Executive Committee for final board approval.
- Vice President Jim Rosenberger presented the annual report of the Membership Council. These committee council reports are one of the ways the board stays connected with its committees.
- As always, the governing boards of the Council of Sections and Council of Chapters updated the board on the activities of the councils.

2013 ASA Board of Directors

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Nat Schenker (President-elect)
Bob Rodriguez (Past President)
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David Morganstein (2nd-Year Vice President)
Jim Rosenberger (1st-Year Vice President)
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Ray Chambers (International Representative)
David Banks (Publications Representative)
Keith Ord (Treasurer)
Ron Wasserstein (Executive Director)

- Steve Pierson, ASA director of science policy, updated the board on ASA advocacy activities, particularly with respect to the role and position of statistics within the National Science Foundation. Issues related to data sharing and reproducibility of research also were discussed.
- The board received a report from Executive Director Ron Wasserstein on the status of the International Year of Statistics. Wasserstein gave examples from all over the world, illustrating the success of the effort. He also reported on a capstone research workshop to be held in London in November, and the Board committed partial financial support for that workshop.
- ASA Public Relations Coordinator Jeff Myers led the board through exercises designed to build skills in interacting with the media.

The board next meets on June 14, 2013, at the ASA Office in Alexandria, Virginia, for its annual budget review meeting. ■

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Member Spotlight Heather Krause

Megan Murphy, ASA Communications Manager

Heather Krause is curious about everything. This explains why she went through a variety of career aspirations while growing up in Harrisburg, Pennsylvania. She thought about being a rock and roll singer, vet, lawyer, juggler, and even a writer until she took a course her freshman year at Penn State University called Social Problems. "This was the first time I really understood that there were people who were professional researchers," she said. "I became very interested in that as a possible career."



Krause

In her pursuit to understand how society worked, she also wanted to understand how computers worked, so she learned to program and write code. The combined interests led to a major in quantitative sociology. She did not use her undergraduate degree in an obvious manner though. Instead, she worked for more than a decade establishing and running an art therapy consulting practice. "I have always had a very strong interest in making the invisible become visible, and I have always loved to draw and paint—since childhood—but I do not have any formal art training at all. I have a real love of patterns though—especially the hidden kind."

It was while working as an art therapist that she decided to return to school and earn a degree in statistics. "I was inspired to do this by a deep level of frustration with the research that was being published in my field and in fields that were directly impacting my life, such as political research, health care research, and poverty research," she said. "In my opinion, too much of the research at that time was invested in maintaining the status quo and not really exploring creative explanations for the empirical reality that was present." She knew that if she wanted to have a say about empirical evidence and to have a conversation with scientists in their own language, she would need better credentials.

Art therapy and statistics turned out to be similar. "I had a hunch before going into the statistics department that the practice of statistics is equal parts art and science—both subjective and objective—which is what makes it so valuable." Both jobs involve looking through many symbols for hidden patterns and meanings and making them visible, usable, and purposeful.

To make the statistical analysis purposeful, though, Krause needed a way to make it useful to the people in charge of implementing various social programs. "I wanted high-quality statistical analysis to be accompanied by equally high-quality communication of those results," she said. That is why she started Datassist.

Advice to the New Data Visualization Artist

Pick a topic you are interested in and follow it from beginning to end. Scrape data on the topic from the web; analyze it using three methodologies in two statistical software packages.

Take the time to play with as many tools as you can get your hands on. Learn to program at least a bit in several languages.

Download free trials of all the visualization software and experiment.

Show your work to as many nonstatisticians and nonscientists as are willing to look at it.

Learn what people like to look at and how people see by making visuals and showing them to people.

Do crazy things.

Datassist is a company that specializes in helping nonprofits and NGOs find the data they need and evaluate it in a way that will serve their mission. To communicate the data in a way that is accessible to a diverse audience, Datassist researchers present data using infographics. “A well-designed infographic can provide a clear narrative of the results that have emerged from an analysis while putting the data into its real-world context and simultaneously showing that there is still uncertainty present,” Krause said. “Effective communication of statistical results is very important to statistics and an area that could use more focus within our profession.”

When asked why infographics were important to statistics, Krause said, “An important aspect of a traditional statistical graphic is to leave a lot of room for interpretation—to provide both the data and the results to the reader in as scientific a way as possible. However, they often ignore basic design principles and disregard the human brain’s need for narrative.” She also noted that some infographics, in an attempt to be artistic, lose the scientific. “Much of what is being called an infographic today is an oversimplification of complex analysis and a biased and often deterministic presentation of probability.”

Being curious about everything has inspired Krause to address questions many people think are not possible to ask, much less answer, so it is not surprising that her number-one piece of advice to young statisticians is to be curious. “This is especially true if you want to go into the data visualization field and data science. The more curious you are, the more substantial and effective your pieces will be.” ■

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A Statistician in the NFL

Jeffrey A. Myers, ASA Public Relations Coordinator

Statisticians in the National Football League (NFL) is old news, you say. You're right, but a statistician in the NFL is new news! Confused? Let me help.

Perhaps for the first time ever, a statistician was selected in the top five picks in the annual NFL player entry draft. Ezekiel "Ziggy" Ansah, a star defensive end at Brigham Young University (BYU) in Provo, Utah, was chosen with the fifth overall pick in the NFL draft by the Detroit Lions April 25.

Ansah was a statistics major at BYU and a strong student, as well. And, coincidentally, the same day he was selected in the NFL draft, he graduated from BYU—an accomplishment that means as much to him and his family as being drafted by an NFL team.

So, instead of calculating an opponent's play-calling tendencies for the Lions like the typical statistician in the NFL, Ansah will be trying to blow up his opponent's plays using the physical attributes and skills that propelled him to the top of most NFL teams' draft board.

Definitely not the nerdy, pen-in-pocket image (incorrect!) that most people hold of statisticians, Ansah's rise to premier football talent is a fairytale story. Raised in Accra, Ghana, he never played American football before attending BYU on an academic scholarship after joining The Church of Jesus Christ of Latter-day Saints in his home country.

Once he arrived in Provo, Ansah tried out for the BYU basketball team and was on the school's track team before he walked into football Coach Bronco Mendenhall's office and asked to play football. The coach agreed, giving the 6-foot-5, 271-pound Ansah a tryout during the team's 2010 spring practice.

"I didn't know how to put on my pads; I had to have one of my teammates help me out," Ansah said in a press release issued by the school's sports information department.

As a newcomer to football, Ansah spent a lot of time on his back during those first spring practices, but he didn't give up. "That's when he kind of captured my heart," said Mendenhall in the same press release, "because he was resilient and because he kept getting up and kept coming back."

Ansah's attitude, intelligence, physical ability, and resilience allowed him to progress in short order to an elite player and a first-round NFL draft pick. "I'm not sure that's ever happened in college football before," said Mendenhall.

Understandably, Ansah's rise to a first-round NFL draft pick was slow. In his sophomore season in 2010, he made his debut in a game against the University of Wyoming and recorded a tackle. He played in six



Photo Credit: BYU Athletics

NFL commissioner Roger Goodell (left) and former Detroit Lions running back Barry Sanders (right) with Ezekiel Ansah.

games his first season, compiling three tackles and a pass breakup. In his junior year, he was a third-down specialist and recorded just seven tackles. Nothing he had accomplished on the field to date had predicted the season to come.

It was during his senior season in 2012 that Ansah's meteoric rise began. After an injury to a teammate in the fourth game pressed him into full-time playing status, Ansah finished third in tackles (48), second in sacks (4.5), and led the team in tackles for loss (13) while starting only the last nine games of the season. His production helped the BYU defense lead the nation in red-zone defense (opponent average of .62) and place second in rushing defense (84.25 yards per game).

His breakout season combined with stellar play at the Senior Bowl—a college football all-star game, where he was presented the Outstanding Defensive Player award in recognition of his outstanding play—and an incredible performance at the NFL Scouting Combine boosted him to the top of the first round of the NFL Draft.

"Regardless of the fact that everybody is telling me that I'm raw, I'm pretty good at what I'm doing," Ansah said in an interview with the Fort Worth Star-Telegram. "... I'm going to be dedicated and do everything I can just to be the best player. I want to be the best player at this position. Even with the little experience I have. That is the challenge that I have."

Knowing what he has accomplished as a football neophyte and a statistics graduate, you have to like Ansah's chances to be successful in the NFL. ■

2012 Audit Report for the American Statistical Association



McGladrey LLP

Independent Auditor's Report

To the Board of Directors
American Statistical Association
Alexandria, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of the American Statistical Association (the Association), which comprise the balance sheet as of December 31, 2012, and related statements of activities and cash flows for the year then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Association's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Association's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the 2012 financial statements referred to above present fairly, in all material respects, the financial position of the Association as of December 31, 2012, and the results of its activities, changes in its net assets and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

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Member of the BDO International network of independent accounting, tax and consulting firms.

Report on Summarized Comparative Information

We have previously audited the Association's 2011 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated March 19, 2012. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2011, is consistent, in all material respects, with the audited financial statements from which it has been derived.

McGladrey LLP

Gaithersburg, Maryland
March 19, 2013

American Statistical Association

Balance Sheet December 31, 2012 (With Comparative Totals For 2011)

Assets	2012	2011
Current Assets		
Cash and cash equivalents	\$ 1,325,446	\$ 385,808
Receivables, net	344,874	318,030
Prepaid expenses and other assets	189,992	230,897
Total current assets	1,860,312	934,735
Investments	12,630,610	11,032,073
Equity In Joint Venture	237,460	212,022
Bond Issuance Costs	120,457	127,307
Property And Equipment, net	7,967,861	8,250,595
	20,956,388	19,621,997
	\$ 22,816,700	\$ 20,556,732
Liabilities And Net Assets		
Current Liabilities		
Accounts payable and accrued expenses	\$ 706,091	\$ 506,963
Deferred revenue	440,758	430,014
2,853,806	3,054,140	
Bonds payable – current	200,000	200,000
Total current liabilities	4,200,655	4,191,117
Bonds Payable – Less Current Portion	5,100,000	5,300,000
Interest Rate Swap Contract	501,239	520,808
	9,801,894	10,111,725
Commitments And Contingencies (Notes 11 And 12)		
Net Assets		
Unrestricted		
Undesignated	10,773,462	8,274,345
Board designated	1,248,501	1,235,337
	12,021,963	9,509,682
Temporarily restricted	445,587	413,069
Permanently restricted	547,256	522,256
	13,014,806	10,445,007
	\$ 22,816,700	\$ 20,556,732

See Notes To Financial Statements.

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American Statistical Association

Statement of Activities Year Ended December 31, 2012 (With Comparative Totals For 2011)

	2012				2011	Total
	Unrestricted	Board Designated	Temporarily Restricted	Permanently Restricted		
Revenue and support:						
Meetings	\$ 2,765,993	\$ -	\$ -	\$ -	\$ 2,765,993	\$ 2,194,943
Membership	1,967,637	-	-	-	1,967,637	1,849,466
Publications	1,967,754	-	-	-	1,967,754	2,345,070
Grants and awards	841,216	-	-	-	841,216	800,933
Special projects	607,681	11,627	70,674	25,000	714,982	594,584
Section income	60,881	518,993	-	-	579,874	665,199
Education	416,862	13,172	-	-	429,874	347,954
Administration	387,673	-	-	-	387,673	43,409
Net assets released from restriction	38,156	-	(38,156)	-	-	-
Total revenue and support	9,043,493	543,792	32,518	25,000	9,644,803	8,641,558
Expenses:						
Program services:						
Meetings	1,873,432	-	-	-	1,873,432	1,698,411
Special projects	1,438,158	14,946	-	-	1,453,071	1,306,217
Publications	1,261,063	-	-	-	1,261,063	1,636,009
Membership	805,578	-	-	-	805,578	808,518
Grants and awards	716,423	-	-	-	716,423	699,734
Section expenses	82,036	495,719	-	-	577,745	662,126
Education	446,788	19,972	-	-	466,730	771,066
Total program services	6,563,414	530,628	-	-	7,094,042	7,491,081
Supporting services:						
Management and general	1,244,990	-	-	-	1,244,990	1,252,642
Total expenses	7,808,364	530,628	-	-	8,338,992	8,743,723
Change in net assets before unrealized gain (loss) on investments and interest rate swap contract	1,235,129	13,164	32,518	25,000	1,305,811	(102,165)
Unrealized gain (loss):						
Unrealized investment gain (loss)	1,144,620	-	-	-	1,144,620	(161,799)
Unrealized gain (loss) on interest rate swap contract	119,508	-	-	-	119,508	(47,158)
Total unrealized gain (loss)	1,263,988	-	-	-	1,263,988	(208,957)
Change in net assets	2,499,117	13,164	32,518	25,000	2,669,799	(311,122)
Net assets:						
Beginning	8,274,345	1,235,337	413,069	822,256	10,445,007	10,756,129
Ending	\$ 10,773,462	\$ 1,248,501	\$ 445,587	\$ 847,256	\$ 13,014,806	\$ 10,445,007

See Notes To Financial Statements.

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2012 Audit Report for the American Statistical Association (continued)

American Statistical Association		
Statement Of Cash Flows		
Year Ended December 31, 2012 (With Comparative Totals For 2011)		
	2012	2011
Cash Flows From Operating Activities		
Change in net assets	\$ 2,569,799	\$ (311,122)
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation	314,091	332,032
Amortization of bond issuance costs	6,850	6,850
Equity in (losses) earnings from joint venture	(25,438)	26,680
Net unrealized and realized (gains) losses on investments	(1,318,478)	380,971
(Gain) loss on interest rate swap contract	(119,368)	47,158
Contributions restricted for investment in perpetuity	(25,000)	(34,000)
Changes in assets and liabilities:		
(Increase) decrease in:		
Receivables	(26,844)	140,208
Prepaid expenses and other assets	40,905	(19,575)
Increase (decrease) in:		
Accounts payable and accrued expenses	199,128	(206,557)
Deferred revenue	(200,334)	492,493
Net cash provided by operating activities	1,415,311	855,138
Cash Flows From Investing Activities		
Purchases of investments	(2,585,234)	(6,036,646)
Proceeds from sales of investments	2,305,174	4,279,159
Purchases of property and equipment	(31,357)	(9,977)
Net cash used in investing activities	(311,417)	(1,767,464)
Cash Flows From Financing Activities		
Principal payment on bonds payable	(200,000)	(200,000)
Contributions restricted for investment in perpetuity	25,000	34,000
Advances from joint venture, net	10,744	331,817
Net cash (used in) provided by financing activities	(164,256)	165,817
Net increase (decrease) in cash and cash equivalents	939,638	(746,509)
Cash And Cash Equivalents:		
Beginning	385,808	1,132,317
Ending	\$ 1,325,446	\$ 385,808
Supplemental Disclosures Of Cash Flow Information		
Cash paid for income taxes	\$ 160,000	\$ 180,000
Cash paid for interest expense	\$ 261,880	\$ 281,557

See Notes To Financial Statements.

