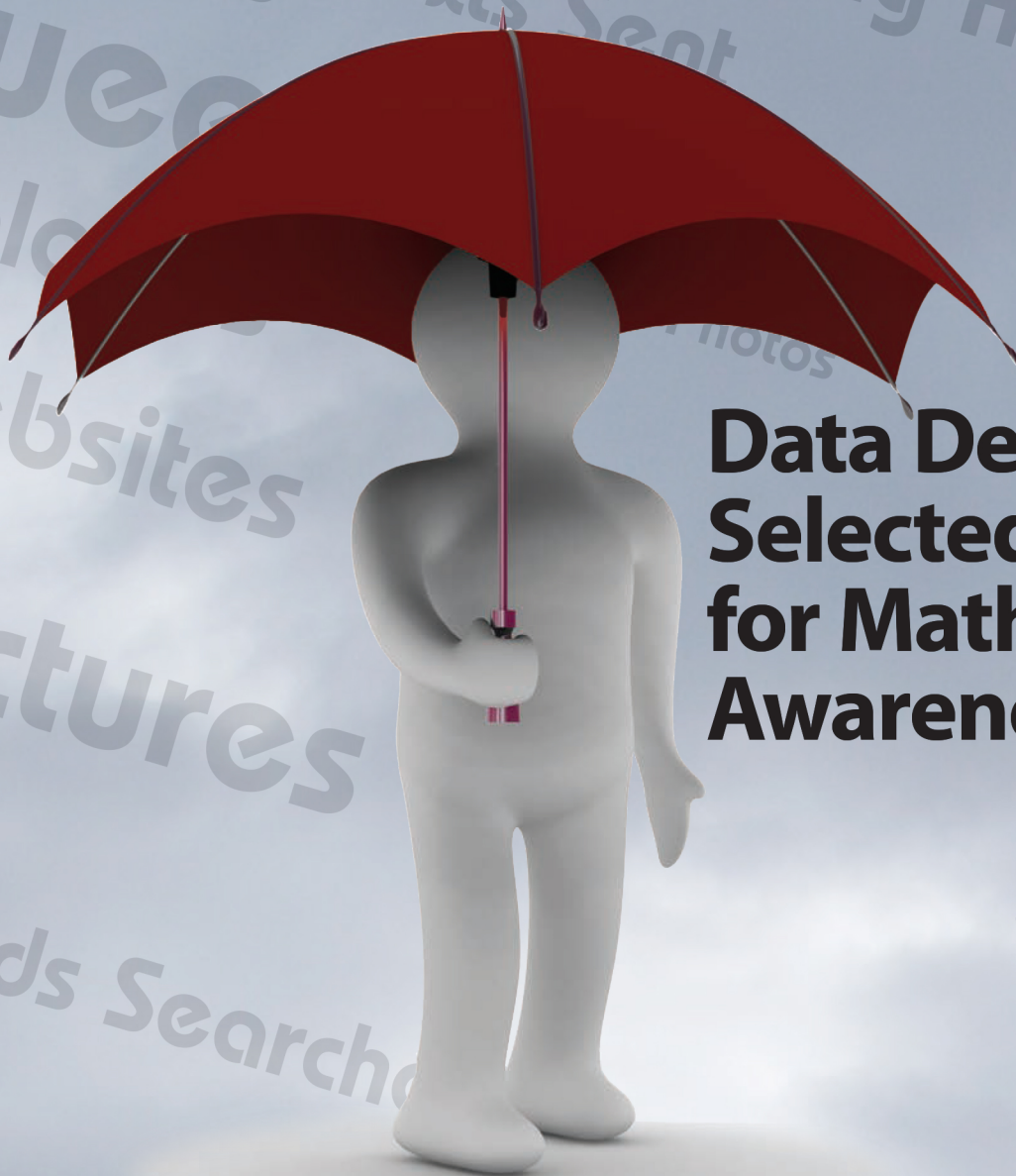


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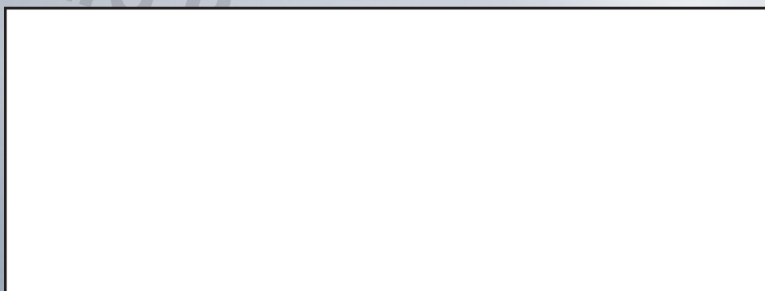


Data Deluge Selected as Theme for Mathematics Awareness Month

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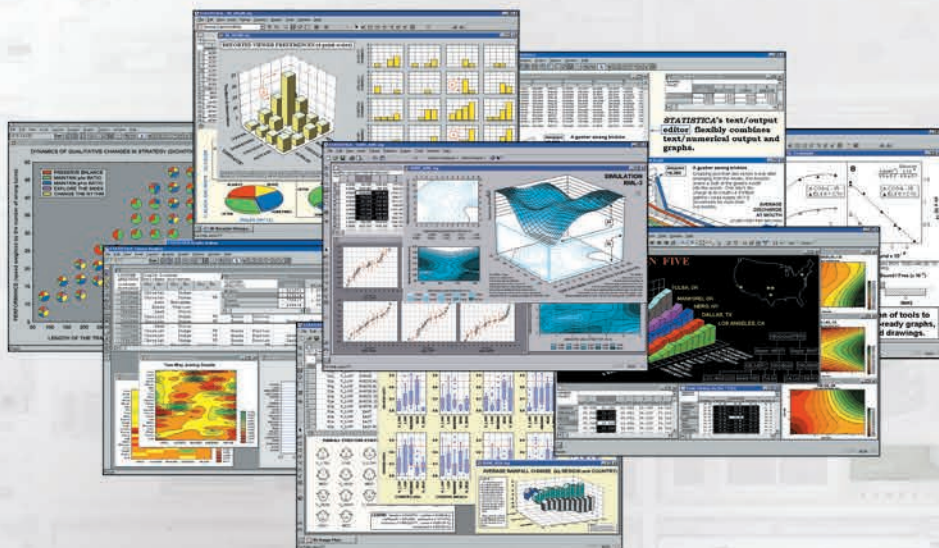
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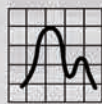
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Executive Director

Ron Wasserstein: ron@amstat.org

Associate Executive Director and Director of Operations

Stephen Porzio: steve@amstat.org

Director of Science Policy

Steve Pierson: pierson@amstat.org

Director of Education

Rebecca Nichols rebecca@amstat.org

Managing Editor

Megan Murphy: megan@amstat.org

Production Coordinators/Graphic Designers

Melissa Muko: melissa@amstat.org

Kathryn Wright: kathryn@amstat.org

Publications Coordinator

Val Nirala: val@amstat.org

Advertising Manager

Claudine Donovan: claudine@amstat.org

Contributing Staff Members

Amy Farris • Rebecca Nichols • Eric Sampson

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American Statistical Association
732 North Washington Street
Alexandria, VA 22314-1943 USA
(703) 684-1221 • FAX: (703) 684-2037

ASA GENERAL: asainfo@amstat.org

ADDRESS CHANGES: addresschange@amstat.org

AMSTAT EDITORIAL: amstat@amstat.org

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

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This column is written to inform ASA members about what the ASA is doing to promote the inclusion of statistics in policymaking and the funding of statistics research. To suggest science policy topics for the ASA to address, contact ASA Director of Science Policy Steve Pierson at pierson@amstat.org.



Pierson

Contributing Editor

Steve Pierson earned his PhD in physics from the University of Minnesota. He spent eight years in the physics department of Worcester Polytechnic Institute before becoming head of government relations at the American Physical Society.

30 STATtr@k Staying Motivated and Achieving Success in Graduate School: A Few Common and New Suggestions

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.



Baumann

Contributing Editors

Doug Baumann is a PhD student in the department of statistics at Purdue University. His research is under the direction of R. W. Doerge and focuses on the annotation-informed integration of 'omic' data in next-generation sequencing. Baumann is interested in curriculum design in undergraduate education and plans to have an academic career at a liberal arts college after graduating.



Nisen

Jeff Nisen is a fourth-year PhD student in the department of statistics at Purdue University. His research focuses on the development of novel estimation and calibration procedures for stochastic models used in the financial engineering, risk management, and econometrics fields. Upon graduation, Nisen plans to work as a quantitative analyst in the financial services industry.

Online Articles

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

The ASA will have an exhibit at the second USA Science & Engineering Festival at the Walter E. Washington Convention Center in Washington, DC, April 28–29. Check out the ASA booth, Discovery Through Statistics, located in Hall C, Booth 1006. Activities will draw from entries to the 2010 Hands-On Statistics Activity Competition, and ASA members will volunteer time in the booth to coordinate the activities. If interested in volunteering, contact Rebecca Nichols at rebecca@amstat.org.

More than 3,000 interactive exhibits and 150 stage shows will take place during the festival. Bring your whole family and give your future and current scientists the experience of a lifetime. Visit www.usasciencefestival.org to view all exhibit and stage shows, download a map of the expo grounds, and view the festival calendar.

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/datetime.

Many of the **sections and committees** sponsor events and host workshops and meetings. For details about these events and other news, make sure you visit our section, chapter, and committee pages online at <http://magazine.amstat.org>.

Lesson Plans Wanted for Statistics Education Web

The new editor of Statistics Education Web (STEW), Mary Richardson of Grand Valley State University, is accepting submissions of lesson plans for an online bank of peer-reviewed lesson plans for K–12 mathematics and science teachers. Lesson plans will showcase the use of statistical methods and ideas in science and mathematics based on the framework and levels in the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report: A Pre-K–12 Curriculum Framework* (www.amstat.org/education/gaise).

Consider submitting several of your favorite lesson plans according to the STEW template to steweditor@amstat.org. For more information, visit www.amstat.org/education/STEW.

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ASA: A 'Big Tent' Organization

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.

Photo
Unavailable

Contributing Editors

Monica Johnston is chair of the ASA Committee on Membership Retention and Recruitment and cofounder of the Section for Statistical Programmers and Analysts. She is an independent consultant and serves as director at Mostly Math, an education services center in Walnut Creek, California.



Price

Dionne Price is a mathematical statistician and team leader at the U.S. Food and Drug Administration. She served as the 2010 program chair for the Biopharmaceutical Section and is the section's current secretary.



Williams

George Williams is vice president of global biomedical data sciences and head of the Center for Observational Research at Amgen. He also is a recipient of the ASA Founders Award and a Fellow of the ASA, Society for Clinical Trials, American College of Epidemiology, American Heart Association, and American Association for the Advancement of Science.

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Statistical Leadership: Perspectives of Past Presidents



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1956 ASA President Gertrude Cox (front, fourth from left) and Bernard Greenberg (back, second from left) at the 1963 ISI session in Ottawa. Greenberg family members are Ruth (back, left), Ray (front, second from left), and Frances (front, third from left). Others are A. Ross Eckler (second from right), who served as ASA president in 1969, and Tulio Hostilio Montenegro (fifth from right), secretary general of the InterAmerican Statistical Institute.

In February and March, I discussed the vital importance of statistical leadership and how we can prepare students and younger professionals for leadership. I conclude the series this month with insights on leadership from past ASA presidents and a little-known story about one of our best-known presidents.

Immediately following the names of presidents, I have indicated their presidential years. This will bring back memories for the longtime members who are recognized in this issue (see Page 5). I am grateful to the presidents who contributed to this column and to Ray Greenberg and Frances Greenberg Klein for the accompanying photograph.

Varieties of Leadership

Statistical leadership takes many forms, as observed by Ronald Iman (1994), who emphasizes our need for leaders “at multiple levels from small to large.”

Jon Kettenring (1997) praises the leaders he describes as “unsung local heroes,” explaining that “these are leaders we meet in all our chapters. They provide critical leadership in ways that are transparent to most of us, but their contributions add up and make the rest of us look good.”

The Path to Leadership

Although the presidents’ accomplishments are varied, their paths to leadership all began with a willingness to serve and work with others. Kettenring said he started small by helping to plan an ASA chapter

in northern New Jersey. In the process, he met a wide range of statisticians from academia and industry. For Jon, “it then seemed that one opportunity led to another.”

Volunteering was also the first step for Robert Mason (2003), who started his current job at a time when he was the only statistician in his organization. Bob realized he needed to network with other statisticians, so he helped form a local chapter and volunteered as its first president. This led to election as representative to the Council of Chapters. Eventually, Bob was elected to the board of directors, where further roles opened.

Qualities of Outstanding Leaders

The presidents had much to say about the personal qualities they value in the outstanding statistical leaders they have known. Kettenring admires leaders who have a broad perspective on our field. They see opportunities because they think of statistics in terms of its interfaces and intersections, and they understand that these connections strengthen the profession and its impact on society.

Mason adds, “The qualities I have most admired in ASA leaders are their willingness to work with others, regardless of personal differences; to be cordial and gracious, yet firm, in decisionmaking; to listen to colleagues and respect their opinions, yet lead when required; to have a good sense of humor and a positive outlook on life, regardless of the outcome of a meeting or event; and to possess a genuine concern for the welfare of others.”



Robert Rodriguez

J. Stuart Hunter (1993) writes that the quality he has admired most in recognized leaders in our field is their empathy toward younger compatriots.

Leaders as Encouragers

Early in their careers, several presidents benefited from examples provided by established leaders. Kettenring acknowledges Ram Gnanadesikan at Bell Labs as “the perfect role model” because Ram was a statistical leader both domestically and internationally.

Words of encouragement from well-known leaders also made a difference. John Neter (1985) remembers the support he received from Donald Riley, ASA secretary from 1955 to 1968.

Tony Lachenbruch (2008) recalls that when he became an ASA Fellow in 1979, he unexpectedly received a congratulatory note from Frederick Mosteller (1967), who wrote knowledgeably about Tony’s contributions. Since then, Tony has made it a practice to send similar notes to others.

Important Skills for Leaders

All the presidents listed communication as a valuable skill they worked hard to acquire. Kettenring recounts, “The importance of this was driven home to me early on at Bell Labs. We rehearsed talks before being let out the door, and all documents were critiqued by management before they were finalized.”

Hunter believes statistical leaders should be communicators who enjoy being statisticians and show others that statistics is fun, interesting, and important.

Iman adds that successful leaders must be good listeners with the ability to interact with others, noting that ASA service provides opportunities to develop these skills. And Richard Scheaffer (2001) emphasizes the importance of organizational and planning skills.

The Multiplicative Effect of Great Leaders

According to John Maxwell, author of several books on leadership, leading others is a way to add growth to an organization, but developing and leading *leaders* is the way to multiply growth.

One of the finest examples of a “multiplicative” leader in our field is Gertrude Cox, who—among her many contributions—served as ASA president in 1956.

The legacy of Cox is prominent in the Research Triangle area of North Carolina, where she helped establish three academic departments. These eventually became the department of statistics at North Carolina State University, the department of statistics and operations research at The University of North Carolina (UNC) at Chapel Hill, and the department of biostatistics at UNC Chapel Hill. Gertrude also was instrumental in founding the Research Triangle

Institute. Today, her legacy is shared by two major companies—Quintiles and SAS—which grew from university programs she established.

Cox’s accomplishments are all the more remarkable because they came at a time when statistics was a mostly male field. She encouraged young women to enter the field, and the ASA’s Cox Scholarship honors her memory by promoting that goal.

An example of how Cox influenced younger people to become leaders is the way in which she encouraged Bernard Greenberg to start a biostatistics department at UNC in 1949—while he was still a graduate student at North Carolina State College.

The story of Greenberg’s appointment was never published, but his son, Ray, gives us a glimpse of how it came about. “Unlike the way things work today with search committees, things in 1949 were handled a lot less formally. The appointment of my father was like an arranged marriage, with the matchmakers being Professor Cox and Edward McGavran, dean of the school of public health. It was a bold move on both their parts to take a newly minted graduate, not yet 30 years old, with no real academic experience, and place him in a position of leadership and responsibility as a department chair (even if there was only one faculty member in the department at the time).”

“It is also worth noting that these were the days when there were few Jewish faculty members, much less department chairs, at the university. So barriers were broken with this appointment, but Professor Cox and Dean McGavran were both excellent judges of talent, and they saw in Bernie Greenberg the potential to grow the new department and to help build the research strength of the school.”

Greenberg went on to become a nationally recognized leader in the field of public health and later dean of what is now the UNC Gillings School of Global Public Health. He is especially remembered by alumni for his gracious encouragement of students.

Conclusions

Among the lessons to be gained from these presidential perspectives, I conclude with three. First, the road to statistical leadership begins with volunteering. Second, successful leaders work on their communication skills and apply them as champions for our field. Third, great leaders encourage and develop younger leaders.

We need leaders at all levels of our association. And exceptional leaders should be the norm—not the exception!

Robert W. Rodríguez

Recognizing the ASA's Longtime Members

The American Statistical Association would like to thank its longtime members by continuing its tradition of honoring those who joined the association 35 or more years ago. This year, we recognize the following members for their distinguished and faithful membership.

If you are a longtime member and will be attending JSM 2012 in San Diego, California, please join us for a reception in your honor. If your name is not below and you believe it should be included, contact Amy Farris at amy@amstat.org to correct your record.



Longtime members John Neter (left) and Victor Chew (middle) with ASA President Bob Rodriguez (right). Taken on January 30, 2012, at the Cedars of Chapel Hill, where both Neter and Chew reside.

50+ Years

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William D. Commins	Jairus D. Flora	Sam Hedayat	Gary G. Koch	Robert L. McKnight	Roger C. Pfaffenberger
William Jay Conover	Alan B. Forsythe	Ronald W. Helms	Michael H. Klein	James M. McPartland	Eswar G. Phadia
R. Dennis Cook	Martin R. Frankel	William G. Henderson	Gary G. Koch	G. Arthur Mihram	Walter Piesch
John A. Cornell	Ralph F. Frankowski	Jan H. Henriksson	Uwe Koehn	Billy J. Moore	Ralph D. Pollard
		John E. Hewett	Robert C. Kohberger	Jerry L. Moreno	Thomas W. Popham
		Bruce Hoadley	Stephen L. Kozarich	Carl N. Morris	
		Bob S. Hodges			

Alton J. Rahe	David S. Salsburg	Gary M. Shapiro	Douglas E. Splitstone	George C. Tiao	Bruce S. Weir
Ronald H. Randles	Charles B. Sampson	Stanley H. Shapiro	Stephen M. Stigler	Lowell H. Tomlinson	Herbert I. Weisberg
Gipsie B. Ranney	Innis G. Sande	Lawrence A. Sherr	Jerrell T. Stracener	James Tonascia	John Williams
Joan S. Reisch	Patricia D. Saunders	Jon J. Shuster	Bruce C. Straits	Carlos E. Toro-Vizcarrondo	Robert L. Winkler
Gladys H. Reynolds	Eberhard G. Schaich	Moshe Sicon	D. Derk Swain	J. Richard Trout	John J. Wiorkowski
Bruce E. Rodda	Richard L. Scheaffer	Betty J. Skipper	Paul Switzer	Wen-Hung Tseng	David A. Wise
Donald C. Ross	J. Richard Schmid	Armand V. Smith	David L. Sylwester	Chris P. Tsokos	John E. Witcher
Richard S. Ross	William R. Schucany	William Boyce Smith	Douglas B. Tang	Willem R. Van Zwet	Janet Wittes
Edward Rothman	Robert J. Serfling	Ronald D. Snee	Judith M. Tanur	James R. Veale	Douglas A. Wolfe
C. Bradley Russell	Babubhai V. Shah	Mitchell Snyder	Aaron Tenenbein	Joel I. Verter	Gooloo S. Wunderlich
Robert A. Rutledge	Nagambal D. Shah	Daniel L. Solomon	James R. Thompson	Ray A. Waller	Morty Yalovsky
Harold B. Sackowitz	F. Michael Speed	Edward J. Spar	William O. Thompson	Robert C. Walls	Shelemyahu Zacks
				James A. Walsh	

40–44 Years

Judith Abrams	Robert L. Andrews	James C. Beebe	William M. Brelsford	Joseph J. Chmiel	Gary R. Cutter
Lee R. Abramson	W. Tad Archambault	Mary S. Beersman	Robert L. Brennan	Lee-Jay Cho	Gerard E. Dallal
C. J. Adcock	Jesse C. Arnold	Jacqueline Benedetti	Ellen F. Brewer	Adam Chu	Kenneth W. Davis
Frances J. Adox	Ersen Arseven	Timothy M. Bergquist	Dwight B. Brock	William S. Cleveland	Robert L. Davis
Robert A. Agnew	James N. Arvesen	Kenneth N. Berk	Maurice E. Bubb	Guy M. Cohen	William W. Davis
Alan Agresti	Taka Ashikaga	William R. Best	Richard K. Burdick	Robert J. Condon	Enrique de Alba
Per A. T. Akersten	Corwin L. Atwood	Wayne F. Bialas	John A. Burkart	Kimon J.E. Constas	Jose R. Deliz
Arthur E. Albert	Abdolrahman Azari	Lynne Billard	Patricia L. Busk	Peter A. Cook	David L. DeMets
Mir Masoom Ali	Robert S. Barcikowski	David S. Birkes	William L. Carlson	Lewis Coopersmith	Susan J. Devlin
Mukhtar M. Ali	William A. Barnett	John A. Blessing	Steven T. Carrier	Robert J. Costello	Thomas F. Devlin
J. Richard Alldredge	John L. Barone	Brent A. Blumenstein	Margaret D. Carroll	Louis J. Cote	Jay L. Devore
Francis B. Alt	Charles K. Bayne	Lennart Bodin	Raymond J. Carroll	Giles L. Crane	Paula H. Diehr
Stan Altan	Richard A. Becker	Aroona S. Borpujari	Walter H. Carter	John R. Crigler	W. Erwin Diewert
Alfred Jerry Anderson	Laurel A. Beckett	Gordon J. Brackstone	Samprit Chatterjee	David S. Crosby	Darryl J. Downing
Dallas W. Anderson	Richard J. Beckman	Edwin L. Bradley	Raj S. Chhikara	Larry H. Crow	Michele Dramaix-Wilmet
				John J. Crowley	Dennis A. DuBose