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American Statistical Association	
Notes To Financial Statements	
Note 1. Nature Of Activities And Significant Accounting Policies	
<p>Nature of activities: The American Statistical Association (the Association) was founded in 1839 and incorporated in 1841 under the not-for-profit laws of the Commonwealth of Massachusetts as a professional association serving statisticians and all individuals interested in the study and/or application of statistics. The Association's objectives are to foster statistics and its applications, to promote unity and effectiveness of effort among all concerned with statistical problems, and to increase the contribution of statistics to human welfare. The Association conducts meetings, produces publications devoted to statistical methodology and its applications, makes available information concerning the science of statistics and its contributions, cooperates with organizations in the advancement of statistics, stimulates research, promotes high professional standards and integrity in the application of statistics to problems of science and of public policy, fosters education in statistics, and, in general, makes statistics of service to science and society.</p>	
<p>A summary of the Association's programs and services follows:</p>	
<p>Meetings: The Association provides for various workshops and meetings that serve as a forum for the latest developments in statistical theory and application. These meetings offer a concentrated opportunity for the exchange of ideas and discussion of research findings among colleagues.</p>	
<p>Special projects: Represent various projects undertaken to further statistics among the public. This includes expenses for various awards presented, which increase the visibility of statistics and its methods with the general public.</p>	
<p>Publications: The Association produces various publications and magazines. These publications represent the Association's commitment to the ongoing enhancement of statistical education and the public's understanding of statistics.</p>	
<p>Membership: Expenses related to member service maintenance.</p>	
<p>Grants and awards: Represent expenses related to providing advice and technical assistance, which enhance statistical education through the support of federal, state, and local government agencies.</p>	
<p>Section expenses: Represent the Association's organization in groups by professional subject matter. These sections facilitate professional interchanges and research opportunities in statistics.</p>	
<p>Education: The Association offers a wide range of continuing education opportunities, which represent a forum for emerging statistics research. These programs include workshops, lectures, and expenses related to the production and sale of educational materials.</p>	
<p>Management and general: Includes the functions necessary to secure proper administrative functioning of the Board of Directors, maintain an adequate working environment, and manage financial and budgetary responsibilities of the Association.</p>	
<p>A summary of the Association's significant accounting policies follows:</p>	
<p>Basis of accounting: The financial statements are prepared on the accrual basis of accounting, whereby, revenue is recognized when earned and expenses are recognized when incurred.</p>	

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American Statistical Association	
Notes To Financial Statements	
Note 1. Nature Of Activities And Significant Accounting Policies (Continued)	
<p>Basis of presentation: The financial statement presentation follows the recommendations of the Financial Accounting Standards Board (FASB) Accounting Standards Codification (the Codification). As required by the Non-Profit Entities Topic of the Codification, <i>Financial Statements of Not-for-Profit Organizations</i>, the Association is required to report information regarding its financial position and activities according to three classes of net assets: unrestricted net assets, temporarily restricted net assets, and permanently restricted net assets.</p>	
<p>Cash and cash equivalents: The Association considers all highly liquid instruments, which are to be used for current operations and which have an original maturity of three months or less, to be cash and cash equivalents. All other highly liquid instruments, which are to be used for the long-term purposes of the Association, are classified as investments.</p>	
<p>Financial risk: The Association maintains its cash in bank deposit accounts, which at times, may exceed federally insured limits. The Association has not experienced any losses in such accounts. The Association believes it is not exposed to any significant financial risk on cash.</p>	
<p>The Association invests in equity mutual funds, fixed income mutual funds, and money market funds. Such investments are exposed to various risks, such as market and credit. Due to the level of risk associated with such investments and the level of uncertainty related to changes in the value of such investments, it is at least reasonably possible that changes in risks in the near term would materially affect investment balances and the amounts reported in the financial statements.</p>	
<p>Receivables: Receivables are carried at original invoice amounts, less an estimate made for doubtful receivables based on a review of all outstanding amounts on a monthly basis. Management determines the allowance for doubtful accounts by identifying troubled accounts and by using historical experience applied to an aging of accounts. Receivables are written off when deemed uncollectible. Recoveries of receivables previously written off are recorded when received. The provision for doubtful accounts, based on management's evaluation of the collectability of receivables, was \$10,718 at December 31, 2012. No interest is charged on any outstanding receivables.</p>	
<p>Investments: Investments with readily determinable fair values are recorded at fair market value. To adjust the carrying value of the investments, the change in fair value is allocated among program activity revenue in the statement of activities.</p>	
<p>Equity in joint venture: The Association has an investment in a certain joint venture for which the equity method of accounting is used. Under the equity method, the original investment is recorded at cost and is adjusted by the Association's share of undistributed earnings or losses of the joint venture.</p>	
<p>Property and equipment: Property and equipment are stated at cost and are depreciated over their estimated useful lives on the straight-line method. The Association capitalizes all property and equipment purchased with a cost of \$5,000 or more.</p>	

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American Statistical Association	
Notes To Financial Statements	
Note 1. Nature Of Activities And Significant Accounting Policies (Continued)	
<p>Valuation of long-lived assets: The Association accounts for the valuation of long-lived assets in accordance with the Codification. The <i>Accounting for the Impairment or Disposal of Long-Lived Assets</i> topic requires that long-lived assets and certain identifiable intangible assets be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of the long-lived asset is measured by a comparison of the carrying amount of the asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the estimated fair value of the assets. Assets to be disposed of are reportable at the lower of the carrying amount or fair value, less costs to sell.</p>	
<p>Interest rate swap contract: The Association follows the Codification, <i>Accounting for Derivative Instruments and Hedging Activities</i>, related to its participation in an interest rate swap contract in relation to its mortgage note, which is considered a derivative financial instrument. This codification standard requires that all derivative financial instruments be recognized in the financial statements at their fair value. Changes in the fair value of derivative financial instruments are recognized each period as a component of change in net assets.</p>	
<p>Bond issuance costs: The Association paid certain customary fees as required to secure the note used to finance the acquisition of its new headquarters. These fees have been capitalized and are being amortized over the term of the bonds. Amortization expense was \$6,850 for the year ended December 31, 2012.</p>	
<p>Board designated net assets: The Board of Directors had designated \$1,248,501 at December 31, 2012, of unrestricted net assets to be used for various section activities and other board-approved projects.</p>	
<p>Revenue and support: Meeting revenue is recognized at the time the meeting takes place. Amounts received in advance of the meeting are shown as deferred revenue.</p>	
<p>Membership dues are recognized ratably over the applicable membership period to which they apply. Payments for memberships, subscription sales, product sales, or services to be rendered and received in advance are deferred to the appropriate period.</p>	
<p>Publication revenue is recognized upon delivery of the material.</p>	
<p>All donor-restricted revenue is reported as an increase in temporarily or permanently restricted net assets, depending on the nature of the restriction. When a restriction expires (that is, when a stipulated time restriction ends or purpose restriction is accomplished), temporarily restricted net assets are reclassified to unrestricted net assets and reported in the statement of activities as net assets released from restrictions.</p>	
<p>Fair value of financial instrument: The Association is required to disclose fair value information about all financial instruments, whether or not recognized in the balance sheet, for which it is practicable to estimate fair value. Cash and cash equivalents, receivables, and accounts payable and accrued expenses are carried at net realizable value, which approximates fair value. The following methods and assumptions were used to estimate the fair value for the financial instrument for which it is practicable to estimate that value:</p>	
<p>Interest rate swap agreement: The fair value of the interest rate swap agreement is a function of the difference between the interest rate on the Association's debt and the rate in the swap agreement. In addition, the risk of non-performance of the Association, as well as the creditworthiness of the Association, is considered in determining the fair value.</p>	

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2012 Audit Report for the American Statistical Association (continued)

American Statistical Association

Notes To Financial Statements

Note 1. Nature Of Activities And Significant Accounting Policies (Continued)

Functional allocation of expenses: The costs of providing various programs and other activities have been summarized on a functional basis in the statement of activities. Accordingly, certain costs have been allocated among the programs and supporting services benefited.

Income taxes: The Association is exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code. In addition, the Association qualifies for the charitable contribution deductions and has been classified as an organization that is not a private foundation. However, the Association is required to report unrelated business income to the Internal Revenue Service and the state of Virginia, as well as pay certain other taxes to local jurisdictions. The Association incurred approximately \$112,050 in income tax expense on unrelated business income related to the net income earned on advertising sales for the year ended December 31, 2012.

The accounting standard on accounting for uncertainty in income taxes addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this guidance, the Association may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. The guidance on accounting for uncertainty in income taxes also addresses de-recognition, classification, interest and penalties on income taxes, and accounting in interim periods.

Management evaluated the Association's tax positions and concluded that the Association has taken no uncertain tax positions that would require adjustments to the financial statements to comply with the provisions of this guidance. The Association files income tax returns in the U.S. federal jurisdiction. Generally, the Association is no longer subject to U.S. federal, state, or local income tax examinations by tax authorities for years before 2009.

Use of estimates: The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications: Certain items in the December 31, 2011, financial statements have been reclassified to conform to the December 31, 2012, financial statement presentation. These reclassifications had no effect on the previously reported change in net assets.

Prior year information: The financial statements include certain prior year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the Association's financial statements for the year ended December 31, 2011, from which the summarized information was derived.

Subsequent events: The Association evaluated subsequent events through March 19, 2013, which is the date the financial statements were issued.

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American Statistical Association

Notes To Financial Statements

Note 2. Receivables

Receivables consist of the following at December 31, 2012:

Publication receivables	\$ 279,777
Trade account receivables	49,137
Grant receivables	20,473
Due from joint venture	6,205
	355,592
Less provision for doubtful accounts	10,718
	<u>\$ 344,874</u>

Note 3. Investments

Investments consist of the following at December 31, 2012:

Equity mutual funds	\$ 7,653,550
Fixed income mutual funds	4,929,665
Money market funds	47,395
	<u>\$ 12,630,610</u>

The following summarizes investment gains for the year ended December 31, 2012:

Unrealized gains	\$ 1,144,620
Interest and dividends	331,163
Realized gains	173,858
Investment fees	(51,092)
	<u>\$ 1,598,539</u>

Unrealized gains, interest and dividends, and realized gains are recorded in the applicable revenue and support and expense line items in the statement of activities.

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American Statistical Association

Notes To Financial Statements

Note 4. Equity In Joint Venture

The following schedule presents summarized financial information from the joint venture, in which the Association has a 60% equity ownership. Amounts presented for the year ended December 31, 2012, include the account of Technometrics (60% equity).

Condensed income statement information:	
Revenues	\$ 101,178
Expenses	58,780
Net income	<u>\$ 42,398</u>
Condensed balance sheet information:	
Total assets	\$ 458,523
Total liabilities	34,510
Net equity	<u>\$ 424,013</u>

Note 5. Property And Equipment

Property and equipment and accumulated depreciation at December 31, 2012, and depreciation expense for the year ended December 31, 2012, are as follows:

	Estimated Lives	Cost	Accumulated Depreciation	Depreciation Expense
Building	30 years	\$ 7,320,951	\$ 1,606,507	\$ 244,034
Building leasehold improvements	30 years	1,170,369	251,415	39,243
Building renovation	30 years	23,100	4,783	783
Furniture and fixtures	5 years	211,869	211,869	-
Office equipment	5 years	85,235	83,349	2,513
Software	3 years	215,579	208,293	19,229
Computer equipment	3 years	152,086	131,132	8,289
Land	-	1,286,000	-	-
		<u>\$ 10,465,189</u>	<u>\$ 2,497,328</u>	<u>\$ 314,091</u>

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American Statistical Association

Notes To Financial Statements

Note 6. Temporarily And Permanently Restricted Net Assets

Temporarily restricted net assets were available at December 31, 2012, for the following purposes, and net assets were released from restriction by incurring expenses satisfying the restricted purpose:

	Balance December 31, 2011	Restricted Contributions	Investment Income	Released	Balance December 31, 2012
Cox Scholarship	\$ 111,437	\$ 353	\$ 4,198	\$ 4,014	\$ 111,974
Waksberg Award	67,269	-	2,500	2,000	67,769
Youden Award	40,276	-	3,766	2,628	41,414
Wray Smith Sch. Fund	29,171	-	1,065	1,117	29,119
Deming Lecture Fund	28,239	-	3,591	1,887	27,853
MG Natrelia Scholarship Fund	25,949	-	936	1,000	25,885
EC Bryant Fund	22,740	-	3,038	2,511	23,267
Chambers Award (ACM Software)	19,162	-	685	500	19,347
Dixon Award	14,732	-	901	6	15,627
Griffith Mentoring Award	11,594	4,900	740	1,883	15,371
Bernard Harris Fund	7,005	5,050	388	-	12,443
Noether Memorial Fund	10,364	-	7,873	8,668	9,769
CA Jacobs Award	7,421	-	236	-	7,707
Marquardt Memorial Fund	6,373	-	1,169	444	7,098
Walker Fund	5,178	-	920	506	5,592
Martha Allaga Scholarship Fund	4,058	1,200	198	-	5,456
Wilks Memorial Fund	2,868	-	1,986	1,611	3,043
Karl E. Peace Award	1,000	-	1,417	766	1,661
Chemostatistics Award	1,235	1,000	9	2,010	234
Judea Pearl Prize	-	15,000	469	-	15,469
Lester R. Curtin Award	-	-	469	-	469
Promoting Statistics Fund	-	3,170	-	3,170	-
Access to Statistics Fund	-	2,795	-	2,795	-
Excellence in Statistics Fund	-	670	-	670	-
	<u>\$ 413,069</u>	<u>\$ 34,138</u>	<u>\$ 36,936</u>	<u>\$ 39,156</u>	<u>\$ 445,987</u>

Permanently restricted net assets consist principally of accumulated contributions for various awards, lecture series, and scholarships. These assets consist of the following at December 31, 2012:

	Balance December 31, 2011	Additions	Balance December 31, 2012
Noether Memorial Fund	\$ 206,506	\$ -	\$ 206,506
Deming Lecture Fund	67,275	-	67,275
Youden Award	61,082	-	61,082
EC Bryant Fund	60,000	-	60,000
Wilks Memorial Fund	47,143	-	47,143
Karl E. Peace Award	34,000	-	34,000
Marquardt Memorial Fund	26,250	-	26,250
Walker Fund	20,000	-	20,000
Lester R. Curtin Award	-	25,000	25,000
	<u>\$ 522,256</u>	<u>\$ 25,000</u>	<u>\$ 547,256</u>

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2012 Audit Report for the American Statistical Association (continued)

American Statistical Association

Notes To Financial Statements

Note 6. Temporarily And Permanently Restricted Net Assets (Continued)

The Board of Directors of the Association has interpreted the Uniform Prudent Management of Institutional Funds Act (UPMIFA) as requiring the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds, absent explicit donor stipulations to the contrary. As a result of this interpretation, the Association classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated for expenditure by the Association in a manner consistent with the standard of prudence prescribed by UPMIFA. In accordance with UPMIFA, the Association considers the following factors in making a determination to appropriate or accumulate donor-restricted endowment funds:

- The duration and preservation of the fund
- The purposes of the Association and the donor-restricted endowment fund
- General economic conditions
- The possible effect of inflation and deflation
- The expected total return from income and the appreciation of investments
- Other resources of the Association
- The investment policies of the Association

The Association has adopted investment and spending policies for endowment assets that attempt to provide a predictable stream of funding to programs supported by its endowment while seeking to maintain purchasing power of the endowment assets.

All earnings of the endowment are reflected as temporarily restricted net assets until appropriated for expenditure based on donor restrictions by the various Committees of the Association. The Board of Directors has assigned a Committee to each program for the purposes of selecting and recommending individuals for awards or grants.

For the year ended December 31, 2012, the Association had the following endowment-related activities:

	Temporarily Restricted	Permanently Restricted
Endowment net assets – December 31, 2011	\$ 131,420	\$ 522,256
Additions	-	25,000
Net appreciation and income	24,160	-
Appropriation of endowment assets for expenditure	(35,394)	-
Endowment net assets – December 31, 2012	\$ 120,186	\$ 547,256

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American Statistical Association

Notes To Financial Statements

Note 7. Retirement Plans

The Association has a 401(k) profit sharing plan and a money purchase plan. Both plans cover substantially all full-time employees from date of hire. Under the terms of the 401(k) profit sharing plan, the Association will match 100% of the participating employee's contributions, up to 3% of the employee's salary. Under the terms of the money purchase plan, the Association contributes 6% of an eligible employee's compensation to the plan. Contribution expense to the plans is as follows for the year ended December 31, 2012:

Money purchase plan	\$ 159,631
401(k) profit sharing plan	76,448
	\$ 236,079

Note 8. Related Party Transactions

The Association is a co-sponsor in one joint venture. It has a maintenance agreement with the same joint venture, in which it provides management and collection services, office space, and editorial and administrative support.

The following schedules summarize the Association's financial activity with the joint venture for the year ended December 31, 2012:

Due from Joint Venture:	
Technometrics	\$ 6,205
Due to Joint Venture:	
Technometrics	\$ (440,758)
Maintenance Agreement Revenue:	
Technometrics	\$ 33,994

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American Statistical Association

Notes To Financial Statements

Note 9. Bonds Payable

On August 1, 2005, the Association entered into an agreement with the Industrial Development Authority of the City of Alexandria to issue \$6,500,000 of Industrial Development Revenue Bonds (the Bonds) on behalf of the Association to finance the purchase and renovation of a new headquarters building. The Bonds are secured by a letter of credit (LOC) issued by a bank and bear an adjustable interest rate periodically set by a remarketing agent. The Association pays the bank an annual fee of .45% until termination date. Interest expense incurred for the year ended December 31, 2012, was \$261,880.

Annual principal payments on the Bonds at December 31, 2012, are due in future years as follows:

Years Ending December 31,	
2013	\$ 200,000
2014	200,000
2015	200,000
2016	200,000
2017	200,000
2018 – 2030	4,300,000
	\$ 5,300,000

The above-mentioned note is collateralized by the land and building purchased by the Association.

In connection with the Bonds and LOC, the Association must be in compliance with certain specified covenants.

Note 10. Interest Rate Swap Contract

The Association has an interest rate swap contract with a bank to reduce the impact of changes in the interest rates on its variable mortgage note. The swap contract was entered into for a ten-year period commencing on October 14, 2005. The notional principal amount of the interest rate swap contract was \$5,300,000 as of December 31, 2012. In accordance with the swap contract, the Association pays a fixed rate of interest of 3.99% and receives a variable interest rate equal to the USD-BMA municipal swap index (0.13484% at December 31, 2012). The Association recognized a gain of \$119,368 under the interest swap contract for the year ended December 31, 2012. At December 31, 2012, the fair value of the swap contract is a liability of \$501,239. The swap contract terminates in August 2015.

Note 11. Commitments

Hotel space: The Association reserves hotel space for its conventions several years in advance. The contracts stipulate the number of rooms to be reserved and the time period for which they are to be reserved. As of the date of this report, contracts for hotel space had been entered into through 2020. However, due to the numerous variables involved, the Association's potential liability under these contracts cannot be determined.