Joseph W. Duncan	Fernando L. Garagorry	Robert E. Hall	F. E. James	Lynn Roy LaMotte	William L. Mietlowski
Donald H. Ebbeler	Turkan K. Gardenier	R. Choudary Hanumara	Sreenivasa Rao Jammalamadaka	James M. Landwehr	George A. Milliken
Brenda Kay Edwards	Alan E. Gelfand	Lynne B. Hare	J. D. Jobson	Per Lange	Satish Chandra Misra
Janet D. Elashoff	Stephen L. George	Galen F. Hart	Clifford L. Johnson	Chang S. Lao	Robert Mondschein
David Elesh	Gauri L. Ghai	Larry D. Haugh	Dallas E. Johnson	William D. Lawing	
Eugene P. Ericksen	P. D. Ghangurde	Robert M. Hauser	Paul K. Jones	Anthony James Lawrance	Douglas C. Montgomery
James W. Evans	Glenn H. Gilbreath	Douglas M. Hawkins	Peter R. Jones	Kenneth D. Lawrence	Roderick Montgomery
Milton C. Fan	Edward J. Gilroy	Richard M. Heiberger	Henry D. Kahn	Clifford J. Lee	David S. Moore
Thomas B. Farver	Phyllis A. Gimotty	John D. Kalbfleisch	Clifford J. Lee	Russell V. Lenth	John K. Moore
Gerald M. Fava	Howard Seth Gitlow	William F. Heiland	John H. Kalbfleisch	Donald Lewin	David R. Morganstein
Robert E. Fay	John R. Gleason	Karl W. Heiner	William D. Kalsbeek	David L. Libby	Effat A. Moussa
Walter Feibes	James H. Godbold	Robert W. Hertz	Howard S. Kaplon	Samuel Litwin	Michael L. Mout
Alan H. Feiveson	Prem K. Goel	Agnes M. Herzberg	Joseph D. Kasile	Robert G. Lovell	Robb J. Muirhead
Martin Feuerman	Robert N. Goldman	Eugene R. Heyman	Robert M. Katz	Lars Lyberg	Henry D. Muse
Alan C. Fisher	Matthew Goldstein	James J. Higgins	Myron J. Katzoff	George W. Lynch	Wayne L. Myers
Andrew J. Flatt	J. Douglas Gordon	Klaus Hinkelmann	Roswitha E. Kelly	James R. Maar	Krishnan Namboodiri
Nancy Flournoy	Louis Gordon	David C. Hoaglin	James L. Kenkel	Bruce E. Mackey	Subhash C. Narula
Sandra Forman	Bernard S. Gorman	Theodore R. Holford	Ralph L. Kent	Edward R. Mansfield	Elliott Nebenzahl
Mary A. Foulkes	David M. Grether	Stephen C. Hora	Robert Kinnison	Dennis R. Mar	Glenn L. Nelson
James W. Frane	William E. Griffiths	David W. Hosmer	Roger E. Kirk	Robert L. Mason	S. Edward Nevius
Martin D. Fraser	Richard F. Gunst	David C. Howell	Ralph L. Kodell	Frances J. Mather	David S. Newman
Daniel H. Freeman	Shelby J. Haberman	Lawrence J. Hubert	David C. Korts	Takashi Matsui	H. Joseph Newton
Carol L. French	Hermann Habermann	Mark L. Hudes	Neal Koss	Clement J. Maurath	James A. Nickel
David Frontz	Timothy O. Haifley	Huynh Huynh	Mary Grace Kovar	George P. McCabe	Earl Nordbrock
Mark C. Fulcomer	Robert E. Hale	Dar-Shong Hwang	Helena C. Kraemer	John D. McKenzie	Julia A. Norton
Howard N. Fullerton	William G. Jackson	Ronald L. Iman	S. David Kriska	Glen D. Meeden	Marija J. Norusis
Mitchell H. Gail	Joan R. Jacobs	Peter B. Imrey	Joseph B. Kruskal	Jeff B. Meeker	Janet L. Norwood
Edward J. Gainer		Allen E. Izu	Arabinda Kundu	James I. Mellon	Peter C. O'Brien
Richard Gaines		William G. Jackson	Robert Kushler	Gayle T. Meltesen	Leonard Oppenheimer
Daniel J. Gans			John M. Lachin	Mary-Jane Mietlowski	Albert C. Ovedovitz

Maurice E. B. Owens	Carol K. Redmond	Joyce A. Schlieter	Jagbir Singh	John M. Thomas	George H. Wang
William J. Padgett	George F. Reed	Josef Schmee	Nozer D. Singpurwalla	Carol B. Thompson	James F. Ward
Leonard J. Parsons	Thomas Reiland	James Schmeidler	Walter Sloboda	Steven F. Thomson	James H. Ware
Jon K. Peck	Benjamin Reiser	Mildred E. Schmidt	Robert D. Small	Robert D. Tortora	John Warren
Raymond C. Peck	Louise C. Remer	Eugene F. Schuster	Stephen C. Smeach	Ram C. Tripathi	Christine M. Waternaux
Arthur V. Peterson	Kenneth J. Resser	Neil C. Schwertman	Dennis E. Smith	Bruce W. Turnbull	Tommy D. Waters
Robert A. Peterson	Hans Riedwyl	Alastair J. Scott	William A. Sollecito	Neil R. Ullman	Larry S. Webber
A. John Petkau	Jeffrey A. Robinson	Stuart Scott	Randall K. Spoeri	Gerald van Belle	William E. Wecker
Charles G. Pfeifer	James L. Rosenberger	Nell Sedransk	M. K. Srirama	Joseph Van Den Reysen	Edward J. Wegman
Louis A. Pingel	Bernard Rosner	Subrata K. Sen	Muni S. Srivastava	Lonnie C. Vance	William W. S. Wei
Mike Pore	Dwight N. Rousu	Jolayne W. Service	Bert Steece	Kerstin Vannman	Lynn Weidman
Stephen L. Portnoy	Donald B. Rubin	Jayaram Sethuraman	Allan Stewart-Oaten	Niels H. Veldhuijzen	Sanford Weisberg
Frank J. Potter	Barbara J. Rutledge	Glenn R. Shafer	Robert L. Stout	Wayne F. Velicer	K. Laurence Weldon
Ross L. Prentice	Thomas P. Ryan	Charles E. Shaffer	William E. Strawderman	Hrishikesh D. Vinod	James P. Whipple
Philip J. Press	Julia Sabella	Juliet Popper Shaffer	Nariaki Sugiura	R. Lakshmi Vishnuvajjala	Owen Whitby
Kevin Price	Susan T. Sacks	Paul Shaman	Moon W. Suh	Frederic A. Vogel	David G. Whitmore
Philip C. Prorok	John J. Salera	Ronald E. Shiffler	Richard A. Sundheim	Kenneth W. Wachter	Howard L. Wiener
Thomas W. Pullum	Francisco J. Samaniego	Iris M. Shimizu	Michael Sutherland	Hajime Wago	William J. Wilson
David A. Pyne	Douglas A. Samuelson	James G. Shook	Ajit C. Tamhane	Joseph J. Walker	Robert F. Woolson
Alfred W. Rademaker	Thomas J. Santner	Albert P. Shulte	Richard D. Terrell	Sylvan Wallenstein	Rita Zemach
J. G. Ramage	James J. Schlesselman	Robert H. Shumway	Ronald A. Thisted	Chao Wang	Eric R. Ziegel
Calyampudi R. Rao		Robert L. Sielken	Hoben Thomas		Stuart O. Zimmerman

35–39 Years

Dennis Aaron	Bovas Abraham	Rich Allen	Sharon Anderson	Susanne Aref	Agustin F. Ayuso
Julian Abbott	Donald R. Akin	Wendy L. Alvey	Bengtung Ben Ang	Vincent C. Arena	Leroy Bailey
Robert D. Abbott	James H. Albert	Keaven M. Anderson	Clifford W. Angstman	Steve Ascher	Steven P. Bailey
Sandra C. Abbott	Robert W. Aldred	Robert J. Anderson	Lawrence Annable	Arlene S. Ash	Stephen P. Baker
John M. Abowd				Anthony C. Atkinson	Saad T. Bakir

James A. Baldwin	Thomas A. Bishop	Patrick J. Cantwell	Timothy C. Coburn	Thomas M. Davis	Kurt Enslein
Vincent P. Barabba	Richard M. Bittman	Thomas P. Capizzi	Michael L. Cohen	Ree Dawson	Thomas W. Epps
Michael P. Battaglia	Jan F. Bjornstad	Grant D. Capps	Michael P. Cohen	Roberta W. Day	Samuel M. Epstein
Eileen J. Beachell	Ernest A. Blaisdell	Arthur Carpenter	Steven B. Cohen	Virginia A. de Wolf	William H. Epstein
Robert J. Beaver	Mark M. Blanchard	Daniel B. Carr	James J. Colaianne	Forest C. Deal	Lawrence R. Ernst
Patricia C. Becker	Peter Bloomfield	George Casella	John R. Collins	R. B. Deal	Sylvia R. Esterby
Jay H. Beder	Harvey Blumberg	Frank C. Castronova	Salvatore V. Colucci	Michael L. Deaton	Michael J. Evans
Steven Belle	Dan C. Boger	Aki N. Caszatt	Loveday L. Conquest	Pierre C. Delfiner	Ray E. Faith
David R. Bellhouse	Robert J. Boik	Amrut M. Champaneri	Bruce K. Cooil	Lorraine Denby	Raymond W. Falk
Robert B. Bendel	James A. Bolognese	John P. Chandler	Kennon R. Copeland	Wayne S. Desarbo	David L. Farnsworth
George Benson	James T. Bonnen	Judith-Anne W. Chapman	E. Jacquelin Dietz	Terry E. Dielman	Alan Fask
James O. Berger	Dennis Boos	Yogendra P. Chaubey	Ralph Digaetano	E. Jacquelin Dietz	John P. Fazio
Roger L. Berger	Marie V. Bousfield	Richard A. Chechile	Lynn P. Dix	Margaret D. Copenhaver	Ronald S. Fecso
James S. Bergum	John E. Boyer	Bee-Lian Chen	David P. Doane	Thomas W. Copenhaver	Michael L. Feldstein
Catherine S. Berkey	Norman M. Bradburn	Gina G. Chen	Allan P. Donner	Charles D. Cowan	Christopher A. Field
Jose Miguel Bernardo	Ann Cohen	James J. Chen	Joseph R. Donovan	Brenda G. Cox	David F. Findley
Ernst R. Berndt	Brandwein	William W.S. Chen	Janice L. Dubien	Lawrence H. Cox	Naomi S. Fineberg
David J. Bernklau	James M. Branscome	Michael R. Chernick	Bonnie P. Dumas	John R. Crammer	Carl Thomas Finkbeiner
Al M. Best	Mary-Lynn Brecht	Robert D. Chew	William D. Dupont	Keith N. Crank	Nicholas I. Fisher
Bibhuti B. Bhattacharyya	Kenneth R. W. Brewer	Nanjamma Chinnappa	Ann Durand	Anne P. Cross	Allen I. Fleishman
William T. Bielby	J. Michael Brick	Joan Sander Chmiel	Timothy R. Eaton	Suzanne L. Cross	James W. Flewelling
Paul P. Biemer	Ron Brookmeyer	Jai Won Choi	L. Marlin Eby	Kenny S. Crump	Hans-Theo Forst
Robert H. Bigelow	Dean S. Bross	Peter D. Christenson	Marlene J. Egger	Andrew Joseph Cucchiara	Peter E. Fortini
Thomas E. Billings	Rocco L. Brunelle	B. Christine Clark	John D. Emerson	William G. Cumberland	Janet F. Fowler
Richard A. Bilonick	Edward C. Bryant	Cynthia Z.F. Clark	John D. Fox	L. Adrienne Cupples	Leroy A. Franklin
David A. Binder	Shirrell Buhler	David A. Clawson	Larry D. Freese	Robert D. Curley	Stephen A. Freitas
Stephen F. Bingham	John M. Bushery	William P. Cleveland	Barbara A. Gabianelli	Lester R. Curtin	
Giselle Binstok	Thomas J. Bzik	George W. Cobb		Andrew I. Dale	
Jeffrey B. Birch	Lawrence S. Cahoon			Prithwis Dasgupta	
Herbert L. Bishop	Alan Cantor			Richard M. Engeman	
				Charles S. Davis	

Paul Gallo	Cynthia R. Gross	Ellen Hertzmark	Peter J. Jacobs	Ignatius A. Kinsella	Stephen S. Langley
Stephen J. Ganocy	Marvin H. J. Gruber	Thomas Herzog	Raj K. Jain	Nancy J. Kirkendall	Wallace E. Larimore
Roan A. Garcia-Quintana	Leslie S. Grunes	James L. Hess	David Jaspen	Syed N.U.A. Kirmani	Nicolaas F. Laubscher
Edward E. Gbur	Victor M. Guerrero	Richard P. Heydorn	Jean G. Jenkins	Linda W. Jennings	Philip T. Lavin
Robin T. Geiger	Berton H. Gunter	Steven C. Hillmer	Robert W. Jernigan	Rudolf G. Kittlitz	Sheila M. Lawrence
Fredric C. Genter	Perry D. Haaland	Susan M. Hinkins	Bruce E. Johnson	Beat Kleiner	Johannes Ledolter
Cynthia D. Gentillon	David B. Hall	Jerry L. Hintze	Paulette M. Johnson	Stuart A. Klugman	Kelvin K. Lee
Dhirendra N. Ghosh	James L. Hall	Chihiro Hirotsu	Gerald A. Joireman	Kenneth J. Koehler	Kerry L. Lee
Malay Ghosh	Nancy R. Hall	Raymond G. Hoffmann	Ian T. Jolliffe	Roger W. Koenker	Martin L. Lee
Ned M. Gibbons	William A. Halteman	Thomas P. Hogan	David C. Jordan	Kenneth J. Kopecky	James D. Leeper
David E. Giles	Robert M. Hamer	Larry R. Holden	Harmon S. Jordan	Edward L. Korn	Stanley A. Lemeshow
Brenda Wilson Gillespie	David C. Hamilton	Robert M. Holmes	David R. Judkins	Kenneth J. Koury	Ramon V. Leon
John A. Gillespie	Thomas S. Hammerstrom	Ernest B. Hook	Karen Kafadar	Ioannis A. Koutrouvelis	Heryee H. Leong
Dennis R. Givens	Janet M. Hanley	Alan Hopkins	Lee D. Kaiser	Andrew Kramar	James M. Lepkowski
Beth C. Gladen	Robert C. Hannum	Berne Martin Howard	Jill A. Kammermeyer	Abba M. Krieger	Trudy J. Lerer
Marcia A. Glauberman	C. David Hardison	Ina P. Howell	Paul B. Kantor	Alok Krishen	Martin L. Lesser
Joseph Glaz	William V. Harper	Louis Hsu	Bruce A. Kaplan	Pieter M. Kroonenberg	Marcia J. Levenstein
Frederick P. Glick	Frank E. Harrell	Elizabeth T. Huang	Theodore G. Karrison	Naoto Kunitomo	Bruce Levin
Huseyin A. Goksel	Stephen P. Harris	Lee Huang	Daniel Kasprzyk	Alan H. Kvanli	Charles Lewis
Richard F. Goldstein	Diane S. Harry	Marla L. Huddleston	Masatoshi Katsuhara	James R. Lackritz	Richard A. Lewis
Joe Fred Gonzalez	Kenneth R. Hartmann	Mohammad F. Huque	Richard W. Katz	Nan Laird	Frederick W. Leysieffer
James H. Goodnight	Gary D. Hatfield	Emilio A. Icaza	Jerome P. Keating	Edward Lakatos	Shou-Hua Li
Robert D. Gordon	Robert E. Hausman	David N. Ikle	Sheryl F. Kelsey	Mansum A. Lam	Walter S. Liggett
Jerren Gould	Maurine A. Haver	Duane M. Ilstrup	James R. Kenyon	Miu Lam	Lawrence I-Kuei Lin
Barry I. Graubard	Ronald W. Hawkinson	John M. Irvine	James L. Kepner	Kuang-Kuo G. Lan	Carol L. Link
Stephanie J. Green	Joan G. Haworth	Alan J. Izenman	Wendell W. Kerr	J. Richard Landis	Robert E. Little
Timothy A. Green	Takesi Hayakawa	Kirk A. Jackson	Andre I. Khuri	Patricia Langenberg	George A. Livingston
William H. Greene	Lance K. Heilbrun	William E. Jackson	Byung-Soo Kim		
Joel B. Greenhouse	Harold V. Henderson	Eva E. Jacobs			
John Vic Grice					
Susan Groshen					

Greta M. Ljung	LeRoy T. Mattson	Samuel Merrill	Robert M. Norton	Won J. Park	Lloyd P. Provost
Roger Longbotham	Timothy A. Max	Marianne E. Messina	El-Sayed E. Nour	Rudolph S. Parrish	Peter Purdue
Michael T. Longnecker	Margaret W. Maxfield	Michael M. Meyer	Thomas S. Nunnikhoven	Robert E. Parson	Clifford R. Qualls
Thomas A. Louis	Scott E. Maxwell	Terry G. Meyer	Barry D. Nussbaum	Van L. Parsons	John N. Quiring
Milton W. Loyer	Fred M. Mayes	Joel E. Michalek	David Oakes	Sharon M. Passe	Tony K. S. Quon
Jay H. Lubin	Michael J. Mazu	Richard O. Michaud	Kevin F. O'Brien	Jeffrey S. Passel	Damaraju Raghavarao
Dennis W. Luckey	Paul R. McAllister	William E. Mihalo	Ralph G. O'Brien	Kenneth W. Patterson	Volker W. Rahlfs
Donald M. Luery	Donna K. McClish	John A. Miller	Michael W. O'Donnell	Charles L. Paule	Philip H. Ramsey
James Lynch	Joseph P. McCloskey	Katherine L. Monti	Judith Rich O'Fallon	Karl E. Peace	Gopa Ray
Michael F. Macaluso	Janet Elizabeth McDougall	Thomas F. Moore	Walter W. Offen	N. Shirlene Pearson	Rose M. Ray
John MacIntyre	Daniel L. McGee	George E. Morgan	Francis G. Ogrinc	Peter H. Peskun	William J. Raynor
Michael E. Mack	Philip G. McGuire	June Morita	Douglas M. Okamoto	David W. Peterson	Domenic J. Reda
Kathleen S. Madsen	Stephen A. McGuire	Max D. Morris	Patrick D. O'Meara	John J. Peterson	Susan L. Reiland
Jay Magidson	Joseph W. McKean	Norman Morse	Maurice Pfannestiel		Mark R. Reiser
Bette S. Mahoney	Geoffrey J. McLachlan	Tetsuro Motoyama	John A. Ondrasik	Daniel Pfeffermann	Mark William Riggs
James D. Malley	Christine E. McLaren	Barbara G. Mroczkowski	Bernard V. O'Neill		Paula K. Roberson
Linda C. Malone	Don L. McLeish	Lawrence H. Muhlbaier	Terence John O'Neill	Charles B. Pheatt	Rosemary A. Roberts
Eric J. Mandel	Ronald E. McRoberts	Leigh W. Murray	J. Burdeane Orris	Ceib L. Phillips	Edwin L. Robison
Charles F. Manski	Thomas P. McWilliams	John C. Nash	Joyce Orsini	Philip J. Pichotta	Frank W. Rockhold
Agustin Maravall	William Q. Meeker	Reinhard Neck	Melvin L. Ott	Linda Williams Pickle	Frank W. Rockhold
Kanti V. Mardia	Cyrus R. Mehta	John T. Neely	William J. Owen	Joseph G. Pigeon	Mark H. Rodeffer
Michael J. Margreta	Robert J. Meier	Gary L. Neidert	Willis L. Owen	Brian D. Plikaytis	Robert N. Rodriguez
Mary A. Marion	Paul I. Nelson	James W. Neill	David J. Pack	Dale J. Poirier	Russell H. Roegner
Ray L. Marr	Kathleen A. Mellars	Margaret A. Nemeth	Mari Palta	William E. Pollard	Paul W. Rogers
Melanie Martindale	Roy Mendelssohn	Robert L. Newcomb	William S. Pan	William E. Pollard	John E. Rolph
Donald L. Marx	Ulrich Menzeffricke	Kai Wang Ng	Deborah L. Panebianco	Jessica Pollner	John E. Rolph
Gretchen Wolfe Mason	W. David Menzie	Thomas W. Nolan	Arthur C. Papacostas	Darwin H. Poritz	Anthony M. Roman
Paula E. Mason	Michael P. Meredith	David Butcher Nolle	Swamy A.V.B. Paravastu	Randall W. Potter	Paul R. Rosenbaum
Victor M. Matthews			Sung H. Park	Manfred Precht	N. Phillip Ross
				Dale L. Preston	Arthur J. Roth
				Howard M. Proskin	Roch Roy