Employment agreement: The Association has entered into an employment contract with the Executive Director of the Association, which expires on August 15, 2015. The contract provides for severance payments equal to a maximum amount of up to ten months of compensation, depending on the years of service.

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American Statistical Association

Notes To Financial Statements

Note 12. Contingencies

The Association participates in a number of federally assisted grant programs, which are subject to financial and compliance audits by the federal agencies or their representatives. As such, there exists a contingent liability for potential questioned costs that may result from such an audit. Management does not anticipate any significant adjustments as a result of such an audit.

Note 13. Fair Value Measurements

The Association follows the Codification topic, *Fair Value Measurements*. The Codification applies to all assets and liabilities that are being measured and reported on a fair value basis. The Codification requires disclosure that establishes a framework for measuring fair value in accordance with generally accepted accounting principles and expands disclosure about fair value measurements. The Codification enables the reader of the financial statements to assess the inputs used to develop those measurements by establishing a hierarchy for ranking the quality and reliability of the information used to determine fair values. The Codification requires that assets and liabilities carried at fair value will be classified and disclosed in one of the following three categories:

- Level 1 – Quoted market prices in active markets for identical assets or liabilities
- Level 2 – Observable market-based inputs or unobservable inputs corroborated by market data
- Level 3 – Unobservable inputs that are not corroborated by market data

In determining the appropriate levels, the Association performs a detailed analysis of the assets and liabilities that are subject to the standard. At each reporting period, all assets and liabilities for which the fair value measurement is based on significant unobservable inputs are classified as Level 3.

The table below presents the balances of assets and liabilities measured at fair value on a recurring basis by level within the hierarchy:

	Total	Level 1	Level 2	Level 3
Financial assets:				
Equity mutual funds:				
S&P 500 index fund	\$ 3,845,371	\$ 3,845,371	\$ -	\$ -
International fund	1,429,997	1,429,997	-	-
Small and mid-cap fund	1,312,507	1,312,507	-	-
Global real estate fund	672,195	672,195	-	-
Emerging markets	393,480	393,480	-	-
	<u>7,653,550</u>	<u>7,653,550</u>	-	-
Fixed income mutual funds:				
Intermediate term bond	1,949,985	1,949,985	-	-
Inflation protected bond	1,022,523	1,022,523	-	-
High yield	902,980	902,980	-	-
Short term bond	694,131	694,131	-	-
Emerging markets	360,046	360,046	-	-
	<u>4,929,665</u>	<u>4,929,665</u>	-	-
	<u>\$ 12,583,215</u>	<u>\$ 12,583,215</u>	\$ -	\$ -
Financial liabilities:				
Interest rate swap contract	\$ (501,239)	\$ -	\$ (501,239)	\$ -

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American Statistical Association

Notes To Financial Statements

Note 13. Fair Value Measurements (Continued)

The equity and fixed income mutual funds of the Association are publicly traded on active markets and are considered Level 1 items. Money market funds of \$47,395 are not subject to the provisions of the *Fair Value Measurements* topic, as they are recorded at cost. The Association's interest rate swap is a pay-fixed, receive-variable interest rate swap based on the LIBOR swap rate. The LIBOR swap rate is observable at commonly quoted intervals for the full term of the swap, and is therefore, considered a Level 2 item.

Congress Finalizes FY13 Budgets

Cuts result for NIH, NSF, most federal statistical agencies

Steve Pierson, ASA Director of Science Policy

The FY13 Statistical Agency Budget Cuts in Perspective of the Last Decade

To put the FY13 budget cuts for the statistical agencies into perspective, Figures 1 and 2 show the normalized budgets for the major federal statistical agencies back to 2003. The GDP deflator also is included to account for inflation.

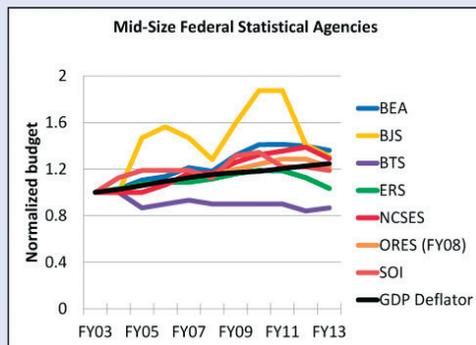


Figure 1: The budgets of the seven mid-sized statistical agencies normalized to their FY03 levels, along with the GDP deflator to account for inflation. The Social Security Administration Office of Research, Evaluation, and Statistics' budget is normalized (and adjusted for inflation) to its FY08 level, when the current accounting scheme was implemented. Except for FY13, the source of this data is the annual Analytical Perspectives OMB publishes with each fiscal year budget request.

For the smaller federal statistical agencies, the variability of the Bureau of Justice Statistics (BJS) budget and the declining purchasing power of the BTS budget stand out. According to The Consortium of Social Science Associations (COSSA), the first BJS increase was largely to resurrect the Arrestee Drug Abuse Monitoring Program as the Felony Arrest Drug Abuse Reporting Program. The second BJS increase was for the revitalization of the National Crime Victimization Survey.

For the BTS budget, which is determined by the authorization process rather than the appropriations process, purchasing power has declined at least 30% since FY03. The amount is likely more because 2004 legislation placed BTS under the control of the then to-be-created Research and Innovative Technology Administration (RITA), and RITA draws some of its budget from BTS. Some of this decrease can be attributed to management issues in the early 2000s.

On the congressional side, based on meetings I've had over the last year, BTS faces a number of challenges, starting with the challenging fiscal environment. For BTS specifically, congressional staffers seem to have a low awareness of BTS data products, and what little awareness they have is that the data are of more use

continued on following page

Weeks before President Obama released his FY14 budget request and six months into the fiscal year, Congress finalized the FY13 budget. For the most part, the budgets for the National Institutes of Health (NIH), National Science Foundation (NSF), and federal statistical agencies are their FY12 budgets reduced by the sequestration cut of 5.1%. The cuts will mean fewer and smaller grants for NIH and NSF and program cuts, hiring freezes, and reduced travel for the federal statistical agencies.

The full extent of the cuts, especially for the statistical agencies, will most likely be felt in FY14 unless the cuts can be reversed. If the budget reductions are not restored in the FY14 budget, further and more extensive program cuts appear inevitable.

For the actual FY13 budgets of NIH, NSF, and the federal statistical agencies, see Table 1 of the accompanying article on the FY14 budget request. (Note that not all FY13 levels have been confirmed.) The variation of the cuts—generally 2–11%—is due to varying additional rescissions necessary to meet the budget caps and exceptions—termed “anomalies”—that Congress made to the final continuing resolution.

In the final FY13 budgets, NSF, NIH, the Bureau of Economic Analysis (BEA), and the National Agricultural Statistics Service (NASS) all received anomalies. For NIH, NSF, and BEA, this means their budgets were only cut by 4.3%, 2.1%, and 2.6%, respectively. The NASS budget was increased by almost 5% so it could complete the quinquennial Census of Agriculture. Because NASS was ramping up its budget to conduct the Census of Agriculture, its final FY13 budget is still \$13 million short of its FY13 request, so NASS is suspending 13 agricultural reports.

The Economic Research Service (ERS) received an anomaly that *lowered* its budget, which, together with sequestration and a rescission of 2.5% on the agriculture accounts, resulted in an 8.7% cut. As a result, it will not deliver 10 commodity newsletters and data products and will suspend another seven programs.

The U.S. Census Bureau's budget is 11% lower than its FY12 level and 13% lower than its FY13 request (not accounting for \$17.6 million transferred from the Working Capital Fund). The administration had requested a 3% increase for FY13 to increase work for the 2020 decennial census and for the quinquennial Economic Census. The Census Bureau will have to delay some of its 2020 decennial census planning work (which will likely result in increased 2020 decennial costs down the road) and scale back some of the Economic Census work. It also will have to implement other cost-cutting measures such as a

hiring freeze and travel reductions. (Detailed effects of the Census Bureau cuts were scheduled to be released May 10.)

The budget for the Bureau of Labor Statistics (BLS) was cut 5%, resulting in the elimination of Measuring Green Jobs products, the Mass Layoff Statistics program, and the International Labor Comparisons program. BLS also will freeze hiring and take other cost-cutting measures.

The National Center for Health Statistics (NCHS) was spared any sequestration cuts because it is funded through Public Health Service Evaluation Transfer funds. The Bureau of Justice Statistics also seems not to have been cut from its FY12 budget, though its FY12 is smaller than previously thought (\$41.3 million, instead of \$45.0 million).

For the most part, the other statistical agencies are not reporting the effects of the FY13 budget cuts, but they are sure to include hiring freezes, reduced travel, and other cost-cutting measures.

For NSF and NIH, sequestration will mean fewer grants and/or smaller grants. In a March 1 *Science* article, "What It Means for Agencies to Be Under the Sequester," Jeffrey Mervis reported that current NIH grantees will see their awards trimmed by several percentage points (<http://bit.ly/1448J4V>).

NIH also anticipates hundreds fewer awards than in FY12. Indeed, ASA President Marie Davidian received word that her National Cancer Institute grants are being funded at only 90% and for only six months, with funding for the next six months to be decided later. She noted how difficult such uncertainty makes planning.

For NSF, which commits its funding up front, current award amounts won't be trimmed, but there will be hundreds fewer awards in FY13 than in FY12.

For more information, see <http://tinyurl.com/bslsa2j>. ■

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On the FOAS website (www.foastat.org), you can join and/or make financial contributions. We invite you to contribute ideas, projects, and materials.

to the private sector. BTS's small budget also contributes to the problem in that it gets less attention than the larger items overseen by the committees with jurisdiction. There is also the Capitol Hill instinct of prioritizing projects in one's home district/state district (versus good data on where and what to build.)

What also stands out in Figure 1 are the sharp drop to the Economic Research Service (ERS) budget over the last two years and the stagnant budget of the Bureau of Economic Analysis (BEA) over the last several years.

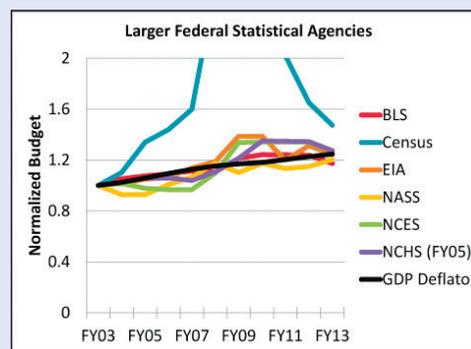


Figure 2: The budgets of the six larger statistical agencies normalized to their FY03 level, along with the GDP deflator to account for inflation. The NCHS annual budgets are normalized (and adjusted for inflation) to the FY05 level, when the current accounting scheme was implemented. The Census Bureau line peaks at 1.265 in FY10. Same source as for Figure 1.

The normalized budgets of the larger federal statistical agencies are shown in Figure 2. The Census Bureau budget, of course, stands out because of the decennial census operation. One also notices that the FY13 budget is well above the GDP deflator line, which can be at least partially explained by the American Community Survey being introduced in the mid-2000s to replace the decennial long form. Its annual budget is \$240 million.

I'm convinced the Census Bureau budget would not be where it is if not for the work of its dedicated advocacy coalition. The Census Project has been especially active over the last year on the American Community Survey and budget for the U.S. Census Bureau. It organizes group letters to Congress, participates in visits to the Hill, and holds periodic meetings for Census Bureau stakeholders. The Census Project also has developed numerous materials in support of the ACS and has organized numerous, effective congressional briefings.

The National Center for Education Statistics' (NCES) budget is noteworthy because of its relatively flat appropriations, except for the 40% rise in its budget from FY07 to FY09. One also notices the Energy Information Administration (EIA) budget has had large variations over the last several years.

Looking at the budget for the National Center for Health Statistics (NCHS), one notices a faster than inflation rise from FY06 to FY10. Much of the credit for this rise goes to an advocacy coalition called Friends of NCHS (<http://bit.ly/13iks0U>), which formed in 2006. Through an active and well-orchestrated advocacy campaign that includes letters to Congress and meetings with key House and Senate Appropriations Committee staff, Friends of NCHS has become a prominent voice. Unfortunately, no other federal statistical agency has such a dedicated coalition.

FY14 Budget Request for NIH, NSF, and Statistical Agencies: *Proposed Increases to Restore FY13 Cuts and More*

Steve Pierson, ASA Director of Science Policy

Table 1—Final Budgets for FY13 and FY14 Budget Requests

	FY11	FY12	FY13		FY14		
			enacted level	change from FY12	Request	change from FY13	change from FY12
Research Agency (amounts in millions of dollars)							
NIH	30688	30623	29300	-4.3%	31331	6.9%	2.3%
NSF	6913	7033	6884	-2.1%	7626	10.8%	8.4%
Statistical Agency (amounts in millions of dollars)							
BEA	93.2	92.2	89.8	-2.6%	100.0	11.4%	8.4%
BJS	60.0	41.3	41.3	0.0%	52.9	28.0%	28.0%
BLS	610.0	609.0	577.2	-5.2%	610.0	5.7%	0.2%
BTS	27.0	25.2	26.0	3.2%	26.0	0.0%	3.2%
Census	1152.0	942.4	841.7	-10.7%	982.5	16.7%	4.3%
EIA	96.0	105.0	99.5	-5.2%	117.0	17.6%	11.4%
ERS	81.8	77.7	71.4	-8.1%	78.5	9.9%	1.0%
NASS	156.4	158.6	166.0	4.7%	160.0	-3.6%	0.9%
NCES	247.0	247.0	226.0	-8.5%	257.0	13.7%	4.0%
NCHS	138.7	138.7	138.7	0.0%	160.0	15.4%	15.4%
NCSES	42.0	43.3	41.6	-3.9%	49.0	17.1%	12.5%
ORES	29.0	29.0	27.5	-5.2%	30.0	9.1%	3.4%
SOI	39.0	39.0	33.1	NA	35.0	5.7%	NA

(Not all FY13 figures are confirmed.) The FY13 levels are generally all cuts because of the 5.1% sequester cuts and additional cuts necessary to meet the budget caps. The last column compares the FY14 request to FY12 to illustrate how the request goes beyond restoring the FY13 cuts. A comparison of SOI's FY13 budget and FY14 request to its FY12 level is not possible because of a realignment of resources.

The President's Fiscal Year 2014 (FY14) budget was released two months later than usual and generally was positive, requesting increases that go beyond restoring the FY13 cuts (as shown in Table 1). The road to achieving these increases will be a difficult one with Democrats and Republicans being far apart on fiscal policy. The statistical community should be vocal with their elected officials about the importance of federal funding for basic research and federal statistical data to economic growth.

NIH and NSF

The FY14 request for NIH would increase the NIH budget by almost 7% above the FY13 level. If enacted, this level would only be a 2% increase above FY12. Taking into account inflation, such a level would see NIH's purchasing power decreased by almost 2%, thereby continuing NIH's declining purchasing power since its budget doubling was achieved in FY03.

One of the NIH FY14 initiatives of interest to the statistical community is the Big Data to

Knowledge (BD2K) program. According to the NIH FY14 budget overview document, BD2K has the following four programmatic efforts:

- Facilitate the broad use and sharing of large, complex biomedical data sets
- Develop and disseminate new analytical methods and software
- Enhance training of data scientists, computer engineers, and bioinformaticians
- Establish centers of excellence to develop generalizable approaches that address important problems in biomedical analytics, computational biology, and medical informatics

If funded, NIH will invest at least \$40 million in the BD2K program, and each Big Data Center of Excellence will be funded at \$2 million to \$5 million per year for 3–5 years.

The NSF FY14 request is especially strong: 11% above FY13 and 8% above FY12. Among the FY14 budget priorities of most interest to the statistical community are Cyberinfrastructure Framework for 21st-Century Science, Engineering, and Education (CIF21: \$155 million) and Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE: \$63 million).

CIF21 is the multidisciplinary program to use cyberinfrastructure to accelerate research and education and new functional capabilities in computational and data-intensive science and engineering. Through CIF21, the Division of Mathematical Science (DMS) supports Big Data and computational and data-enabled sciences (CDS&E). INSPIRE addresses complicated and pressing scientific problems at the intersection of traditional disciplines and is intended to encourage investigators to submit bold and exceptional proposals. DMS also has funding solicitations in the FY14 priority areas: cyber-enabled materials, manufacturing, and smart systems (CEMMSS) and secure and trustworthy cyberspace (SaTC). Also, DMS continues to support research through its Research at the Interface of the Biological, Mathematical, and Physical Sciences (BioMaPS) and Expeditions in Education programs.

Statistical Agencies

The administration's FY14 budget request for the statistical agencies again shows a strong commitment to increasing their budgets, with four agencies seeing more than 10% requested increases over their FY12 levels, thereby more than restoring the FY13 cuts. Another five agencies have requested increases of 3–8% over their FY12 levels. Three more agencies are essentially flat funded from FY12.