Lawrence V. Rubinstein	Timothy L. Schofield	Francisco P. Soler	Stephen R. Sulpor	David L. Turner	William L. Weber
Andrew L. Rukhin	Friedrich W. Scholz	Dan J. Sommers	James P. Summe	Gregory W. Ulferts	Thomas E. Wehrly
David Ruppert	Charles B. Schriver	Frank C. Sonsini	Robert Sutherland	Dale E. Umbach	Daniel L. Weiner
Estelle Russek-Cohen	John H. Schuenemeyer	Keith A. Soper	David A. Swanson	Jessica M. Utts	Jon August Wellner
Carl T. Russell	Donald J. Schuirman	Bruce D. Spencer	Gerald R. Swope	Esa Ilkka Uusipaikka	Roy E. Welsch
Michael S. Saccucci	Steven J. Schwager	Clifford H. Spiegelman	Prem P. Talwar	Pamela M. Vacek	Fredrick S. Whaley
Thomas W. Sager	Thomas A. Scripps	Nancy L. Spruill	Robert M. Tardiff	Hernando Valencia	Robert M. Wharton
Shiva K. Saksena	William L. Seaver	Donald M. Stablein	Erica S. Taucher	Richard L. Valliant	Andrew A. White
John P. Sall	Jeanne L. Sebaugh	Edward J. Stanek	Robert L. Taylor	George H. Van Amburg	David C. Whitford
William M. Sallas	Joseph Sedransk	William M. Stanish	Marcia A. Testa	Richard Craig Van Nostrand	Roy W. Whitmore
Allan R. Sampson	Teddy I. Seidenfeld	Richard M. Stanley	A. Cole Thies	Stephen B. Vardeman	Rand R. Wilcox
Ester Samuel-Cahn	Robert R. Starbuck	John H. Thompson	John H. Thompson	Denton R. Vaughan	Christopher John Wild
Gilles F. M. Santini	Thomas R. Sexton	Mary E. Thompson	Theodore J. Thompson	Leland Wilkinson	Andrew R. Willan
Robert L. Santos	Arvind K. Shah	David W. Stewart	Joseph S. Verducci	Andrew R. Willan	Jean F. Williams
Nathan E. Savin	Mohammed A. Shayib	Gerald R. Stewart	Anthony D. Thrall	Steve P. Verrill	Stephen R. Williams
John W. Sawyer	Shingo Shirahata	John A. Stewart	Richard B. Tiller	Joseph G. Voelkel	Michael A. Wincek
Richard L. Sawyer	Patrick E. Shrout	Robert A. Stine	Ronald R. Titus	Joachim Vollmar	Dennis A. Wolf
William G. Saylor	Stanley A. Shulman	Sandra S. Stinnett	Jerome D. Toporek	Grace Wahba	Lawrence C. Wolfe
Patricia A. Scanlan	Andrew F. Siegel	Anne M. Stoddard	Lynn D. Torbeck	Howard Wainer	Kirk M. Wolter
Stephen Schacht	Richard S. Sigman	S. Lynne Stokes	David C. Trindade	Joel A. Waksman	Farroll T. Wright
David J. Schaeffer	Jeffrey S. Simonoff	Kenneth O. Story	Ishwari D. Tripathi	Esteban Walker	Michael G. Yochmowitz
Nancy K. Schatz	Terry L. Sincich	Michael A. Stoto	David L. Tritchler	Katherine K. Wallman	Sarah T. Young
Kenneth Schechtman	Judith D. Singer	Miron L. Straf	Pravin K. Trivedi	Lars Walloe	James R. zumBrunnen
Perry A. Scheinok	Robert K. Smidt	Robert F. Strahan	J.R. Roger Trudel	Chai-Ho C. Wang	
Harry M. Schey	Donna F. Stroup	L. Claire Tsao	L. Claire Tsao	Sophonria W. Ward	
John D. Schmitz	Walter W. Stroup	Kam-Wah Tsui	Kam-Wah Tsui	Herbert W. Ware	
David A. Schoenfeld	Perla Subbaiah	Alan R. Tupek	Alan R. Tupek	Stanley Wasserman	

Statisticians Participate in 2nd Annual Climate Science Day

Five ASA members participated in the second annual Climate Science Day (CSD) on Capitol Hill February 1. Co-organized by the ASA and jointly sponsored by the ASA and other professional societies, the event's primary purpose is for scientists to develop relationships with congressional staff so they will consult the scientists on climate-related questions.

Speaking to the goal of these visits, Peter Craigmile of The Ohio State University and Leonard Smith of the London School of Economics and Pembroke College, Oxford, the two ASA members who participated in the first CSD, noted how much better meetings went with staffers with whom they'd met last year. "It was interesting how substantive our meetings were with the four staffers we met last year; everyone was more comfortable, more relaxed," said Smith. "I find real value in revisits and look forward to CSD 2013."

Craigmile added, "Visiting an office for the second time allowed us to build upon the themes that we discussed in the first Climate Science Day. The Members of Congress and staffers we met were receptive and interested in thinking about the local impacts of climate change."

Michelle Bell of Yale University commented, "CSD seemed a great approach to help provide scientific information, without prescribing a specific policy. I appreciated that this event focused just on the facts, and was not agenda-driven or political. Our goal was to relay science, not ask for certain policies or for funding. I also liked the range of scientific disciplines."

Peter Guttorp, chair of the ASA Advisory Committee for Climate Change Policy (ACCCP), commented on how the tenor of the meetings changed once staffers realized the scientists weren't coming in with a policy agenda. He added, "I was paired with a scientist specializing in livestock manure management, and with my work on estimating global temperature, we almost always could present an angle that interested the staffer."

Amy Braverman, participating as a member of ACCCP, said "It was an unusual opportunity to be in touch with the national decisionmaking process and to highlight the role that statistics can play."



From left: Peter Craigmile, Peter Guttorp, Sen. Maria Cantwell, Christopher Gambino, and Kasey White

Twenty-nine scientists from 12 science societies or organizations—including the American Association for the Advancement of Science, American Geophysical Union, American Meteorological Society, American Society of Agronomy, and National Ecological Observatory Network—participated. They were paired by geography into 14 teams accompanied by professional society staff for 100 meetings with members of Congress and/or their staff.

During the afternoon of preparatory briefings prior to the day of visits on the Hill, participants were told that the meetings were more about establishing a relationship than delivering messages. As part of the preparation, the participants heard from a bipartisan panel of House and Senate staffers and a climate science communications expert. Professional society staff—including Steve Pierson, the ASA's director of science policy—also spoke to the participants about messaging/objectives, tips for successful meetings, and the current Congress. ■

Analytics & Data Mining Conference
Empowering Data Enthusiasts

Coming Soon!



Trip to Sri Lanka Warm, People Welcoming

Nancy L. Geller

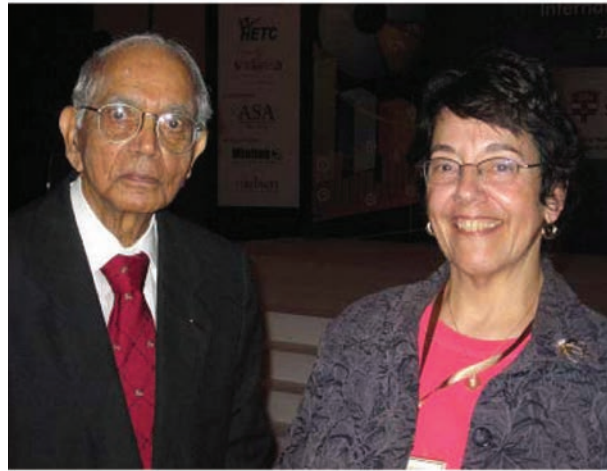
As 2011 ASA president, I was invited to be a plenary speaker at the International Statistics Conference last December in Colombo, Sri Lanka. The other plenary speaker was C.R. Rao, and I was quite honored to be in his presence.

The conference, themed, “Statistical Concepts and Methods for the Modern World,” took place December 28–30 at a state-of-the-art conference center on the outskirts of Colombo. The ASA was a silver sponsor for the conference, which is why I was invited to present a plenary talk.

The conference began with a traditional opening ceremony. The vice chancellor of the University of Colombo and the Sri Lankan Senior Minister of Science and Technology were present. One by one, all special guests (including me) lit the opening torch. Then came the melodious national anthem and the presentation of an honorary degree—his 34th—to C. R. Rao. Rao’s degrees are from 18 countries and include the Guy Medal (Britain), membership in the U.S. National Academy of Sciences, and the U.S. National Medal of Science. Rao also was awarded the first fellowship of the newly created Institute of Applied Statistics of Sri Lanka. Making the Sri Lankan Applied Statistical Association into an institute took an act of parliament, a recent achievement of its president, Palitha Sarrukali, who was one of my hosts.

Chief guest and Sri Lankan Senior Minister of Science and Technology Tissa Vitarana spoke about global warming through human intervention and its potentially disastrous effect on island nations. He urged making policymakers and the general population more aware of the magnitude of the problem and urged statisticians to contribute to this effort. He spoke about statisticians’ contributions to modeling after the 2004 tsunami and expressed optimism that this meeting would strengthen applied statistics and its contributions to scientific research.

The first plenary talk by Rao was titled “Importance Sampling and Cross-Entropy with Applications to Problems of Large Deviations and Optimization Problems.” Cross-entropy is a measure of loss of information when one uses a probability density g to make inference on a probability



Nancy Geller with plenary speaker C. R. Rao (left)

density f . One chooses g by minimizing cross-entropy and importance sampling, and then one can use Monte Carlo techniques to find probability of large deviations or the maximum of a function over a given subset.

I gave the second plenary talk on the morning of the second day. The talk, on prognostic and predictive biomarkers, was well received with questions and a number of inquiries from students who want to study or do post-docs in the United States. Most of the talks were mathematical statistics, and mine was more applied.

Overall, the conference was interesting with a wide range of topics, such as robust statistics, Bayesian methods, cancer research, and sequential analysis.

I also gave a seminar at the department of statistics at the University of Colombo. Attendance was better than at most talks I’ve given in the United States, as many former students came ‘home’ for the end of the year break and to attend the conference the following week.

Sri Lanka is just north of the equator, and although December is winter, it was hotter during the day than in Miami in August! The Sri Lankan statisticians were warm and welcoming. The ASA has made many new friends. ■





What Would You Do with All This Data?

Data Deluge Selected as Theme for Mathematics Awareness Month

April is Mathematics Awareness Month (MAM), and members of the Joint Policy Board for Mathematics (JPBM) selected “Mathematics, Statistics, and the Data Deluge” as the theme for this year.

Every day, a massive amount of data is collected, often from information we have provided to services we use regularly. Scientific data are generated daily from sensor networks, astronomical numbers of instruments, biometric devices, and other sources in amounts we almost cannot fathom—and all that data need to be sorted.

Resources for this year’s MAM are designed to show how mathematics and statistics provide the tools for understanding these data and mitigating against their misuse. In addition to the themed poster, there are articles, essays, and activities—as well as a chance to win an iTunes gift card worth \$100—on the MAM website (www.mathaware.org). The poster, “What Would You Do with All This Data?” is also available in the centerfold of

this issue. It includes a quick response (QR) code, which takes you to the mobile version of the MAM website when scanned.

Activities for MAM are organized on local, state, and regional levels by college and university departments, institutional public information offices, student groups, and related associations and interest groups. Visit the website to submit an activity or view this year’s events and celebrations.

You also can order full-size copies of the poster by mail or online. The cost is \$1 for each poster. Mail orders may be sent to ASA Marketplace, American Statistical Association, 732 N. Washington St., Alexandria, VA 22314. Order online at www.amstat.org/eseries/scriptcontent/BEWeb/orders/ProductDetail.cfm?pc=MAMPOSTER.

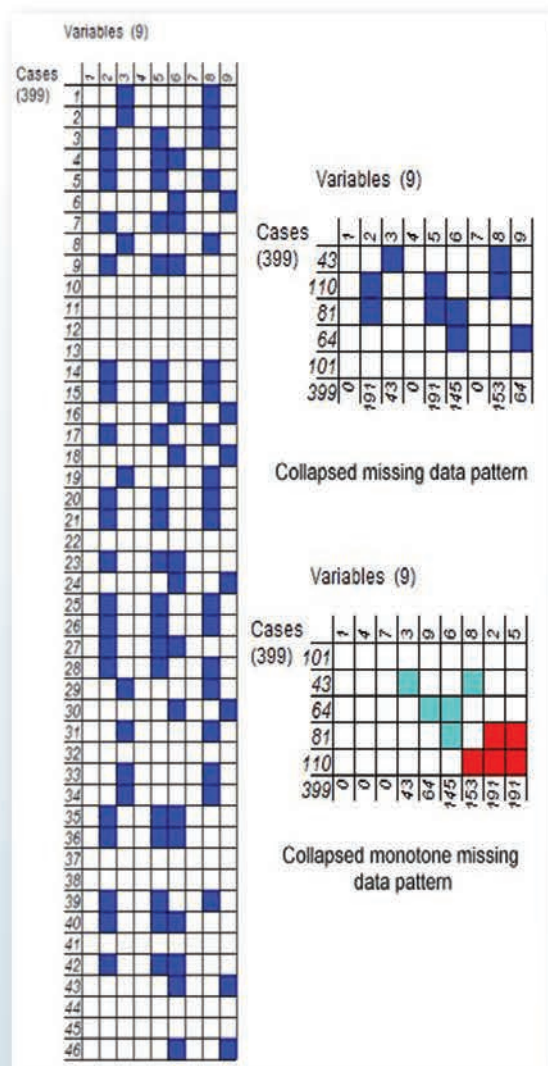
The JPBM is a collaborative effort of the American Mathematical Society, American Statistical Association, Mathematical Association of America, and Society for Industrial and Applied Mathematics. ■

solas for Missing Data Analysis

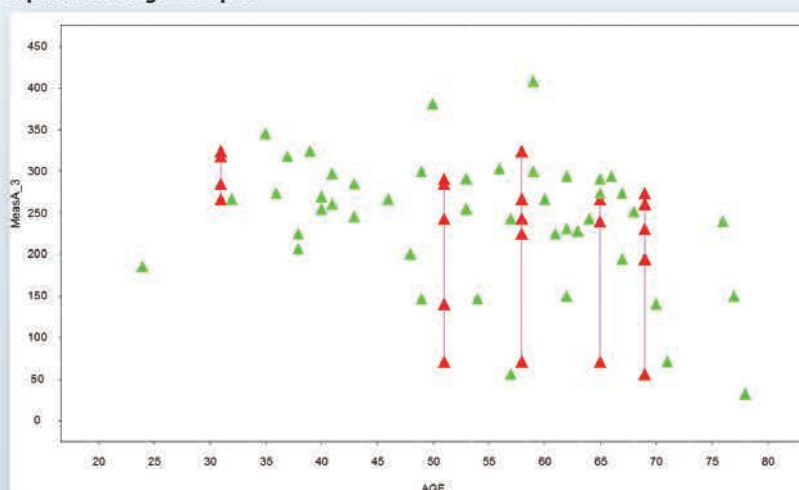
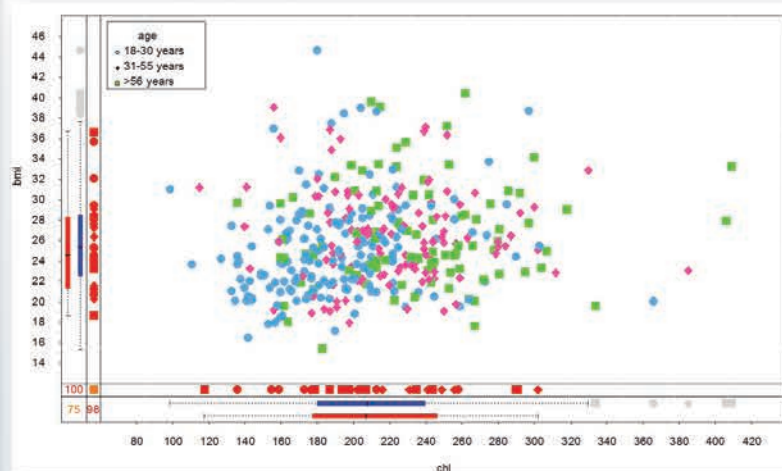
SOLAS is the missing data software most research statisticians and data analysts choose when working with incomplete data or missing values. It provides researchers with a range of imputation techniques in an easy-to-use, validated software application.

SOLAS Highlights

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



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



ASA, SIAM Collaborate on Uncertainty Quantification Journal

Jim Berger, Don Estep, and Max Gunzburger

The ASA and Society for Industrial and Applied Mathematics (SIAM) recently recognized the needed synergy between mathematics and statistics to address major challenges at the interface of computer modeling of complex processes and data by embarking on a joint effort to create the *Journal on Uncertainty Quantification* (*JUQ*). The journal will be published by SIAM and initially led by the editorial team of Jim Berger, representing the ASA, and Don Estep and Max Gunzburger, representing SIAM.

In broad terms, uncertainty quantification (UQ) in computational science and engineering has to do with describing the effects of error and uncertainty on results based on simulation and prediction of the behavior of constructed models of phenomena in physics, biology, chemistry, ecology, engineered systems, politics, etc. That the subject is labeled uncertainty quantification outside of statistics leads to confusion because statisticians typically use the phrase for any aspect of statistics for which an accuracy assessment is attached; UQ herein is reserved for the more limited definition, reflecting the scope of the journal.

Results from mathematical modeling are subject to errors and uncertainty emanating from a variety of sources, including uncertainty in data obtained from experiment and observation; limitations of physical modeling, including uncertain coefficients, approximation, and the need for emulation; problems in computer codes; and the difficulty of combining models into integrated systems. Of course, many of the same issues arise in understanding the uncertainties associated with any simulation model (such as agent-based models) and complex statistical models. Quantifying the effects of these uncertainties is crucial to accurately modeling and predicting real complex processes through computational simulators.

In specific terms, UQ embraces a number of problems, including:

- Code verification
- Model validation and estimating structural model error
- Computational error estimation for numerical solutions (e.g., a posteriori error analysis)
- Data assimilation and model calibration

- Detection and forecasting of high-impact, rare events
- Emulation of computer models and dimension reduction
- Inference with complex multiscale, multiphysics models
- Representation of uncertainty and error and integration of different types of uncertainty (e.g., parameter uncertainty, numerical error, and structural model error)
- Inverse problems, decisionmaking, and optimization under uncertainty
- Treatment of high-dimensional spaces

Addressing such problems requires tackling mathematical and statistical research of great technical difficulty. General mathematical components of UQ include probability, measure theory, functional analysis, differential equations, graph and network theory, approximation theory, and ergodic theory. At the same time, nearly all aspects of the statistical sciences are relevant to UQ. Moreover, much of this research is necessarily carried out in interdisciplinary settings.

JUQ will contain research articles presenting significant mathematical, statistical, algorithmic, and application advances in UQ in the context of simulation, prediction, control, and optimization in science and engineering and related fields such as sensitivity analysis, model validation, model calibration, data assimilation, and code verification. A key goal of *JUQ* will be nurturing synergistic interactions between the mathematical, statistical, computational, and applications communities involved in uncertainty quantification and related areas. To this end, *JUQ* solicits papers describing new ideas that could lead to significant progress in methodology, computational/algorithmic aspects, and fully conceived applications of uncertainty quantification, as well as review articles on particular aspects.

For more information about the journal and submitting articles, visit www.siam.org/journals/juq.php. ■

Preliminary Microdata File Available for Analysis

Jane F. Gentleman

A preliminary microdata file of January–September data from the 2011 National Health Interview Survey (NHIS) is available through the National Center for Health Statistics (NCHS) Research Data Center (RDC). NHIS data users can analyze these data without having to wait for the annual final NHIS microdata release (at about the end of June).

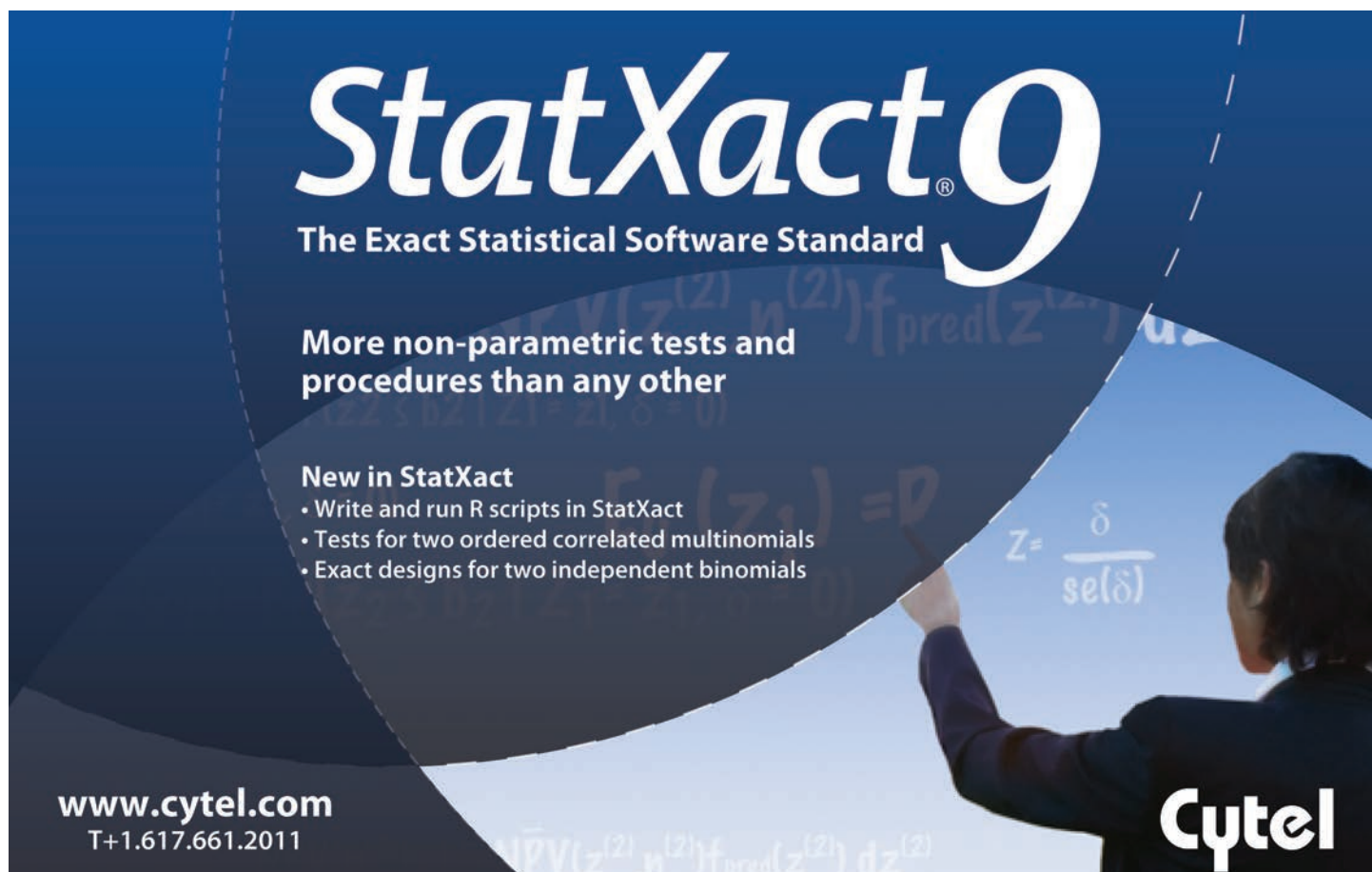
The NHIS is the principal source of information about the health of the U.S. civilian noninstitutionalized population and one of the major data-collection programs of NCHS. Among the many NHIS microdata and analytic products produced by NCHS are quarterly preliminary microdata files produced by the NHIS Early Release Program and containing selected NHIS variables for use in the RDC. For each data-collection year (January–December), these files are made available three times: in about September (with data from the first quarter), in about December (with data from the

first two quarters), and in about March of the next year (with data from the first three quarters). Analysts wishing to use the files should follow standard procedures for using the RDC. Note that NCHS has RDCs in Hyattsville, Maryland, and Atlanta, Georgia. NCHS RDC data also can be accessed remotely and at U.S. Census Bureau RDCs.