The agencies with the largest requested increases compared to their FY12 levels are the Bureau of Justice Statistics (BJS), Energy Information Administration (EIA), National Center for Health Statistics (NCHS), and NSF National Center for Science and Engineering Statistics (NCSES). The BJS request of \$53 million would restore half of the cut from its FY11 budget of \$60 million and mostly go to the National Crime

Victimization Survey. The EIA increase would go to many programs having to do with its consumption surveys, energy supply surveys, and forecasting abilities. Much of the NCHS increase would go toward its vital statistics reporting and further phasing in of the electronic birth and death records. The NCSES program would go to many initiatives, the largest being a survey of research and development funding and performance by nonprofit organizations and an expansion of the scope of administrative records sources.

The agencies with the 3–8% increases over their FY12 levels are the Bureau of Economic Analysis (BEA), Census Bureau, National Center for Education Statistics (NCES), and Social Security Administration Office of Research, Evaluation, and Statistics (ORES). What stands out here are a BEA initiative to

measure foreign direct investment and the Census Bureau ramping up (\$140 million) for the final year of the research and testing phase of the 2020 Decennial Census. The Census request also ramps down the 2012 Economic Census and closes out the 2010 Decennial Census. The requested budget for the Internal Revenue Service Statistics of Income Division is \$2 million more than its FY13 level.

Compared to their FY12 levels, the FY14 requests would mostly just restore the budgets of the Bureau of Labor Statistics (BLS), Economic Research Service (ERS), and National Agricultural Statistics Service (NASS) to their FY12 levels after the FY13 cuts. The Bureau of Transportation Statistics (BTS) is funded from the Highway Trust Fund and so is outside the appropriations process. ■

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ASA Delegation Visits Russia

Robert N. Rodriguez



ASA delegates Youngjo Lee (left) and John Boyer (center) engage in conversation with Artem Egorov (right) and a Russian interpreter at the Center for Statistical Techniques in St. Petersburg, Russia.

Last September, I traveled to Russia with a delegation of ASA members for a series of professional exchanges with statisticians in Moscow and St. Petersburg. In addition to learning about the work of these colleagues and discussing common interests, we toured some of the cultural and historical sites for which these two cities are renowned.

Two of the statistical organizations we visited, the Russian Federal State Statistics Service and the Center for Statistical Techniques, exemplify the diversity of statistical practice we found.

The Federal State Statistics Service, located in Moscow, is an umbrella for 65 statistical agencies, and this organizational structure enables centralized oversight for the collection and use of all government data. Our hosts at the service explained their use of sampling methodology for socioeconomic surveys.

In Russia, response is not mandated for surveys or the population census, although a change in the law is being considered. Statistical agencies struggle with declining response rates, as do official statistics agencies in other countries. Response rates are higher in Russian provinces and lower in cities such as Moscow. On the other hand, economic surveys benefit from good administrative records data because businesses are required to register themselves and apply standard company classifications.

Along with data quality, we discussed the training of Russian statisticians. The number of statistics graduates is decreasing, partly because the mathematics requirement deters many potential students.

In St. Petersburg, we met with the staff of the Center for Statistical Techniques, a private company that provides statistical training and consulting. Formed in 2001, the center bridges the

gap between formal statistical education in universities and the growing statistical needs of business. The center has been successful in applying statistics to quality management in marketing and sales departments and in the areas of delivery and logistics. Statistical training programs developed by the center emphasize concepts for executives and techniques for business users.

We had a lively discussion with the staff, who greeted us enthusiastically with Cyrillic name tags and a lengthy list of questions. They were especially interested in hearing about the ASA Section on Quality and Productivity and a recent book about statistical thinking by two ASA members, Roger Hoerl and Ron Snee. We later sent a copy of the book to the staff in appreciation for their hospitality.

If I had to describe the trip with a single adjective, it would be “balanced.” Although our delegation was self-selected, we represented a well-balanced mix of statistical backgrounds (academic, business, and government). And because the organizations we visited represented a similar balance of statistical activities, we were able to share viewpoints and compare notes with all of our Russian hosts.

Finally, our trip was carefully balanced between professional exchanges and cultural exploration. With the help of experts in Russian art and history, we learned much about what we saw: mosaics in the Moscow Metro system, cathedrals in the Kremlin, and great art in the Hermitage Museum. We returned from this extraordinary experience with a sense of professional accomplishment and personal enrichment. ■

Westat: 50 Years Young

Dan Levine and David Morganstein, Westat

In early 1961, Ed Bryant, then a tenured full professor of statistics at the University of Wyoming, and two former students, Jim Daley and Don King, decided they'd like to try something a bit different and settled on a partnership to serve the statistical needs of governments, business, and industry. This year, Westat, the namesake of that decision, having grown to an employee-owned organization of 2,000, celebrates its golden anniversary of incorporation in 1963 as one of the nation's premier statistical research and survey companies.

That partnership had a number of early, lean years—its first year's revenue reached all of \$2,000—but a move from Colorado to Washington in 1966, where opportunities seemed more abundant, set the stage for a dramatic change in fortune.

But let's start at the beginning. As Ed described it, "The company had far less chance of survival than a calf born on the open range during a blizzard" (a giveaway of his youth on a Wyoming ranch), "but we didn't know it. None of the three of us had ever had to meet a payroll or had the experience of jumping through the red tape necessary to create a company. But when one is young, everything seems possible and optimism runs rampant through one's thinking. That the company did survive and become one of the dominant organizations in its field is not a miracle, but the result of the intelligence, integrity, and hard work of a lot of people." Those first years were worse than lean, as Westat struggled. To help Westat survive, Ed sold his house, and (again in Ed's words) "Jim and Don helped by starving."

The early years in Washington found Westat facing both fire and flood. One day, for example, a fire started in a suite that Westat had rented to a distributor of government publications. It wasn't discovered immediately and hence got hot enough to warp one of the main steel beams, which caused the front one-fourth of the upper floor to collapse only minutes after the building was evacuated. Temporary headquarters were quickly set up in a nearby motel and virtually no work was missed due to the extraordinary dedication of the staff.

The flood occurred during Hurricane Agnes, and the rain was so heavy that water came in around the door and through the telephone and electrical conduits under the building. The staff, including wives and husbands, spent the night bailing out and, fortunately, once again, damage was held to a minimum.

The most important event of 1962 for Westat was winning a contract with the U.S. Patent Office for statistical services and experimental designs. Since, in those days, it was acceptable to render technical support while working elbow to elbow with

the government client, the Patent Office furnished office space, desks, calculators, telephones, and secretarial service. Westat was able to avoid having to spend scarce resources on office space, an unexpected boon.

The change in government policy requiring contractors to maintain separate facilities came about a bit later and stimulated Westat opening a local office. Westat held the contract with the Patent Office for more than five years, during which employees had the opportunity to publish and present papers. The experience gained through the contract with the Patent Office turned out to be extremely important in leading to other government contracts.

Westat struggled hard during those early years to create an identity for itself, but a major turning point came in late 1968, when Morris Hansen joined the company after retiring from the U.S. Census Bureau. Well known for his many accomplishments and contributions to statistical sampling and survey methodology, his joining Westat solidified its reputation as a company to be taken seriously by the contract research community, and it soon found itself winning contracts and proving itself.

Another major benefit of Hansen's affiliation with Westat was that Westat soon became the place for many of the best of the Census Bureau's statisticians to go for second careers. In fact, Westat hired so many Census Bureau alumni that it became known as "Census West." Among the most significant was Joe Waksberg. Morris, Joe, and the others they attracted also brought another important benefit: their strong belief in the importance of nurturing the next generation of survey statisticians and researchers. And that legacy continues to guide Westat to this day.

The 1970s saw Westat move more aggressively into the survey business with the conduct of its first longitudinal study, the evaluation of the Public Employment Program (PEP); its first national household survey, the National Survey of Family Growth (NSFG); and its first large health study, Health Maintenance Organization Evaluation Study.

In 1970, Westat found itself facing an urgent need for financing to support its expanding workload and turned to the American Can Company (ACC), which offered to acquire a controlling interest for \$750,000. The deal gave Westat the support it needed to invest in new projects and meet the payroll. And it also brought Joe Hunt to Westat from ACC as chief financial officer and, subsequently, president of Westat.

The "marriage" of Westat and ACC lasted until 1977, when ACC announced that Westat would be sold to the highest bidder. Faced with this decision, Westat's directors decided that the "highest bidder" would be Westat and spent the next year trying to find

Daniel B. Levine is a statistician and economist who is a recognized expert in the development and implementation of survey research involving the collection of complex and policy-related information. Before joining Westat, Levine was employed for almost 30 years with the U.S. Census Bureau, where he served as deputy director.



David Morganstein is a vice president and director of the statistical unit, a group of 65 statisticians at Westat, Inc., where he has worked for more than 35 years. He will be the ASA president-elect in 2014. He is also a recipient of the ASA's Founders Award. He is an elected member of the International Statistical Institute, a former chair of its Ethics Committee, and a Joint Program in Survey Methodology instructor.



Banner on Westat building

a way to accomplish this goal. Events culminated in late 1978 when the final papers were signed and the Westat Employee Stock Ownership Plan (ESOP) was established. Joe Hunt became president of Westat in 1978, a position he held until his retirement in 2010, and the decade closed with \$14 million in revenues.

One step in the maturation of Westat was the realization that surveys play a dominant role in its success. While not all Westat does, most of the evaluation, data management, statistical analysis, and design options research are related to surveys. Specialization in all of the phases of surveys—sample design; instrument design; execution of mail, telephone, web, and personal interview data collection; data processing; analysis; and report writing—is a desirable specialization (if, indeed, it is a specialization at all) because of its adaptability to so much of the work contracted out by government and industry.

Another way to look at the growth of Westat is to identify “landmark” contracts (i.e., those that either opened a new and substantial area of business activity or that, by virtue of their size, were substantial contributors to Westat’s growth). The Patent Office contract was certainly a landmark. Although Westat and its subsidiaries had been in the survey business since 1966, those first surveys were small-scale marketing studies. Its first large field job was the longitudinal evaluation of the PEP, which began in 1972 and terminated in 1974. This was not a household survey, but a survey of participants in PEP. Its first large-scale nationally projectable household survey was the second round of the NSFG, which began in 1974 and ended in 1977.

In the early 1980s, Westat conducted its largest survey during this period, the Employment Opportunity Pilot Projects, for the Department of Labor. Westat also won three large contracts that are still ongoing: the National Health and Nutrition Examination Survey, National Assessment of Educational Progress, and National Medical Expenditure Survey.

As its business grew, so did its staff, and, in 1981, Westat moved to its present location in Rockville, Maryland, finally achieving the goal of having all of its employees under one roof.

The 1980s also saw a significant expansion in directing large-scale health investigations with the Reye’s Syndrome Study and Vietnam Veterans’ Birth Defects Study. Westat gained new clients such as the Environmental Protection Agency, U.S. Department of Education, U.S. Department of Agriculture, Centers for Disease Control and Prevention, National Science Foundation, National Cancer Institute, National Institutes of Health, and National Center for Health Statistics. Revenues increased 150% in the second half of the 1980s, and professional staff doubled over the decade. Even with this growth, Westat has maintained its unique culture.

Westat also has been in the forefront of enriching the methodology of statistics, a by-product of having to solve problems not easily handled by current practice. The variety and difficulty of many of Westat’s projects provided the opportunity and impetus for such enrichments. As examples, Westat’s statisticians developed many innovative extensions to sample design and methodology. They also wrote seminal papers on sampling theory, improved estimators, and other aspects of survey methodology; developed a clustered approach to random digit dialing (RDD) that was the state of the art for more than a decade; studied and developed the state-of-the-art list-assisted method for RDD sampling; developed improved methods of variance estimation; wrote books and papers examining many facets of design, sample selection, imputation, and weighting; and consulted with virtually every federal statistical agency in dealing with methodological problems.

Papers by Westat staff—covering the entire spectrum of topics related to the design, conduct, and analysis of sample surveys—appear regularly in professional journals. Westat also has made significant contributions through developing software to deal with difficult survey issues, such as missing or inconsistent data, or in pioneering the development and release of software for the analysis of complex survey data that provide appropriate sampling error estimates.

Today, in addition to its capabilities as a leading statistical survey organization, Westat provides extensive skills and experience in custom research, program evaluation studies, and communications campaign development across a broad range of subject areas. Westat also has the technical expertise in survey and analytical methods, computer systems technology, biomedical science, and clinical trials to sustain a leadership position in all its research endeavors.

Recent years have found Westat expanding into such diverse areas as oil and gas reserves, attitudes of youth toward military service, smoking cessation, drug exposure, diet and health, clinical trials, epidemiologic

studies, substance abuse, health promotion, transportation, social marketing, communications, early child development, airport noise abatement, and disclosure avoidance to protect privacy and confidentiality.

Today, its revenue stands at \$500 million, just under 40 times its revenue in 1963, the year it incorporated. Although most of the staff is located in Rockville, Maryland, Westat also maintains research offices in Atlanta, Georgia; Cambridge, Massachusetts; Raleigh/Durham, North Carolina; Philadelphia, Pennsylvania; and Houston, Texas. In addition, it has international offices in Beijing, China; Liberia, Costa Rica; Addis Ababa, Ethiopia; New Delhi, India; Johannesburg, South Africa; and Bangkok, Thailand. Additional staff members are engaged in data collection and processing at Westat's survey processing facilities, at its Telephone Research Center facilities, and throughout its nationwide field interviewing operations.

In 1988, at Westat's 25th anniversary, Ed ended his reflections on the first 25 years with two questions he was often asked. To the question, "Would you do it again?" the answer was a resounding "NO. The human investment necessary to create the critical mass for success is too great." To the question, "Are you glad you did it?" the answer is "Absolutely, it has been quite a trip!"

So, why has Westat succeeded? An overly simplistic explanation is that its success has resulted from capable people working together. Another is that Westat meets or exceeds the expectations of the client at a competitive cost. But the truth lies deeper. Professional integrity underlies the reputation that has made Westat successful. In the short run, it may be tempting to tell clients what they want to hear, but it's better policy to tell them what they need to know.

Some dismiss Westat's achievement by saying it got started at just the right time, but they conveniently overlook the many businesses that were founded at about the same time that failed. Luck obviously played a role, but wasn't a key factor, since it's much easier to be lucky when you are winning than when you are losing. More important than luck is getting the right employee in the right job, one where he or she can do well and continue to grow. Westat has needs for a wide variety of skills, and matching the skills of people with job requirements is an important element of success.

As an ESOP, the employees are the owners at Westat; in fact, they are the company. This engenders an "all for one and one for all" mentality. When a problem arises, the employees get together and try to solve it without assigning blame. In spite of all that has been said earlier, ability coupled with the willingness to work and submerge one's ego seem to be of tremendous importance. One overheard comment seems to summarize it best: "Anyone who enjoys work could have a helluva good time here." That's as good a key as any to Westat's success. ■

Preparing Master's Statistics Students for Success: ASA Board Approves Workgroup Recommendations

In the February issue of *Amstat News*, John Bailer and others described an initiative undertaken in 2012 "to develop guidelines, framed as learning outcomes, for master's degree programs in statistics and biostatistics that are responsive to the needs of stakeholders who employ such graduates." (<http://magazine.amstat.org/blog/2013/02/01/mastersworkgroup>) The following recommendations from that group were unanimously adopted by the ASA Board of Directors at its April 2013 meeting:

- Graduates should have a solid foundation in statistical theory and methods.
- Programming skills are critical and should be infused throughout the graduate student experience.
- Communication skills are critical and should be developed and practiced throughout graduate programs.
- Collaboration, teamwork, and leadership development should be part of graduate education.
- Students should encounter non-routine, real problems throughout their graduate education.
- Internships, co-ops, or other significant immersive work experiences should be integrated into graduate education.
- Programs should be encouraged to periodically survey recent graduates and employers of their recent graduates as a means of evaluating the success of their programs and to examine if other programmatic changes are warranted.

The committee noted that, while the first five recommendations are not precise learning objectives, they could readily be translated into learning outcomes in graduate programs. The sixth recommendation suggests an experiential requirement that might be built into graduate programs. The seventh recommendation encourages continuing attention to work force needs when reviewing graduate curricula.

The committee and the board further noted that the focus on experiential learning in statistics could be a promising area for closer partnerships between universities and local industry and government. There are opportunities for future calls for Member Initiative projects, as well, and perhaps some opportunities for chapter activity.

"We hope these recommendations will prove useful to academic departments as they think about starting or revising master's degree programs," Bailer said. "We believe that many of the recommendations above also would apply to bachelor's degrees as well as doctoral degrees in statistics. Finally, the calibration of current academic programs with the needs and expectations of our partners in industry and government is important for guaranteeing that our graduates are prepared to excel upon entry into the work force."



High-Schooler Captures **Top Prize** in Statistics2013 **VIDEO CONTEST**

Jeffrey A. Myers, ASA Public Relations Coordinator

For Jason T. Girouard, the International Year of Statistics (Statistics2013) has turned out to be a pretty darn sweet, not to mention enriching, experience.

Girouard claimed the top honor—the Best Overall Video—in the recently completed Statistics2013 Video Contest, and his production also was awarded first place in the Best Video by a Person or Persons 18 Years of Age or Less category, giving him top billing in two of the competition's three categories.