Thus, every year, NHIS analysts can use the NCHS RDC to access selected preliminary data as early as nine months before the annual public use microdata release.

The January–September 2011 NHIS preliminary microdata file contains Family Core data for 77,635 persons of all ages, Sample Child Core data for 9,815 children, and Sample Adult Core data for 25,272 adults.

Visit www.cdc.gov/nchs/nhis.htm and www.cdc.gov/rdc for more information. ■



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NSF, Census Bureau Announce Research Network

The National Science Foundation (NSF) and U.S. Census Bureau have awarded interdisciplinary research grants aimed at finding new ways to interpret social, behavioral, and economic data and new ways to use and disseminate the resulting statistics.

The following eight research awards were made to establish a set of research nodes that will conduct long-term, interdisciplinary, methodological research and educational activities.

Data Integration, Online Data Collection, and Privacy Protection for the 2020 Census

Principal Investigator: Stephen Fienberg, Carnegie Mellon University

This project will conduct research on three basic issues of interest related to collecting decennial census data: privacy, costs, and response rates. Researchers will address the practical problems of ensuring confidentiality and privacy while producing useful statistics for public and private purposes. They will investigate the use of administrative records to create the basic census frame, as well as other possible uses of administrative records as part of the census. This node also will conduct experiments that implement new ways of encouraging participation in an effort to reduce the decline in (or perhaps even increase) response rates and examine the unit used to collect census information (currently the household).

Improving the Connection Between the Spatial and the Survey Sciences

Principal Investigator: Seth Spielman, University of Colorado

This project will exploit new forms of geographic information and recent advances in spatial statistics, a type of statistics that focuses on the relationships between variables for areas in close proximity. In this case, the project is intended to make small-area estimates from the American Community Survey more accurate. The project also will foster an improved connection between the spatial and survey sciences, yielding both immediate and long-term benefits for the estimation, dissemination, and usability of the small-area statistics produced by the U.S. Census Bureau and others.

Integrated Research Support, Training, and Data Documentation

Principal Investigator: John Abowd, Cornell University

This project will develop a curation system designed and implemented in a manner that permits synchronization between the public and confidential metadata about the data sets available to researchers from the U.S. Census Bureau. The scholarly community will use the system as it would a conventional metadata repository, deprived only of the values of certain confidential information, but not their metadata. The researchers also will improve

imputation methodology for the Longitudinal Employer-Household Dynamics Program.

Enhancing Federal Agencies' Data Dissemination Capabilities

Principal Investigator: Jerome Reiter, Duke University

This project will develop broadly applicable methodologies that will transform and improve how statistical information is shared with the public by the federal statistical system. In particular, researchers will advance methodologies and tools for disseminating public use data with high quality and low risk of confidentiality breaches by developing theory and methodology for releasing multiply imputed "synthetic" data sets based on flexible, nonparametric Bayesian models built specifically for complex data sets.

Linking Surveys to the World—Administrative Data, the Web, and Beyond

Principal Investigator: Matthew Shapiro, University of Michigan

This project aims to improve survey measurements of economic and demographic data and potentially supplement or replace surveys with statistics based on administrative, web-based, and geospatial data. Applications include using linked survey-administrative data to assess attrition, selective nonresponse, and measurement error

in surveys; using web-based social media to measure job loss, job creation, small business creation, and informal economic activity; using administrative geospatial data to enhance small-area estimates; and investigating the relationship between public use, synthetic, and internal versions of the same data sets.

Development of Innovative and Transformative Approaches to Data Collection

Principal Investigator: Allan McCutcheon, University of Nebraska

This project will focus on improving survey data collected from computer-assisted methods. Objectives include evaluating the use of four diagnostic tools for identifying measurement errors in computer-assisted, interviewer-administered data-collection instruments; evaluating the use of adaptive/responsive designs in which a dynamic modeling of collected data is used to modify the questionnaire as the data are being collected; and evaluating the application of calendar- and time diary-based data-collection methods to aid in the accuracy of behavioral self-reports by tailoring questions to the needs of individual respondents.

Census Bureau Data Programs as Statistical Decision Problems

Principal Investigator: Bruce Spencer, Northwestern University

This project will address fundamental problems for all government statistical agencies, such as how to understand the value of the statistics they produce, how to compare value to cost in order to guide rational setting

of statistical priorities, and how to increase value for given cost. Researchers will extend and apply statistical decision theory, including cost-benefit analysis, to attack such basic questions.

In addition to generating new research methods and using advanced research practices and procedures, the researchers will address social and economic issues addressed by the federal statistical system. These issues include improving survey data collected from computer-assisted methods, exploiting new forms of geographic information, and ensuring confidentiality of the data collected and reported.

One more important result may be improved cost-efficiency and quality for the data collected in surveys. Improving censuses and surveys for the Census Bureau and other statistical agencies results in more accurate statistics for policymakers and officials to draw more precise conclusions and make better-informed decisions.

"This grant program gives the Census Bureau and the entire federal statistical system the opportunity to leverage the expertise of academia to solve problems we face every day in delivering cost-efficient statistics and information to the public," said Robert Groves, director of the Census Bureau. "This research is an investment that will lead to cost savings, and we are excited about the possibilities for learning from our colleagues and for collaboration over the next five years."

The projects also will foster the development of the next generation of researchers with skills relevant for the measurement of economic units, households, and people.

"These awards provide a unique opportunity for researchers to advance fundamental

understanding of important issues related to the collection, analysis, and dissemination of data in the social, behavioral, and economic sciences within the context of salient problems for the federal statistical system," said Cheryl Eavey, program director for NSF's Methodology, Measurement, and Statistics Program.

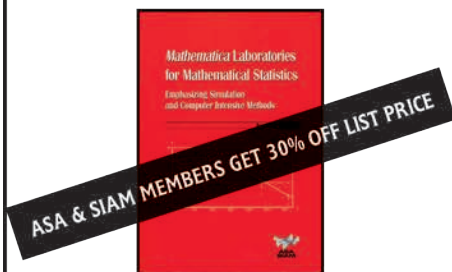
More information can be found at www.census.gov/NCRN or the National Science Foundation's NCRN site, www.nsf.gov/funding/pgm_summ.jsp?ims_503587&org=SBE&from=home.

Improving the Interpretability and Usability of the American Community Survey Through Hierarchical Multiscale Spatio-Temporal Statistical Models

Principal Investigator: Scott Holan, University of Missouri

The American Community Survey is an ongoing survey that releases statistics and estimates annually, providing communities with the timely information needed to plan the distribution of resources and services. This project will improve the interpretability and usability of the survey estimates, in particular the estimates for small areas and small population groups, through the development of statistical models that take account of both changes over time and differences over geographical space. In addition, researchers will provide a variety of methods that are of independent interest and can be used in many other surveys administered by the Census Bureau and other federal statistics agencies. ■

From the
ASA-SIAM SERIES
 on statistics and applied probability



**Mathematica Laboratories
 for Mathematical Statistics:
 Emphasizing Simulation and
 Computer Intensive Methods**
 Jenny A. Baglivo

"I particularly value that the emphasis of the labs is on the statistical concepts and not on programming in Mathematica. ... This text is an important addition to materials for post-calculus probability and statistics courses."

— Adele Marie Rothan, College of St. Catherine

"The book... is well suited not only for teaching purposes but it may also be used profitably by statistical practitioners or consultants interested in a computer-based introduction to mathematical statistics, and especially to computer intensive methods."

— Christina Diakaki, Technical University of Crete, Greece, *Zentralblatt MATH*, 1067

Integrating computers into mathematical statistics courses allows students to simulate experiments and visualize results, handle larger data sets, analyze data more quickly, and compare the results of classical data analysis methods with those using alternative techniques. This text's concise introduction to concepts of probability theory and mathematical statistics is accompanied by in-class and take-home computer laboratory activities that reinforce the techniques and are accessible to students inexperienced with *Mathematica*. The more than 230 laboratory problems present applications in many real-world settings, with data from the social and physical sciences as well as manufacturing, marketing, and sports. Originally published in 2005, the lab materials have been updated in 2012 for current versions of *Mathematica* and are available online through SIAM.

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New Online Material Available for Book on Mathematica

Mathematica Laboratories for Mathematical Statistics: Emphasizing Simulation and Computer Intensive Methods, by Jenny A. Baglivo, provides a model for incorporating technology and modern statistical methods into mathematical statistics courses. Although the print book was originally published in 2005, the electronic material accompanying the text (previously provided on CD-ROM) were recently updated for use with current versions of Mathematica and are available online.

The book is a concise introduction to the concepts of probability theory and mathematical statistics and includes parametric, nonparametric, permutation, bootstrap, and diagnostic methods. The print book does not include Mathematica commands. Instead, step-by-step instructions for using Mathematica are given in examples in the online material, which includes a series of in-class and take-home computer laboratory problems designed to reinforce the concepts and apply the techniques in real or realistic settings. The labs are accessible to users with little or no experience with Mathematica.

In addition to the 230+ laboratory problems, the online material includes custom tools designed to enhance the capabilities of Mathematica

for probability and statistics. Complete solutions to all labs, an instructor's guide, and hints for developing additional tools and labs are available to instructors who adopt the text for their courses.

The order of topics and level of presentation in the book are similar to those of other mathematical statistics texts. Chapters on permutation and bootstrap techniques were added after the formal inference chapters and before the intermediate-level topics. These two techniques are then discussed side-by-side with classical methods in later chapters. Thus, instructors will find it easy to incorporate the book's approach into their courses.

The book's contents are sufficient to support a problem-oriented mathematical statistics sequence in which the computer is used throughout the sequence. In fact, the first lab session can be scheduled after only three or four class meetings. The book and accompanying online material also can be used for self-study by statistical practitioners or consultants interested in a computer-based introduction to mathematical statistics, especially to computer-intensive methods.

Potential users interested in requesting an examination or desk copy, or current users who wish to obtain access to the updated material, should visit www.ec-securehost.com/SIAM/SA14.html. ■

March JASA Features Novel Methods for Handling Censored Data



The March 2012 issue of the *Journal of the American Statistical Association* is the first for new Theory and Methods section editors Xuming He of the University of Michigan and Jun Liu of Harvard University. Their first issue contains the usual broad assortment of theory and methods

contributions, affecting both study design and data analysis. Two Theory and Methods articles that use imputation to improve statistical inference with censored data are described below. The Applications and Case Studies section of this issue includes applications in education, environmental science, medicine, and public health. Articles about improved methods for tissue classification in brain imaging and wind power forecasting are previewed here.

Theory and Methods

Censored data are a form of missing data; it is known only that the observed value lies in a particular interval. For example, censored patient survival times in a clinical study are often known only to exceed the amount of follow-up time for an individual.