Not too bad for the 18-year-old high-school student from Brimfield, Massachusetts, who was only 17 when he entered the contest earlier this year.

The Contest

Sponsored by Wiley Publishers, the video contest was organized by the Statistics2013 Steering

Committee to encourage people around the world to think about statistics and its effect on their daily life.

Each entry was required to be no longer than four minutes in length and to illustrate the following criteria:

- How statistics affects individual lives, improves society, or makes the world a better place in general
- How statistical thinking can be brought to bear on important issues of our day
- Interesting careers in statistics

Entries in each of the contest's categories, which had to be submitted by February 28, were judged on statistical content and entertainment

value. The contest's three award categories were the following:

- Best Overall Video
- Best Video by a Person or Persons 18 Years of Age or Less
- Best Non-English Language Video

Wiley provided cash prizes for the top three videos in each category, with the largest monetary prize awarded to the Best Overall Video.

In all, 59 videos from numerous countries were entered. Judging was tough, and the international panel of judges found it difficult to select the top videos in each category.

"The quality and diversity of the 59 entries made choosing the best videos a challenging task. In the end, I feel strongly that the decisions of the judges captured the spirit of the contest, which encompasses the impact of statistics, the importance of statistics, and careers in statistics," said Thomas Short, chair of the video contest's review committee and statistics professor at John Carroll University in University Heights, Ohio. "On behalf of the international panel of judges, I say thank you to all who entered the contest and pass on our collective congratulations to the winners!"

The statisticians who served as the contest judges were Hans Hockey, New Zealand; Donna LaLonde, United States; Olga Obratsova, Russia; Christopher Olsen, United States; Danvers Omolo, Kenya; Ernesto Sánchez, México; Theresa Utlaut, United States; Geert Verbeke, Belgium; and Christopher Wild, New Zealand.

While reviewing the videos, the judges felt Girouard's production best conveyed the most important messages about statistics and best met the contest's criteria: its impact and importance as well as the career opportunities in this increasingly important scientific field.

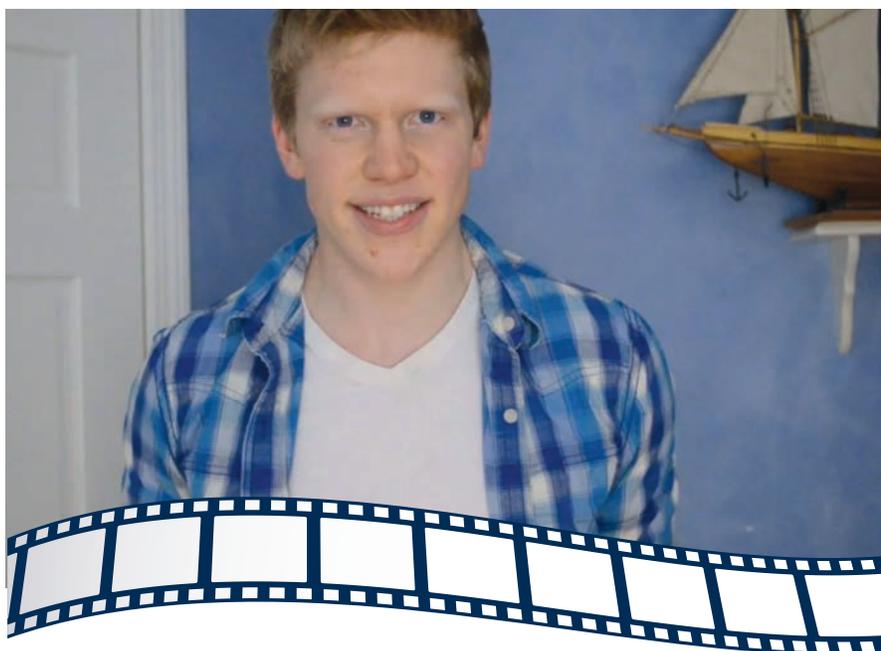
Girouard Shines

For his work on his appropriately titled production, "The Importance of Statistics," Girouard took home first place in the Best Overall Video and Best Video by a Person or Persons 18 Years of Age or Less categories.

"It feels fantastic to be the top winner! I spent so much time making my video, and I'm thrilled that others liked how it came out as much as I did," said Girouard following his achievement.

He entered the Statistics2013-organized contest after learning about it online at Onlinevideocontests.com.

Girouard credits the probability and statistics honors class he is taking at Tantasqua Regional High School and the teacher of the course for motivating him to enter the contest and his success.



Freeze-frame of the Best Overall Video by Jason Girouard



Freeze-frame of the Best Non-English Language Video by the Hungarian Central Statistical Office

Statistics2013 Video Contest Winners

A total of 59 videos from numerous countries were entered into the Statistics2013 Video Contest. Following is a list of the first-place through honorable-mention winners in each award category and the prizes each winner was awarded:

BEST OVERALL VIDEO

First Place

The Importance of Statistics by Jason Girouard (\$1,000 and certificate)

Second Place (three videos)

Why Statistics Matters? by Tom Furniss (\$333 and certificate)

International Year of Statistics by Olivia B. (\$333 and certificate)

A Day Without Statistics by Roberto Molinari (\$333 and certificate)

Honorable Mention (four videos)

Stats Can Be Cool You See by Michael Posner (certificate)

That Is What We Are by Hungarian Central Statistical Office (certificate)

My Statistician Friend by Daniele Durante (certificate)

IYS2013_NISRA by Debs Brown and Iain Bri Bryson, Northern Ireland Statistics and Research Agency (certificate)

BEST VIDEO BY A PERSON OR PERSONS 18 YEARS OF AGE OR LESS

First Place

The Importance of Statistics by Jason Girouard (\$500 and certificate)

Second Place

Check My Stats (Revised) by Marcus Layher, Rachel Lerner, Erik Schoning, and Connor Atkins (\$250 and certificate)

Third Place

Statistics2013—The International Year of Statistics by Rhiannon Farney (\$100 and certificate)

BEST NON-ENGLISH LANGUAGE VIDEO

First Place

That Is What We Are by Hungarian Central Statistical Office (\$500 and certificate)

Second Place

What Do You Know About Statistics? Что такое статистика?" by Yulia Balioz (\$250 and certificate)

Third Place

Statistics Is the Grammar of Science by Svilen Donev (\$100 and certificate)

Honorable Mention (two videos)

EMR Video for Annual Statistics 2013 Entry by Jean Paul Ngiruwera (certificate)

Statistics 1 by Ivanka Popova (certificate)

You can go to the International Year of Statistics website at www.statistics2013.org to view each video.

"My teacher, Mr. [Chuck] Hamparian, has gotten me much more interested in numbers and statistics than I ever thought I would be.

"As soon as I saw the contest online, I knew I had to enter it to try to share all that I've learned from Mr. Hamparian. In the end of my video, I used a quote that Mr. Hamparian always says, 'The patterns in numbers give statisticians the ability to predict the future', which I think is very true," he explained.

Girouard said that working on his winning video was a learning experience, as well. "The biggest thing I learned while making my video was how much of a real-world application there is for statistics," he explained. "There are so many careers, in so many fields, with such a vast range of applications. Numbers truly do give you the ability to predict the future, and I hope I can help people realize that through my video."

As the Statistics2013 Video Contest's top winner, Girouard was awarded a total of \$1,500—\$500 for winning the Best Video by a Person or Persons 18 Years of Age or Less category and \$1,000 for taking home the title of Best Overall Video.

Girouard, who will be a business management major at the University of Massachusetts-Amherst this fall, plans to use his prize money for college-related expenses. "The money will really help me out for college," he says. "I'll be using it to buy a nice laptop and some other miscellaneous college materials. It's a huge help!"

Best Non-English Language Video

The only category Girouard didn't win was the Best Non-English Language Video. That honor was awarded to the Hungarian Central Statistical Office for its production, "That Is What We Are."

You can view all 59 videos entered into the contest at www.statistics2013.org.

Statistics2013 Says Thanks!

Ronald L. Wasserstein, ASA executive director and a member of the Statistics2013 Steering Committee, passed on the organizing group's congratulations to Girouard and all the winners and relayed appreciation to all contest entrants.

"My colleagues on the Statistics2013 Steering Committee and I offer a hearty congratulations to Mr. Girouard and all the contest winners for their excellent videos and thank everyone who participated in the contest," said Wasserstein. "We greatly appreciate everyone for supporting the International Year of Statistics. All the videos entered into the Statistics2013 Video Contest will help foster better understanding of the myriad contributions statistical science and statisticians make to improve our world." ■

WSS Members Serve as Expert Judges on Science Fair Circuit



WSS members (from left) Jurate Landwehr, Danny Lee, and Lee Abramson judge projects at the DC STEM Fair.

During the peak of the spring semester, members of the Washington Statistical Society (WSS) served as expert judges for five regional science fairs that occur in the Washington, DC, area. The WSS annually participates in these regional science fairs as part of its quantitative literacy and community service programs.

WSS representatives also promoted the Curtis Jacobs Award for Outstanding Statistics Project. The award was established in 1991 to honor the memory of Jacobs, who served as a chief statistician at the Bureau of Labor Statistics on many major federal economic statistics programs, including the Consumer Price Index.

Many of the judges recounted their high-school careers, recalling that statistics courses were, at best, a lecture or two in a math class. Today, many high-school students even have the opportunity to take Advanced Placement Statistics courses from qualified teachers. The diversity of the projects that made use of statistical ideas and the truly high sophistication of some science projects exemplified the dramatic change that has taken place over the past. Even projects conducted by junior high-school students demonstrated the increasing knowledge of statistical uncertainty at an early level. They exercised an awareness and understanding of statistical uncertainty in their study

WSS Science Fair Judges and Curtis Jacobs Award Representatives

Lee Abramson	Ruey-Pyng Lu
Jeff Bailey	Mike Messner
Promod Chandhok	Mark Otto
Dhuly Chowdhury	Arnie Reznick
Mike Fay	John Rogers
Mike Fleming	Scott Rumburg
Whitney Kirzinger	Glenn White
Laura Lee Johnson	Matt Williams
Tom Krenzke	Frank Yoon
Jurate Landwehr	Audra Zakeski
Daniel Lee	

Winners of Awards in Recognition of Excellence in Investigation or Use of Statistical Methods in a Science Fair Project

Northern Virginia Regional Science and Engineering Fair – March 2, 2013			
Prize	Name	School	Grade
1	Margaret Doyle	Yorktown	10
2	Christopher Gerlach	T.C. Williams	12
3	Matthew Lowen	Yorktown	12
3	Emma Beall		12
Prince George's Area Science Fair – March 9, 2013			
Prize	Name	School	Grade
1	Susan Ojo	Eleanor Roosevelt	12
2	John Bielec		
2	Dimitri Morake		
3	Hunter Whaples		
Fairfax County Regional Science and Engineering Fair – March 16, 2013			
Prize	Name	School	Grade
1	Andrea Li	Thomas Jefferson	
2 (team)	Eduard Danalache	Thomas Jefferson	
	Hanna Carolina Hatanpaa		
	Emily Rogers		
Science Montgomery – March 16, 2013			
Prize	Name	School	Grade
1	Pushkar Aggarwal	Poolesville H.S.	
2	Lucia Jiang	Takoma Park Middle School	
3	Noah Kim	Takoma Park Middle School	
3	Kisha Thakur	Thomas Wootton H.S.	
DC Science Technology Engineering and Mathematics Fair – March 23, 2013			
Prize	Name	School	Grade
1	Emma Johnson	School Without Walls	12
2	Lauryn Mitchell	School Without Walls	12
3	Alexander Morales-Sanz	School Without Walls	12

designs and analyses, through concepts such as standard deviation, model estimation, and statistical reporting.

Mike Messner of the Environmental Protection Agency served as head judge for the science fair coordinated by the Montgomery County schools, having done so for many years. He gave his impression of the students who dedicate countless hours and energy to their scientific efforts: “These kids are awesome.”

For example, in the Northern Virginia Regional Science and Engineering Fair, the first-place winner, Margaret Doyle of Yorktown High School, applied a probit model to assess the efficacy of sweet potato extracts as an inexpensive mosquito larvicide. She had collected a sample of 2,000 larvae and measured the lethal dose of extracts from different parts of the plant.

The second-place winner, Christopher Gerlach of T.C. Williams High School, addressed a meteorological issue. He had collected weather data from multiple sources and fitted models to determine which forecasting method had the highest predictive ability. He used the R statistical software to estimate models and develop attractive plots in an exuberant display that was nearly 6 feet tall.

Doyle received a check for \$100, Gerlach received the book *Statistics* by James McClave and Terry Sincich, and both received a subscription to *CHANCE* magazine donated by Taylor & Francis. Pearson Education, Inc. and Cengage Learning donated elementary, introductory, and AP edition statistics books and the web software StatCrunch Data Analysis. ■

MASTER'S NOTEBOOK

Seeing Is Believing

Jean V. Adams, U.S. Geological Survey - Great Lakes Science Center and Great Lakes Fishery Commission

Earlier, I gave my recipe for a long and happy career: Find your passion and connect with people (<http://bit.ly/12sueMU>). This month, I add a dash of painting and paying it forward.

Paint a Picture

“Draw a circle on the left and another on the right. Connect the two circles with a line. Now, starting at the left side of the left circle, move your pen to the left, then up, then to the right, then diagonally up and to the right, ...” The class was utterly confused. A fellow student was trying to get us to draw the side view of a car without telling us what we were drawing. The class was in public speaking. The point of the exercise was to demonstrate, quite literally, how a picture is worth 1,000 words. The exercise and the point stuck with me.

As statisticians, we use plots and diagrams as pictures of the data with which we are working. Drawing graphs may be the first thing we do as part of the data exploration process. Plots can reveal important characteristics of the data or highlight potential data entry errors. Drawing graphs also may be the last thing we do to explore model adequacy and summarize results. If we successfully capture the story of the data in an intuitive graph, it raises the level of understanding of the issue to new heights.

It's easy for us statisticians to think of ourselves as number crunchers, rather than picture painters, but we are, in fact, both. The brushes and paints in our statistical tool box are just as important and just as unique to our profession as our other

analytical tools. Because of our familiarity with graphs and the software to create them, we may be able to visualize our clients' data in ways they cannot. (See Nathan Yau's blog, *Flowing Data*, <http://flowingdata.com> for some inspirational visualizations.)

Make it a point to paint a picture of your clients' data.

Pay It Forward

Have you ever had your work improved by the comments of a good reviewer? Have you ever benefited from the sage advice of a mentor? Have you ever gotten stuck trying a new analysis or software and turned to Internet forums to get unstuck? Of course you have. We all have. We are surrounded by people willing to help, including some we have never met. Don't hesitate to ask for assistance. If you choose your target wisely and clearly state your question, you will be rewarded for your efforts. I find that just the process of framing the question for someone else brings some answers to light.

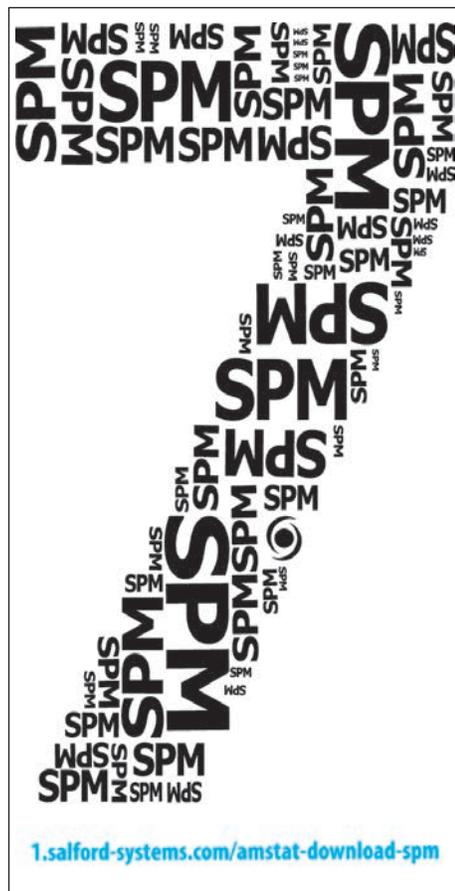
Have you ever been on the other side? Reviewed someone else's work? Advised a protégé? Answered questions on an Internet forum? If not, give it a try. You may be surprised to discover that you get as much out of the interaction as the person you're helping. It can be quite gratifying, and there's always something to learn. As every teacher knows, the best way to really understand a subject is to try to explain it to someone else.

No matter how much experience you have, there's always someone with more experience from whom you can learn, and there's always someone with less



experience who could benefit from your help.

Paint a picture and pay it forward ... two spices to flavor your statistics life. ■



STATtr@k

How to Do Statistical Research

Terry Speed



Editor's Note:
Adapted from
"Terence's Stuff,"
IMS Bulletin, Vol.
34, No. 1

Statistical research, for me, usually begins with either trying to find a half-reasonable answer to a question, where I have found no prior approach exists, or trying to find a 60% reasonable answer based on something that is already half-reasonable. In brief, doing something where there is currently nothing, or doing a little better where there is currently something. If what already exists is pretty good, I'll use it.

This takes place in a context (data, questions). I lost interest in context-free statistical research long ago, partly because any "standard" or "routine" method, model, tool, or technique is likely to need modification or extension in a new context. Therein lies the chance to do some research, if that interests you. If not, use something "off-the-shelf" and hope it does a good job. (In my experience, finding out whether a given method, model, tool, or technique does the job is frequently a research problem itself.) If there is no standard or routine method, model, tool, or technique, go for it and hope nobody notices until you are done!

A strategy I discourage is "develop theory/model/method, seek application." Developing theory, a

model, or a method suggests you have done some context-free research; already a bad start. The existence of proof (Is there a problem?) hasn't been given. If you then seek an application, you don't ask, "What is a reasonable way to answer this question, given this data, in this context?" Instead, you ask, "Can I answer the question with this data; in this context; with my theory, model, or method?" Who then considers whether a different (perhaps simpler) answer would have been better?

The ideal research problem in statistics is "doable," interesting, and one for which there is not much competition. My strategy for getting there can be summed up as follows:

- Consulting: Do a very large amount
- Collaborating: Do quite a bit
- Research: Do some

Why? A very large amount of consulting means meeting many people and many problems and learning a lot, including where we are ignorant. Then, you might spot some low-hanging fruit. Quite a bit of collaboration gives you an in-depth knowledge of something, rubs your nose in your ignorance, and perhaps motivates you to reduce it a little. Research keeps the brain active and is fun. It also helps careers (fame, fortune), but you know that.

A clarification: For many—perhaps most—of you, the way to do statistical research is to get more data (in context, with questions) through consulting and collaborating. However, for a few of you, it may be to get less data—to find the opportunity to focus on research more and do less consulting and collaborating.

I say do a very large amount of consulting. How can you make this happen, with whom, and how much is "a large amount"? Naturally, the answer depends on your situation. If you are at a university or other research institution, you should have no real difficulty answering these questions. If you are somewhere else, it can be harder.

I say collaborate quite a bit. How do you find collaborators, how do you choose them, and how much is "quite a bit"? The answer here also depends on your situation. Collaboration can arise out of consulting. Collaborate on a topic in which you are interested, with people in the field you like, who are good at what they do, and who are conveniently

located so you can see them frequently and become part of the team. When you are asking how much is enough, you can do more! You'll know. Talk it over with your mentor.

Mentors can help a lot. Help you to get started, help you to carry on, help you know when to stop. Find one! Similarly, your boss can help. S/he should support your efforts, understand your aspirations, accommodate your needs, and see that your efforts are recognized. You may not always be so lucky!

As for Actually Doing Statistical Research ...

Most of what I have talked about is arranging the conditions for research opportunities to present themselves; this is by far the major part of the problem. Doing the research is also important. So I offer some quotes and comments (guess the sources!), as well as some of my own experience.

- Research is 1% inspiration and 99% perspiration.
- Develop your techniques.
- If at first you don't succeed, try, try again. (Then quit. No use being a damn fool about it.)
- Keep it "as simple as possible, and yet no simpler."
- Chance favors prepared minds.
- My method of overcoming a difficult problem it to go around it.
- An approximate answer to the right question is worth a good deal more than the exact answer to an approximate problem.
- Never stop listening to and learning from others.
- Use all the resources available: CIS, PubMed, etc.
- Research is the process of going up alleys to see if they are blind.
- Emulate the masters and mistakes (i.e., copy, but with attribution). ■

2013 SUMMER INSTITUTES & CONFERENCES

at the University of Washington, Seattle, Washington, USA

- ◆ **18th Summer Institute in Statistical Genetics**
8-26 July 2013, <http://sisg.biostat.washington.edu>
- ◆ **5th Summer Institute in Statistics and Modeling in Infectious Diseases**
8-24 July 2013, <http://depts.washington.edu/sismid/>
- ◆ **2nd Summer Institute in Biostatistics**
12-16 August 2013, <http://sib.biostat.washington.edu>
- ◆ **SQG Conference: "Impact of Large-Scale Genomic Data on Statistical and Quantitative Genetics"**
24-26 November 2013, www.biostat.washington.edu/sqg_conference



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Members Reveal Why They Have Remained with ASA for Three Decades

Christy Chuang-Stein, Statistical Research and Consulting Center, Pfizer Inc.



In the April issue, the ASA published a list of long-time members of the association. Some of these members have been with the association for more than half a century. Imagine that! Recently, we reached out to a few and asked why they have remained ASA members for all these years. This is what they told us:

I became a member of ASA the year prior to receiving my PhD. The primary reasons for joining were professional development and affiliation. Later, I discovered other reasons for continuing to be a member of the ASA: access to experts (face-to-face and publications), leadership development, current best practices, current issues, ethical behavior, and many life-long friends. It came to me over a period of time that to give is much more preferable and rewarding than receiving. So, I volunteered in several ASA programs and activities. Currently, my joy comes from mentoring graduate students and tutoring K–12 students in mathematics and statistics.— *Bob Assenzo, member since 1962*

I joined ASA when I was a graduate student in statistics. After finishing my PhD, I returned to Canada to work in Canadian Universities. However, my wife and I enjoyed going to the annual ASA meeting, as we were able to visit with many of our friends from graduate school days. These trips were a vacation for my wife and an outlet for me to present a paper and for me to see how others thought about various statistical issues. I still often take a course to get the latest on a topic that I might use. ASA has been a key professional resource for my career.— *Charlie Goldsmith, member since 1963*

ASA's increasing support to pre-university statistics education has made me a loyal member for nearly half a century. Fred Mosteller began it all in 1967 by creating with NCTM (National Council for Teachers of Mathematics) the ASA/NCTM Joint Committee on Curriculum in Statistics and Probability for grades K–12. Many wonderful publications (e.g., *Statistics by Example*, *Statistics Teacher Network*, *Making Sense of Statistical Studies*, *Bridging the Gap*) and projects (e.g., poster and project competitions) have come from the committee. Thank you ASA for helping us try to create a statistically literate citizenry.— *Jerry Moreno, member since 1964*

As a graduate student, my professors instilled in me that part of being a practicing statistician was to be a member of the ASA. ASA assists us in staying current in our profession via journals, short courses, online courses, and presentations at meetings. What I value the most is the opportunity to meet other statisticians. Some have

not only mentored me, but encouraged me to take up leadership roles within the Biopharmaceutical Section. My wish is that I could find avenues to provide this encouragement to the next generation of statisticians.— *Anna Nevius, member since 1967*

ASA has provided a mechanism for keeping up with what is happening in the statistics profession and renewing old friendships. I think it's also important for professional statisticians to be a member of ASA (or comparable organizations in other countries, such as RSS) to help provide visibility to statistics as its own field and not merely a subfield of mathematics, business, public health, computer science, operations research, etc.— *Alan Agresti, member since 1970*

ASA has been key to providing me with exceptional career opportunities. The professional networks, friendships, and learning opportunities have been so tangible that I never for a moment thought of allowing my membership to expire. Even today with a larger-than-ever membership, I always seem to meet new and interesting ASA members besides seeing my old friends and colleagues. I am at a point in my career where it is even more important for me to give back. Contributing as an active member of ASA allows me to feel like I have given as much as I have received.— *Rob Santos, member since 1976*

I can honestly say that ASA has had a very significant, positive effect on my career. In addition to the obvious things, such as the meetings and publications it offers, ASA has given me numerous opportunities to develop as a leader, in addition to developing as a statistician. ASA has also facilitated meeting and developing relationships with many statisticians in diverse areas of the discipline. I definitely feel that I have gotten out more than I have put into the ASA.— *Roger Hoerl, member since 1982*

I joined the ASA as I was finishing my master's degree in statistics. I first joined our local ASA chapter where interactions with other local statisticians allowed me to broaden my understanding of how statistics was being applied to almost every branch of science. Over the years, networking with other statisticians at our annual meetings has allowed me to develop relationships with individuals in other areas of statistics and find statisticians with similar interests as mine. This would not have been possible without my ASA membership and attendance at JSM.— *Janet Buckingham, member since 1985* ■

A Call for Participation in XSEDE Computing: Statisticians Needed for Big Data

George Ostrouchov, Oak Ridge National Laboratory and University of Tennessee

In this age of Big Data, *The New York Times* (<http://nyti.ms/3wiBSi>) and *The Wall Street Journal* (<http://on.wsj.com/14aX7f0>) reported that statistics is cool. Yet, when it comes to high-performance computing (HPC), a necessary component in dealing with Big Data, the statistics community is still largely absent. ASA President Marie Davidian says “Mentions of statistics or statisticians were scant” in recent *Nature* and *Science* articles on data (<http://bit.ly/YTmbNw>).

Big Data are becoming synonymous with just “data” as more people use the term and data sets get bigger, but it is mostly the truly big data on big resources that make the news. “Statistical, mathematical, and computational sciences are a key to innovation and discoveries in this era of Big Data and observation,” said Sastry Pantula, director of the Division of Mathematical Sciences at the National Science Foundation (NSF). “NSF is making significant investments in advanced cyber infrastructure (ACI), and it is important for our communities to take advantage of facilities like XSEDE for their research and for training their undergraduate and graduate students.”

XSEDE (www.xsede.org) stands for Extreme Science and Engineering Discovery Environment and is the NSF’s portal for sharing large computer systems (including supercomputers), data, and expertise. It is easy to apply for resources, which can include computing time on large platforms and expert assistance with running codes such as R.

You don’t have to win the lottery (or a big grant) to buy HPC resources. If you are at a U.S. institution, these resources are available almost “just for the asking.” Jump in yourself, or let your students take the training and teach you (www.xsede.org/education-and-outreach). You can get a “startup” XSEDE allocation at www.xsede.org/using-xsede. Ask for “extended collaborative support” for expert help on your project.

Working with these machines is becoming much easier, even with R (e.g., r-pbd.org). After some familiarity with the resources, an “education” allocation can be used

for conducting classes and teaching students about parallel computing.

The cool kids, described in *The New York Times* and *The Wall Street Journal*, are statisticians who are also computationally savvy. Parallel computing has gone mainstream as the technology that replaced increasing clock rates of hardware. Scalability is now the term that describes software’s parallel ability to use higher core counts, bigger co-processors, and cluster computers. Only scalable parallel algorithms can now benefit from new hardware. Participation in XSEDE computing is an avenue



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for making sure the next generation of statisticians is made up of the cool kids for data.

To some, this may seem a job for those who care more about the hardware and algorithms than about theoretical statistics. The reality is that theoretical statisticians are desperately needed. All forms of parallel computing have a common theme of how to split up the problem and data into pieces and how to assemble the pieces. This is done best by someone who understands the estimation problem and is able to consider pitfalls and alternatives due to how data partitions and data size affect bias and variability.

The need for participation by statisticians in HPC goes deeper than just bigger data and faster estimation. The mathematics community in predictive simulation science is heavily involved with HPC. Uncertainty quantification is now a hot topic in that community. This is where statisticians' understanding of uncertainty, developed over the past century, is particularly strong and needs to be brought to the table. Our presence in HPC will help us intersect more heavily with this community and be more relevant for HPC-based prediction. ■

To the Editor:



I commend Stephen Stigler for his excellent list of 20 outstanding statisticians for the ASA Hall of Fame (March, 2013). However, I was surprised at what seems an important omission. Simon Kuznets, among his many impressive qualifications, had what I believe to be a unique distinction. He served as a president of the ASA (1949) and received the Nobel Prize (Economics, 1971). Kuznets made major contributions to economics, demography, and statistics; was president of the American Economic Association (1954); and provided important guidance to the U.S. government during World War II. His outstanding contributions exemplified the value of cross-fertilization across different fields and between theory and practice.

Herbert I. Weisberg
Causalytics, LLC
Needham, MA

Herbert Weisberg's nomination of Simon Kuznets for the ASA Hall of Fame has considerable merit. One other statistical connection he does not mention: Simon's brother, George, was also connected to our field, teaching statistics in agricultural economics at Berkeley (my first statistical job was as a TA for George Kuznets). Others, commenting on the ASA website, have made good suggestions. All of these will be considered when we "elect" the next group of members in 2014, the year of the ASA's 175th anniversary.

Stephen M. Stigler
The University of Chicago

CAS Launches Pilot Partnership ASA Mentorship Program

Sponsored with seed money from a 2013 ASA Member Initiative grant, the ASA Committee on Applied Statisticians (CAS) is launching a pilot partnership ASA mentorship program for applied statisticians.

Mentorship initiatives targeted toward practicing statisticians have been made in a variety of ASA units, including some sections, chapters, and committees. Also, a past ASA president wrote two *Amstat News* columns on mentoring. Yet, many have come to CAS asking if such a program exists.

The scope of this pilot will focus on self-identified applied statisticians—both recent master's and PhD graduates—and statisticians who have been out of graduate school for 5–12 years. Members of CAS will work with these statisticians in all areas, including academia, industry, and the government sector. The program will include clearinghouse, consultative, and selected hands-on mentoring activities.

A website is being developed at <http://community.amstat.org/CAS/Mentoring1> to explain the program in detail, including the clearinghouse, so mentees can be referred to ongoing mentoring efforts when appropriate. CAS would like to learn from and partner with ongoing mentoring efforts in other units of the ASA. Contact CAS Chair Amarjot Kaur at amarjot_kaur@merck.com to discuss past and current mentoring efforts you may have been involved in or for general questions about the initiative.

Are you interested in becoming a mentor to an applied statistician and helping us pilot this program during its first year of operation? Are you a potential mentee, or can you nominate an applied statistician who may be looking for a mentorship program? If so, please email contact information to CAS Vice-Chair Erin Tanenbaum at Tanenbaum-Erin@norc.org with "ASA CAS Mentor Program" in the subject line. Also send a résumé/CV to help us match mentors and mentees.

Registration Open for Statistics Workshop

Keynotes to launch event this year

The 2013 ASA Biopharmaceutical Section FDA-Industry Statistics Workshop will be held from September 16–18 at the Marriott Wardman Park, Washington, DC. The conference includes sessions co-chaired by statisticians from industry, academia, and the Food and Drug Administration (FDA). Roundtable luncheon discussions are available on the first day of sessions, and short courses on related topics are offered the day prior to the workshop.

While the format of the workshop remains the same as in the past, keynote addresses given by Donald Rubin of Harvard University and Ronald Wasserstein of the American Statistical Association will open the event.



Wasserstein

Wasserstein, ASA executive director, will speak about the International Year of Statistics (Statistics2013, www.statistics2013.org). The 2013 ASA Biopharmaceutical Section FDA-Industry Statistics Workshop is one of about 2,000 participating organizations in Statistics2013.



Rubin

Rubin is John L. Loeb Professor of Statistics at Harvard University, where he has served as chair for 13 of his more than 25 years there. He has more than 350 publications (including several books) covering an array of topics. Rubin is a Fellow of the American Statistical Association, Institute for

Mathematical Statistics, International Statistical Institute, Woodrow Wilson Society, John Simon Guggenheim Society, New York Academy of Sciences, American Association for the Advancement of Sciences, American Academy of Arts and Sciences, and Alexander von Humboldt Foundation. He is also the recipient of the Samuel S. Wilks Medal, Parzen Prize for Statistical Innovation, Fisher Lectureship, and



George W. Snedecor Award. According to ISI Science Watch, he has been one of the world's most highly cited writers in mathematics.

There will also be a plenary panel session, "Innovation and Best Practices for Clinical Trials," moderated by Lisa LaVange of the FDA. Panelists include Greg Campbell of the FDA, Sue-Jane Wang of the FDA, Tom Fleming of the University of Washington, Janet Wittes of Statistics Collaborative Inc., Frank Shen of Abbvie, and Kyle Wathan of J&J.

Registration closes on September 9. Make sure to register early, as the workshop filled to capacity last year.

The ASA Biopharmaceutical Section FDA-Industry Statistics Workshop is sponsored by the ASA Biopharmaceutical Section in cooperation with the FDA Statistical Association. ■

REGISTRATION FORM

10th International Conference on Health Policy Statistics

October 9–11, 2013 • Palmer House Hilton Hotel—Chicago, IL



[www.amstat.org/
meetings/ichps/2013](http://www.amstat.org/meetings/ichps/2013)

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1. Print or type all information and retain a copy for your records.
2. Use a separate form for each registrant.
3. Mail form with payment to ICHPS Registration, c/o ASA, 732 N. Washington Street, Alexandria, VA 22314. Fax form (credit card payment only) to (703) 684-2037.
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Please see Page 2 for titles and times.

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10th International Conference on Health Policy Statistics Workshops

Wednesday, October 9, 2013

Observational Studies Track

8:30 a.m. to 10:15 a.m.

WK1: “Sensitivity Analysis for Observational Data: Method and Computation”

With Bo Lu, The Ohio State University

10:30 a.m. to 12:15 p.m.

WK2: “Designing an Observational Study with the Propensity Score”

With Thomas Ezra Love, Case Western Reserve University

1:30 p.m. to 3:15 p.m.

WK3: “Causal Inferences in Health Services Research”

With Xiao-Hua Andrew Zhou, University of Washington

3:30 p.m. to 5:15 p.m.

WK4: “The Medical Expenditure Panel Survey (MEPS): A National Data Resource to Inform Health Policy”

With Jeffrey Rhoades, Agency for Healthcare Research & Quality

Longitudinal Data Track: Hierarchical Models

8:30 a.m. to 12:15 p.m.

WK5: “Hierarchical Models and Computing for Joint Longitudinal-Survival and other Multiple Component or Endpoint Data”

With Bradley P. Carlin, University of Minnesota, and Laura Hatfield, Harvard

1:30 p.m. to 5:15 p.m.

WK6: “Missing Data in Longitudinal Clinical Trials”

With Edward Vonesh, Northwestern University

Assorted Methods Track

8:30 a.m. to 10:15 a.m.

WK7: “Interpreting Change and Responder Analysis for Patient-Reported Outcomes”

With Joseph Cappelleri, Pfizer, and Lisa A Kammerman, U.S. Food and Drug Administration

10:30 a.m. to 12:15 p.m.

WK8: “Statistical Analysis of Zero-Inflated Continuous Data”

With Lei Liu, Northwestern University

1:30 p.m. to 3:15 p.m.

WK9: “Comparative Effectiveness Research: Statistical Methods and Challenges”

With Constantine Gatsonis, Brown University, and Sharon Lise Normand, Harvard University

3:30 p.m. to 5:15 p.m.

WK10: “Mixed Models for Ecological Momentary Assessment (EMA) Data”

With Donald Hedeker, University of Illinois at Chicago

Friday, October 11, 2013

Special VA Workshop

12:15 p.m. to 2:00 p.m.

WK11: “Estimation of Re-Identification Risk in De-identified Health Care Data”

With Xiao-Hua Andrew Zhou, University of Washington

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

Management Science Associates, Inc. is pleased to announce the promotion of **Susan Buchman** to the company's first chief data scientist. Buchman joined Management Science Associates in August 2010 and most recently served as director of analytic services. She earned a bachelor's in mathematics at the Massachusetts Institute of Technology in 2001 and a master's and PhD in statistics from Carnegie Mellon University (CMU), specializing in nonparametric statistics and high-dimensional data. She previously worked at Travelers Insurance and CMU's Robotics Institute. ■



Hoerl

Roger Hoerl, the Donald C. Brate '45-Stanley G. Peschel '52 Assistant Professor of Statistics, will receive the Statistical Advocate of the Year award from the Chicago Chapter of the American Statistical Association. The award, which recognizes those who successfully advocate for the importance of data and sound analysis in a variety of sectors, also celebrates the contributions of the late Harry V. Roberts, a noted statistician whose work had a significant impact on the practice and teaching of statistics. Hoerl, who joined Union College last fall, previously led the Applied Statistics Laboratory at GE Global Research. His recent research interests have focused on the development of the discipline of statistical engineering, which provides approaches for addressing large, complex, unstructured problems. ■



Pantula

Oregon State University (OSU) has named **Sastry Pantula**, a statistics professor at North Carolina State University who has served as director of the National Science Foundation's Division of Mathematical Sciences since 2010, as dean of OSU's College of Science.

Pantula, who will begin his new duties on August 30, succeeds interim dean Vince Remcho. Past-President and Fellow of the American Statistical Association, he is also a Fellow of the American Association for the Advancement of Science.

"Sastry Pantula has a distinguished career, during which he consistently has demonstrated his ability to help develop outstanding opportunities for undergraduate and graduate students and collaborative research, as well as build strong and diverse faculty," said Sabah Randhawa, OSU provost and executive vice president. "The College of Science and Oregon State University will benefit from his excellent organizational and leadership skills."

Pantula has been on the North Carolina State faculty since 1982. He headed the statistics department there for eight years and directed the university's Institute of Statistics. During his tenure, he worked with his dean and the college foundation to create three \$1 million endowments for distinguished professors. Since 1999, working with colleagues and alumni, he also has secured more than \$7 million in funding from the National

Science Foundation and other agencies and industries to promote graduate student training and mentorship.

His own research focuses on time series analysis and econometric modeling with a broad range of applications. He has worked with the National Science Foundation, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, and U.S. Census Bureau on projects ranging from population estimates to detecting trends in global temperature.

As dean of OSU's College of Science, Pantula will provide leadership for some of OSU's most recognized disciplines, including nationally noted programs in physics, ecosystem informatics, water resources, and environmental health science. The college is a major reason OSU has gained the top ranking in the United States for conservation biology in recent years. Diversity of sciences in the college, including mathematical and statistical sciences, provides innovative opportunities for fundamental and multidisciplinary research collaborations across the campus and around the globe.

Pantula holds bachelor's and master's degrees from the Indian Statistical Institute in Kolkata, India, and a PhD in statistics from Iowa State University. *Submitted by Mark Floyd* ■

J. N. K. Rao of Carleton University was awarded an honorary doctorate (*laurea honoris causa*) by the Catholic University of Sacred Heart, Piacenza, Italy, during a special ceremony on March 20. Rao delivered a lecture titled "Impact of Sample Surveys on Social Sciences" after receiving the award. ■

Leslie M. Moore Wins 2013 Don Owen Award



On March 22, San Antonio Chapter Vice President Peter Olofsson (left) presented the Don Owen Award to Leslie M. Moore for her outstanding contributions to research, statistical consultation, and service to the statistical community.

The 2013 Don Owen Award, given by the American Statistical Association's San Antonio Chapter, was presented to Leslie M. Moore by chapter vice president, Peter Olofsson, on March 22 during the Conference of Texas Statisticians. The conference was held at Rice University and organized by Dennis D. Cox of the department of statistics.

Moore is a research scientist at Los Alamos National Laboratory. She earned her doctoral degree in mathematics from The University of Texas at Austin in 1985, after which she worked for seven years at Los Alamos, one year at the Institute of Statistics and Decision Sciences at Duke University, six years at Comforce Technical Services in Albuquerque, and again joining Los Alamos as a research scientist in 1998, where she has remained.

Moore has published research articles about several topics, including experimental design and, in particular, design of computer experiments, analysis methodology, measurement system assessment, and search algorithms. She is recognized as a leading expert in the design of computer experiments where, in particular, her 1990 article on minimax and maximin design is a widely cited seminal work.

Moore has done an extensive amount of statistical consulting, working on topics such as carbon capture implementation, nuclear plant reliability, transportation simulation, and supercomputer performance. She also has served as supervisor to numerous summer student interns at Los Alamos and won its 2010 Achievement Award for contributions to its student program. She is regularly invited to present her research and consulting work at conferences and symposia. Moore, who was nominated by Michael Hamada of Los Alamos National Laboratory, is a member of the American Statistical Association and a fellow of the Royal Statistical Society. ■

Obituaries

William D. Commins

William Commins Jr., 82, a statistician who worked at the National Science Foundation, passed away April 8 at his home in Bethesda, Maryland.

Commins worked for the National Science Foundation for more than two decades on matters that included the evaluation of grant proposals and results. He was previously an analyst and researcher for the National Security Agency and private sector firms including Planning Research Corp.

Commins earned his bachelor's degree in mathematics from Catholic University and doctorate in statistics from Stanford University in 1959.

His memberships included the American Statistical Association and St. Jane Frances de Chantal Catholic Church in Bethesda.

Earl S. Pollak

Earl Pollak, retired study director for the Committee on National Statistics of the National Research Council, passed away June 11, 2012.

He was formerly chief of biometry at the National Cancer Institute. Prior to that, he was director of the Division of Biometry and Epidemiology at the National Institute of Mental Health.

Pollak was a Fellow of the American Statistical Association, American College of Epidemiology, and American Public Health Association. He earned his bachelor's and master's degrees in statistics from the University of Minnesota and an ScD in biostatistics from Harvard University.

Marc F. Fontaine

Marc Fontaine, retired senior research consultant for Texaco, died January 24, 2013. He was 86.

Fontaine was a member of many organizations, including the Texas Society for Professional Engineers, American Institute of Chemical Engineers, Society of Petroleum Engineers, American Mathematical Society, American Statistical Association, Society of Core Analysts, American Chemical Society, Pioneer Oil Producers Society, and Texaco Retirement Club.

To read more about Fontaine's life, visit his memorial page at <http://marcffontaine.com/obituary>.

William Kenneth Poole



Poole

William Poole, 73, passed away on April 6, 2013.

Poole served as senior statistician, chief scientist, and center division vice president at the Research Triangle Institute in Research Triangle, North Carolina.

Poole was a Fellow of the American Statistical Association and was published in more than a 100 publications, including the *Journal of the American Statistical Association*, *American Journal of Epidemiology*, and *American Journal of Public Health*.

His complete obituary can be found at www.heraldsun.com/obituaries/x204799606/April-8-2013. Online condolences may be submitted to www.howertonbryan.com.

David Sylwester

Longtime ASA member David Sylwester passed away April 26, in Knoxville, Tennessee.

Sylwester graduated with a math degree from the University of Oregon, earned a master's in physics from the University of Indiana, and earned his PhD in statistics from Stanford University.

Since 1983, he served as head of the department of statistics at the University of Tennessee. He was also treasurer of the American Statistical Association in 1999.

To read more about his life, visit his memorial page at www.legacy.com/obituaries/knoxnews/obituary.aspx?n=david-luther-sylwester&pid=164543804#fbLoggedOut.

Martin B. Wilk

Submitted by Christian Genest and Gordon J. Brackstone

Martin B. Wilk died in Yorba Linda, California, on February 19, 2013. He was 90.

Throughout his career, Martin demonstrated that a statistician can successfully span academia, industry, and government. For more than half a century, he made important contributions to and occupied senior positions in each of these domains. While his name may be best known within the profession for the Shapiro-Wilk test for normality, his influence on statistical methods and practice has been much broader. He was, among other positions, assistant vice-president and director of corporate planning at AT&T and chief statistician of Canada. In 1999, he was made an Officer of the Order of Canada for providing "insightful guidance on important matters related to our country's national statistical system."

Born and raised in Montréal, Martin attended McGill

University, where he completed his bachelor's degree in chemical engineering in 1945. After graduation, he joined Canada's National Research Council atomic energy project at Chalk River, Ontario, where he soon recognized the critical role of variability in data analysis. At first, he developed his own techniques to handle this variability. It was only after his move in 1950 to Iowa State College as a laboratory research assistant that he discovered the discipline of statistics. He was soon enrolled in statistical courses and underwent his conversion from engineer to statistician. At Iowa, he completed a master's degree in 1953 and a PhD in 1955 in experimental design under the supervision of Oscar Kempthorne.

Martin's postdoctoral year was spent at Princeton University under John Tukey, during which he was introduced to the research work of Bell Labs on a part-time basis. Attracted by the research environment of Bell Labs, he chose to continue there after his postdoctoral year. During the 1960s, he took on progressively more senior positions in the statistical methods and research groups of Bell Labs. Between 1959 and 1963, he was also professor of statistics at Rutgers University while maintaining a part-time consulting relationship with Bell Labs.

The contributions to statistical methodology for which Martin is renowned stem largely from this period at Bell Labs. With primary collaborators Ram Gnanadesikan and Samuel Shapiro, he published a series of papers dealing with probability plotting for multivariate data and diagnostic procedures for classical distributions, including the well-known Shapiro-Wilk test statistic for normality.

By the end of the 1960s, Martin had developed an

interest in the broader managerial and organizational issues of the American Telephone and Telegraph Company (AT&T), the parent company of Bell Labs. Beginning with the issue of rate setting for telephone services, and as preparation for hearings by the Federal Communications Commission, he became involved in the assessment and improvement of the models being used to value various business lines. This involvement led to the recognition by AT&T's management of the broader value of management science, and Martin was to be an in-house leader in this respect. During the 1970s, he directed staff involved in corporate modeling, research, and planning, becoming assistant vice president and director of corporate planning in 1976.

In 1980, Martin was approached by the Canadian government for the position of head of Statistics Canada. At that time, the agency had been experiencing serious difficulties. Independent reviews of both management and methods, commissioned by the government, had identified a range of issues that needed to be addressed, not least of which was a loss of staff morale following a period of adverse publicity. Martin accepted this challenge and became chief statistician of Canada late in 1980, the first mathematical statistician to occupy this post.

Between 1981 and 1985, Martin refocused Statistics Canada by, for example, introducing a more integrated and cohesive organizational structure, strengthening the agency's contacts with ministries and other important data users, putting in place a disciplined planning system, rationalizing its program of publications, and establishing a stronger analytical capacity.

He gave the organization a sense of purpose again. During this period, he also had to deal with a sudden Cabinet decision to cancel the 1986 census, a decision he managed to have reversed after some persuasive lobbying and innovative funding proposals. Martin's short tenure as chief statistician of Canada set the stage for Statistics Canada to flourish and become recognized as a world-class statistical agency over the following two decades.

After his retirement from Statistics Canada in 1985, Martin remained in Ottawa and undertook several important consultancies for the Canadian government. In particular, he headed the National Task Force on Health Information that led to the creation of the Canadian Institute of Health Information. He also conducted a review for Revenue Canada of their data management and holdings with emphasis on strengthening the statistical use of these data. He served for many years on the National Statistics Council of Canada, as well as on Statistics Canada's advisory committees on statistical methods. Finally, approaching 80, he retired to the West Coast of the United States, living for extended periods in Oregon and California, where he was able to enjoy his later years with his second wife, Dorothy, and his children and grandchildren.

Martin was a vice president of the American Statistical Association from 1980–1982, having previously served as president of his local chapter. He also served as president of the Statistical Society of Canada for 1986–1987, promoting the strengthening of ties between academic statisticians and statisticians in industry and government. He was made an honorary member of the Statistical Society of Canada in 1988 “for seminal contributions to the

fields of analysis of variance, multivariate analysis, model fitting and validation; for enormous contributions to Statistics Canada as the chief statistician; and for insightful guidance of the society while serving on its board and as its president.”

Martin's contributions to the statistical profession were recognized by many other honors throughout his career. He was, among others, a Fellow of the American Statistical Association (1962), Institute of Mathematical Statistics (1968), and American Association for the Advancement of Science (1969). He received the Jack Youden Prize in 1972 and a Distinguished Alumni Award from Iowa State University in 1997.

Those who worked with Martin recall his formidable ability to argue a case, extemporaneously and sometimes at length; his penetrating questions, often from unexpected angles; his ability to analyze complex issues quickly and focus on the crux of the matter; and his unending supply of aphorisms exactly suitable for the issue at hand. Many of his pronouncements continued to be quoted at Statistics Canada long after he retired.

The profession has lost a great statistician whose contributions to theory and practice will long be influential. For additional information about Martin's life and career, visit www.ssc.ca/en/about/history-ssc/martin-bradbury-wilk and www.theglobeandmail.com/news/national/martin-wil-remembered-as-the-best-statistician-in-canadas-history/article11040353/?cmpid=rss1 or see C. Genest and G.J. Brackstone's 2010 *Statistical Science* article, “A Conversation with Martin Bradbury Wilk.”

sectionnews

Biometrics

The Biometrics Section will sponsor six Continuing Education courses and six invited sessions at this year's Joint Statistical Meetings in Montréal, Québec.

Continuing Education Courses

Statistical Methods in Genetic Association Studies
 Personalized Medicine and Dynamic Treatment Regimes
 Analysis of Interval-Censored Survival Data
 Statistical Methods for Medical Imaging Analysis
 Statistical Evaluation of Prognostic Biomarkers
 Practical Software Engineering for Statisticians

Invited Sessions

Current Statistical Issues in Comparative Effectiveness Research
 Dynamic Treatment Regimes and Adaptive Designs Toward Personalized Health Care
 Emerging Statistical Methods for Big Data
 Frontiers in Longitudinal and Survival Data Analysis
 Big Data, Big Impact When Statistics Matter
 Questions in Cancer Research: What Are the Most Pressing Statistical Problems?

The section is now looking for invited session or short course ideas for JSM 2014, to be held in Boston, Massachusetts. Contact Jonathan Schildcrout at jonathan.schildcrout@vanderbilt.edu if you have any.

Invited session ideas are also welcome for ENAR 2014, which will take place March 16–19 in Baltimore, Maryland. Send your ideas to Jason Roy at jaroy@mail.med.upenn.edu.

For detailed section news, visit <http://magazine.amstat.org/?cat=17>. ■

Biopharmaceutical

This year, the ASA's Biopharmaceutical Section will celebrate the International Year of Statistics at the Joint Statistical Meetings in Montréal. The section will sponsor two short courses, five invited sessions, 27 topic-contributed sessions and contributed sessions, and eight roundtable discussions.

The following is a list of a few sessions:

Sunday, August 4

Censoring Issues in Survival Analysis
 Regulatory Considerations on Design and Analysis of Observational Studies

Monday, August 5

Analysis of Recurrent Events in the Presence of Competing Risks and Informative Censoring Issues in Building Imputation Models for Missing Data Techniques

Impact of Bayesian Methods in Medical Product Development

Tuesday, August 6

Statistical Innovations Developed for Cancer Clinical Trials

Critical Aspects of Dose-Finding in Drug Development

Regulatory Challenges of Nonclinical Biostatistics

Wednesday, August 7

Highlights of a Special Issue of SBR in Honor of Robert O'Neill's Tenure as Director of the Office of Biostatistics at FDA

The Affordable Healthcare Act's Statistical Challenges
 Missing Data in Noninferiority Trials

Thursday, August 8

Challenges in Evaluation of Correlates of Protection and Immunobridging of Vaccine Trials
 Challenging Statistical Issues in Medical Device Trials

This year, there will be a novel hybrid presentation, the SPEED session. In the SPEED session, you will hear up to 20 five-minute talks. This is the first year for SPEED sessions, so feedback from both presenters and meeting attendees is encouraged.

For detailed section news, visit <http://magazine.amstat.org/?cat=17>.

Government Statistics and Social Statistics

Members of the Social Statistics and Government Statistics sections have organized a great set of technical sessions and roundtables for the upcoming Joint Statistical Meetings in Montréal. In addition to papers, panels, and roundtables, the sections also encourage you to visit the poster sessions. Posters provide a great opportunity for you to interact with the authors to discuss their research.

Sessions begin on August 4 at 2:00 p.m. and continue until August 8. Below is a summary of the section-sponsored invited (I) and topic-contributed (TC) sessions and roundtables (R) by date.

Sunday, August 4

The Undercount of Young Children in Official Statistics (I)
 The 2013 Current Population Survey ASEC Field Test (TC)

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

Robust Inference in Social Science with Wrong but Useful Models (TC)

Complex Data Analysis and High-Dimensional Computing: Methods and Applications (I-Poster)

Monday, August 5

Sampling Asians in the National Health and Examination Survey (R)

Hurricanes, Damned Hurricanes, and Statistics (TC)

Design and Adjustment Challenges in Modern Surveys (TC)

Toward Better Statistical Methods for Causal Inference (I)

The National Children's Study (NCS) Vanguard Data Analytics (R)

Graphical Approaches for Survey Data (I)

Tuesday, August 6

New Developments in the Use of Smart Phones for Survey Research (I)

Bayesian Modeling of Populations (TC)

Measuring Relationships in U.S. Federal Household Surveys (I)

Blending Probability and Non-Probability Samples Using Calibration Techniques (R)

Extracting Social Science Insights from Social Media (R)

Wednesday, August 7

Elicitation of Data Users' Utility Functions and Prior Information in Work with Large-Scale Data Collection for Government Agencies (I)

Administrative Records Use for Health Insurance Research (TC)

Administrative Records Quality, Coverage, and Applications for Surveys and Censuses (TC)

An Attempt to Disentangle the Effect of Variables in Obama's Presidential Election (R)

Would the Real Steve Fienberg Please Stand Up: Getting to Know a Population from Multiple Incomplete Files (I)

Record Linkage Research and Applications (TC)

Thursday, August 8

Evolution of Federal Statistical Agency Disclosure Review Boards (TC)

New Paradigms for Missing Data Methods in Social and Economic Surveys (TC)

Real-World Approaches to the Knotty Problems of Outliers, Faulty Values, and Covariates in Complex Sampling Designs (TC)

Dynamic Modeling in Tobacco Control Policy (TC)

Visit the online program at www.amstat.org/meetings/jsm/2013/onlineprogram to view the full set of sessions, including contributed paper and poster sessions.

In addition to the sessions, the Government Statistics, Social Statistics, and Survey Research Methods sections sponsor a student paper competition each year. Following are the winning authors:

Jose Zubizarreta, The Wharton School, University of Pennsylvania

Shin-Jung Lee, University of Michigan

Audrey Béliveau, Simon Fraser University

Hanzhi Zhou, University of Michigan

Jonah Deutsch, University of Chicago

For information about the student paper competition/travel award to attend the Joint Statistical Meetings, visit www.amstat.org/sections/studentpaperawards.cfm.

Physical and Engineering Sciences

The Section on Physical and Engineering Sciences (SPES) needs volunteers to help with the data collection for their annual presentation and poster awards, which will be presented during the Joint Statistical Meetings in Montréal. To volunteer, contact Michael Crotty at michael.crotty@sas.com.

Also during JSM, SPES is the primary sponsor of three invited sessions, four topic-contributed sessions, six contributed sessions, one contributed poster session, and four roundtable discussions. SPES also is co-sponsoring several sessions, including "A Celebration of J. Stuart Hunter's Contributions to *Technometrics* and Statistics" on Tuesday at 2 p.m.

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

Statistical Programmers and Analysts

Members of the Section for Statistical Programmers and Analysts (SSPA) are looking forward to being in Montréal and participating in this year's JSM with Continuing Education courses, roundtable discussions, and various oral and poster presentations.

Continuing Education Short Courses

Practical Bayesian Computation

Techniques for Simulating Data in SAS

Invited Posters

The Emerging Role of the Data Scientist

The Variety of Data Scientists

A Little Goes a Long Way: Efficient Habits of the Project-Juggling SAS Programmer

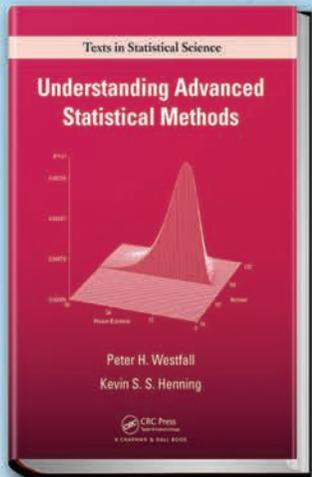
Invited Sessions

Transitioning to Big Data: What Every Statistical Programmer/Analyst Should Know

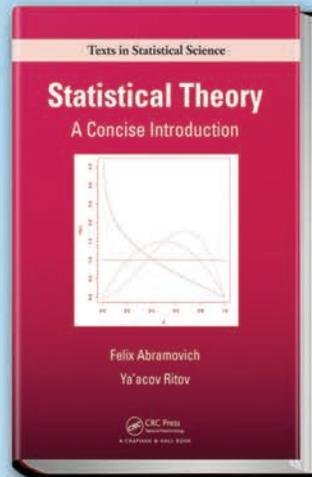
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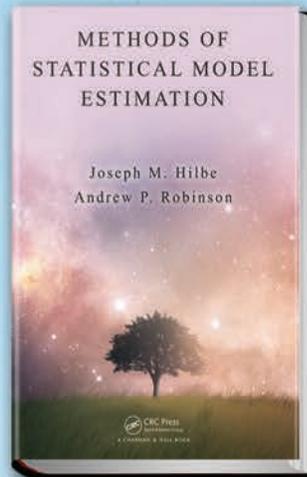
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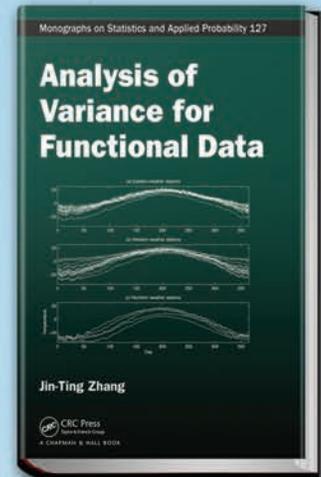
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Andrew P. Robinson
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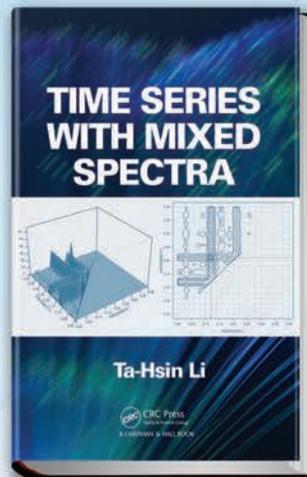
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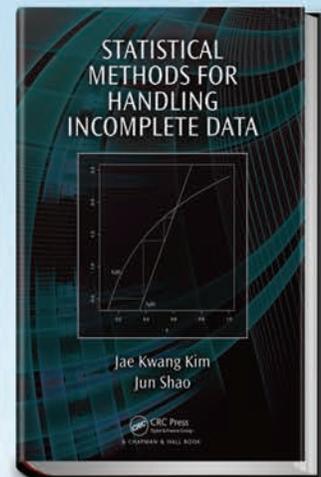
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Topic-Contributed Sessions

The World of Statistical Analysis Professionals

Hitting the Target in Hospital Profiling: The AHRQ Quality Indicators

Statistical Methods for Assessing Hospital Performance: Risk-Adjusted Clinical Outcome Reporting

P.M. Roundtables

Allocating Programming Resources in a Dynamic Environment

Engineering Scientific Solutions

Drop by the section's table in the registration area to hear details about upcoming webinars, technical skills, travel grants, and openings for officers. To volunteer at the table, go to <http://doodle.com/gu3bu2bi4mhwzi7x>.

Statistics in Epidemiology

The Statistics in Epidemiology (SIE) Section will serve as primary sponsor for the following eight invited sessions, eight topic-contributed sessions, 18 contributed sessions, five roundtable discussions, and one short course at this year's Joint Statistical Meetings in Montréal, Québec:

Short Course

Causal Inference and Its Application in Health Sciences

Invited Sessions

Data Integration: Combining Multiple Data Sources to Gain Statistical Efficiency

New Techniques for Big High-Dimensional Data

Mendelian Randomization Methods for Causal Inference

Causal Inference in Observational Studies with Time-Varying Treatments

Biased Epidemiological Study Designs: Opportunities and Challenges

Statistical Methods for High-Dimensional Sequence Data

Recent Work in Causal Inference with Longitudinal Cohort Studies of HIV-Infected Patients

Estimating the Heritability of Complex Diseases - Recent Developments

Topic-Contributed Sessions

Statistical Issues in Assessing Performance of Diagnostic Devices

Recent Developments in Statistical Adjustment for Measurement Error/Misclassification

Spatial Uncertainty in Public Health Problems

Fresh Perspectives on Causal Inference

Advances in G-estimation of Structural Nested Models and Structural Equation Models

Applications of Random Effects Linear Models to Personalized Medicine

Causal Inference: Recent Advances

Methods for Assessing Environmental Factors on Reproductive Outcomes

Contributed Sessions

Statistics in Spatial and Environmental Epidemiology

Statistical Analysis with Biomarkers and Genetics

New Developments in Disease Prediction

Recent Advances in Categorical and Survival Data Analysis

Analytic Challenges in Epidemiological Studies and Public Health

Genetic Epidemiology and Sequencing Data Analysis

New Methods and Applications to Cancer and Psychiatric Research

Statistics in Genetic Epidemiology

New Methods for Missing Data Analysis

Methods and Applications in Diagnostic Tests

Propensity Score and Sensitivity Analysis in Observational Studies

Causal Methods and Applications in Variable Selection, Genetics, Mediation, and Survival Analysis

Developments in Modeling Infectious Diseases

Statistical Challenges with Measurement, Complex Design, and Missing Data

Developments in Genetic Association Studies

Methods and Applications in Survival Data Analysis

Methods and Applications in Modeling Infectious Diseases

Meta-Analysis and Clustered Data Analysis

Roundtable Discussions

Challenges and Strategies for Analysis of Complex Survey Data When Statistical Methodology and Software Package Are Underdeveloped

Dissemination of Novel Quantitative Methods

Development and Application of Statistical Methods in the International Tobacco Control Four-Country Survey

Bayesian Disease Mapping: Opportunities, Challenges, and New Frontiers in an Information and Data-Rich Era

Nursing Home Research as a Challenge and Opportunity for Gerontologic Biostatisticians

For detailed section news, visit <http://magazine.amstat.org/?cat=17>.

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

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

California

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District of Columbia

■ Associate to Full Research Professor, Co-PI or PI. Provide direction in design, conduct and analysis of major multi-center medical studies and publication of major papers. Advising students and teaching. Basic Qualifications: doctorate in statistics or biostatistics or equivalent doctoral educational attainment. Review of applications will begin on May 1, 2013, and is ongoing until the position is filled. For application instructions, go to www.bsc.gwu.edu. EOE/AA.

New Jersey

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International

■ Faculty Positions in Industrial Engineering and Logistics Management. Applications are invited for tenure-track assistant professor/visiting faculty positions. Applicants should have a PhD in industrial engineering or related discipline, strong methodology training in statistics and/or operations research, and excellence in teaching and research. Applications including a CV, statement of research and teaching, and transcript (for assistant professor position only), should be sent by email to ielm@ust.hk. EOE. ■

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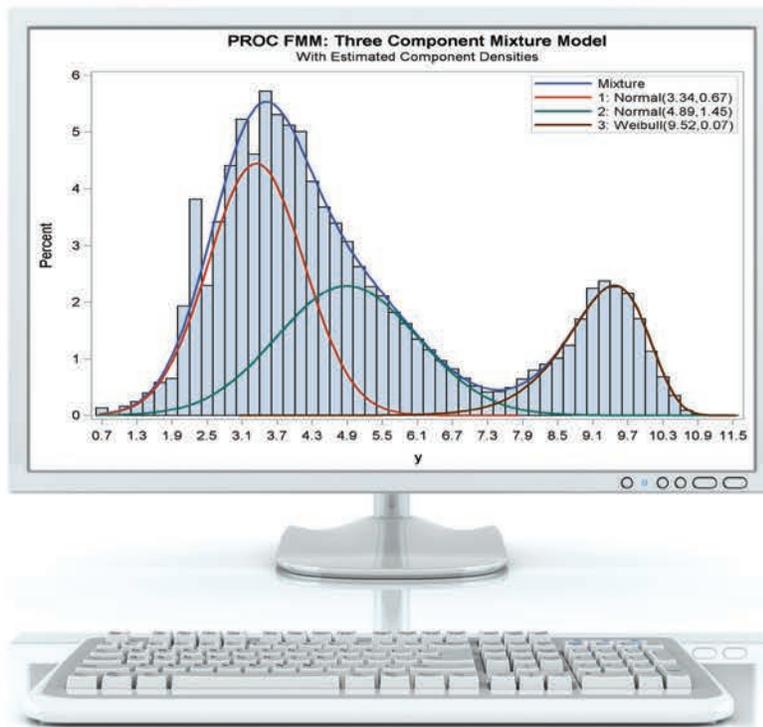
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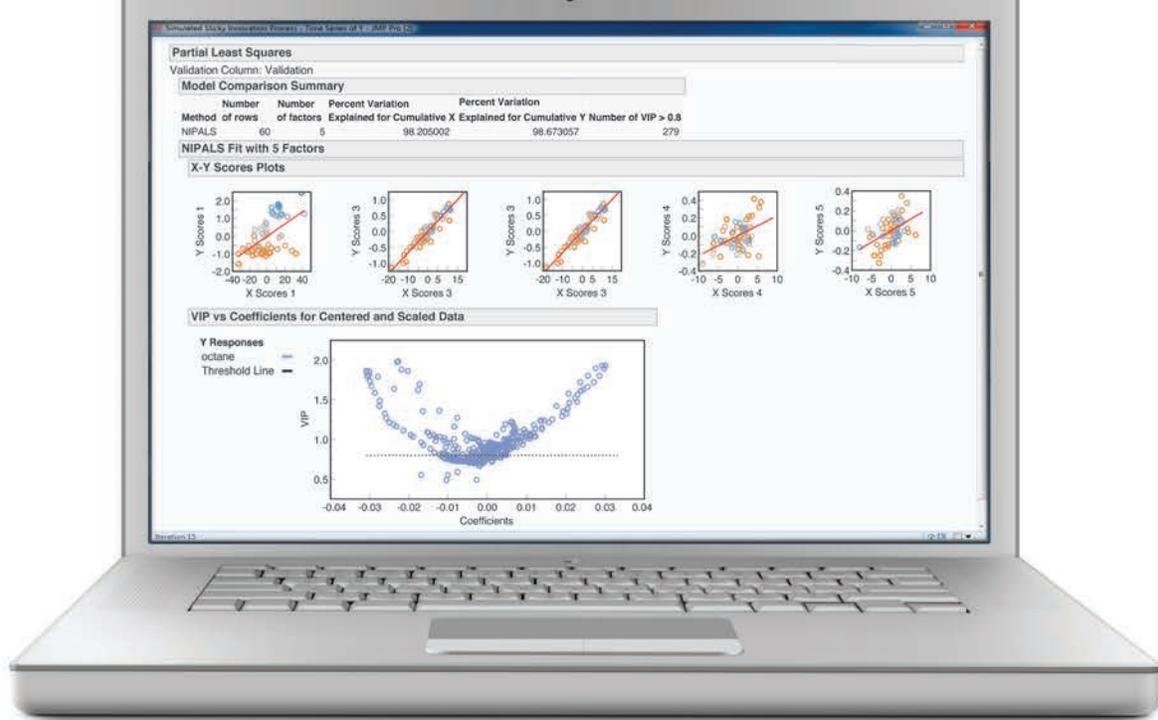
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