In many settings, censored data can complicate analysis and/or lead to a loss of statistical efficiency. One such setting is in the development of survival trees for analyzing survival data. Survival trees are a popular nonparametric regression approach to understanding the relationship between the survival time of a subject and a set of predictors. The ability to obtain a good-fitting survival tree relies on having a sufficient number of observed outcomes to build up the tree; censored observations don't have observed failure times that can limit our ability to develop appropriate trees.

"Recursively Imputed Survival Trees," by **Ruoqing Zhu** and **Michael Kosorok**, proposes imputing the unobserved failure times based on an initial survival model, updating the model based on the imputed

failure times, and then repeating the process several times. The proposed method can be viewed as a type of Monte Carlo expectation-maximization (EM) algorithm, which generates extra diversity in the tree-fitting process. Simulation studies and data analyses demonstrate that the new approach makes better use of the censored data than previous tree-based methods, yielding improved model fit and reduced prediction error.

Another case in which censored data can cause difficulties is when important predictors in a regression are subject to censoring. This can happen, for example, when an exposure variable is subject to detection limits so that values below the detection limit are not observed. A common approach is to use likelihood-based methods that assume the "missing" covariate values are missing at random, but this is not appropriate for censored covariates.

Huixia Wang and **Xingdong Feng** address this issue in the context of robust regression, specifically M-regression, in their article "Multiple Imputation for M-Regression with Censored Covariates." Instead of specifying parametric likelihoods for the imputation model in their approach, the authors' method imputes the censored covariates by assuming the conditional quantiles of the censored covariates are linear in the observed variables. This can be viewed as a semiparametric approach. The censored covariates are imputed multiple times and then standard regression methods are applied to the multiply imputed data sets and the results combined to produce an estimator with improved efficiency. The resulting estimator is shown to be consistent and asymptotically normal. The finite sample performance of the proposed method is assessed through a simulation study and the analysis of the c-reactive protein data set in the 2007–2008 National Health and Nutrition Examination Survey.

Applications and Case Studies

Magnetic resonance imaging (MRI) is a technology that allows scientists to study the human brain. It allows them to assess the anatomical structure of the brain. MRI produces measurements on a large three-dimensional array of volume elements known as voxels. One class of anatomical studies attempts to identify the different tissue types (gray matter, white

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matter, and cerebrospinal fluid) in a subject's brain from a single MRI image.

This type of classification can be done manually, but it is labor intensive. Automatic methods have been developed that use a Markov random field (MRF) prior distribution to favor contiguity among voxels of the same tissue type. The MRF is combined with a model that assumes observed voxel image intensities (e.g., gray levels) are normally distributed with means and variances that depend on the tissue type. Typical methods assume that each voxel is homogeneous so that the entire voxel is characterized as belonging to a given tissue type.

Dai Feng, Luke Tierney, and Vincent Magnotta, in their article, "MRI Tissue Classification via Bayes Hierarchical Mixture Models," derive an improved classification approach by introducing subvoxels within each voxel and then building an MRF model at the subvoxel level. Markov chain Monte Carlo methods are used to simulate from the posterior distribution of the model parameters and the subvoxel labels. A thorough simulation study demonstrates the value of the new approach.

Alternative energy is a critical research topic at present. Wind power shows great promise as a potential source of energy, but effective use of wind power requires accurate forecasts of wind power generation to allow wind energy producers to make reasonable supply commitments for future time periods. Most currently, available forecast approaches obtain point estimates of wind speed and wind direction and then turn these into point estimates of wind power. **Jooyoung Jeon and James Taylor's** article, "Using Conditional Kernel Density Estimation for Wind Power Density Forecasting," develops a method for generating probability distributions of wind power forecasts. Probability distributions of wind power forecasts allow better decisions than point estimates.

Jeon and Taylor use standard time series approaches (a VARMA-GARCH model) to generate wind speed and wind direction estimates. They then use a stochastic model to relate wind power to wind speed and direction. Their approach uses conditional kernel density estimation, where the conditioning is on wind speed, to obtain separate probability distributions for the wind power produced at different wind speeds. A time decay factor is built into the conditional kernel density approach to allow evolution in the wind power/wind speed relationship over time. The methodology is applied to four Greek wind farms and provides better short-term (up to 72-hour) forecasts than simpler methods that rely on deterministic wind speed/wind power curves.

There are many other informative articles in both sections of the March issue, as well as a set of book reviews. The full list of articles and a list of the books reviewed can be found at <http://pubs.amstat.org/loi/jasa>. ■

SCIENCE POLICY

FY13 Budget Request: Flat Funding to Significant Increases for NIH, NSF, Statistical Agencies

Steve Pierson, ASA Director of Science Policy

Science Policy Actions

ASA signs onto letter opposing components of Grant Reform and New Transparency (GRANT) Act of 2011 (H.R. 3433)

ASA signs onto letter in support of FY13 budget for NCHS

The president's Fiscal Year 2013 (FY13) budget request included some bright spots for research funding agencies and the federal statistical agencies, as Table 1 illustrates. Realizing these requested increases and defending the other requested levels will be an uphill battle, with continued sharp disagreements on the federal budget within Congress and between Congress and the administration. Further, with 2012 being a presidential election year, agreement on the budget is unlikely until after the election. Throughout the process, it is important to communicate to Congress the importance of these agencies.

NIH and NSF

The administration demonstrated its commitment to increasing the budget for the National Science Foundation (NSF) by requesting a 5% increase for the agency in FY13. The National Institutes of Health (NIH) is flat funded for FY13 from FY12.

Despite the level of funding for NIH, the administration addresses the decreasing proposal funding success rate (especially for investigator-initiated grants

and young, first-time researchers) by planning to increase the new or competing Research Project Grants (RPGs) by 672, which would result in a success rate of approximately 19%. According to NIH's deputy director for extramural research, Sally Rockey, this would be accomplished by reducing noncompeting RPGs by 1% from the FY12 level, negotiating the budgets of competing RPGs to avoid growth in the average award size from FY12, and abandoning inflationary increases in the out-years of competing and noncompeting awards.

The \$340 million increase requested for NSF bolsters a number of research and education programs. The highlights of the FY13 request includes funding for cybersecurity research and education; the next generation of computer tools and resources; the Science, Engineering, and Education for Sustainability portfolio; multidisciplinary research targeted at new materials, wireless communications, "smart" infrastructure, and robotics technologies; a new partnership with the Department of Education to transform K–16 mathematics teaching and learning; and research on implementation of undergraduate instructional practices leading to improved student outcomes.

Details of NSF's FY12 budget also were recently finalized. (NSF's total FY12 budget was settled in November, but Congress left the details for how to allocate the funding within NSF to the administration.) While NSF's

budget was increased by 2% from FY11 to FY12, the budget for the Mathematical and Physical Sciences (MPS) Directorate—the largest of NSF's seven directorates—was decreased by a quarter percent to \$1.309 billion. The Directorate for Education & Human Resources (EHR) was cut 4%. The directorates with the largest increases from FY11 to FY12 were Computer and Information Science and Engineering-CISE (3% to \$654 billion); Engineering (6% to \$673 million); and Social, Behavioral, and Economic Sciences-SBE (3% to \$254 million). For FY13, all directorates would get an increase, ranging from 2% for SBE and 3% for MPS to 6% for EHR and 9% for CISE.

The Division of Mathematical Sciences (DMS)—part of the MPS directorate—had its budget cut 1% in FY12, from \$239.8 million in FY11 to \$237.8 million in FY12. The proposed DMS level for FY13 is \$245 million, an increase of 3% over FY12. For further information, see the ASA Community blog entry at <http://tinyurl.com/13ReqNIHNSF>.

Statistical Agencies

The administration's FY13 budget request shows a commitment to increasing or restoring the budgets of many statistical agencies, but it also demonstrates new priorities. Six federal statistical agencies receive requested increases of 5% or greater: the Bureau of Economic Analysis (BEA), Bureau of Justice Statistics (BJS), Bureau of Transportation

Statistics (BTS), Energy Information Administration (EIA), National Agricultural Statistics Service (NASS), and National Center for Health Statistics (NCHS).

Five other agencies, to within 1%, are flat funded: the Economic Research Service (ERS), Bureau of Labor Statistics (BLS), National Center for Education Statistics (NCES), Social Security Administration Office of Research, Evaluation, and Statistics (ORES), and the Internal Revenue Service Statistics of Income Division (SOI). The requested FY13 budget for the NSF National Center for Science and Engineering Statistics (NCSES) is 5% lower than that of its FY12 budget, and the U.S. Census Bureau would see a 3% increase.

Looking first at the agencies with significant requested increases, the 33% for BJS would restore the 25% cut it received in FY12. The 10% for EIA would restore the significant cut it received in FY11. The 13% for NASS would restore a cut to its budget in FY11 and provide for the 2012 Census of Agriculture.

The requested increases for BEA and NCHS repeat the requested increases of the past few years for these agencies that Congress didn't fund, showing the administration's sustained commitment to increasing these agencies' budgets. For BEA, the administration requests an increase of 5% to improve its measurement of the U.S. economy through more frequent GDP reports by industrial sector and better understanding of how the business cycle affects U.S. households' ability to consume.

The 17% for NCHS would be used for implementation of electronic death records for a first set of states, new questions about sexual orientation into the full National Health Interview Survey (NHIS), and development of new sample designs for population-based surveys.

Table 1. FY13 Requested Budgets for NIH, NSF, and 13 Statistical Agencies and How They Compare to FY11 and FY12 Levels

	FY11	FY12	FY13 Request	\$ Change from FY12	Percentage Change
Research Agency (amounts in millions of dollars)					
NIH	30688	30623	30623	0	0%
NSF	6913	7033	7373	340	5%
Statistical Agency (amounts in millions of dollars)					
BEA	93	92	96	4	5%
BJS	60	45	60	15	33%
BLS	610	609	618	9	1%
BTS	24	25	38	13	51%
Census	1152	942	970	28	3%
EIA	96	105	116	11	10%
ERS	82	78	77	-1	-1%
NASS	156	159	179	20	13%
NCES	247	247	248	1	0%
NCHS	139	138	162	24	17%
NCSES	42	44	42	-2	-5%
ORES	29	29	29	0	0%
SOI	39	40	40	0	0%

The \$38 million request for BTS is a 50% requested increase (\$13 million) and is unique in that it more than offsets the \$1.8 million cut seen in FY12 and surpasses the FY11 and FY12 requested budgets of \$30 million and \$35 million. The requested funds would go to the National Long Distance Travel Data Program, a Safety Data and Analysis Initiative, and the Freight Statistics Program. The FY13 proposes the umbrella organization for BTS, the Research and Innovative Technology Administration, be elevated to a new office within the Office of the Secretary.

As noted above, many of requested increases represent a commitment to previous attempts to increase a statistical agency's budget, albeit, in some cases, more modestly (e.g., the requested budget for BEA in FY11 and FY12 was \$108 million.) For some agencies, however,

the administration has backed off of previous requested increases that weren't funded by Congress. For FY11 and FY12, the administration requested \$645 million and \$647 million for BLS; for ORES, \$32 million and \$35 million. Similarly, the administration did not renew the \$15 million increase for NCES it requested in FY12.

The requested budget for the U.S. Census Bureau includes increased funding to account for the execution of the 2012 Economic Census (a quinquennial survey) and the planning of the 2020 Decennial Census. The budget also accounts for the continued ramping down of the 2010 Decennial Census and decreases for the American Community Survey (4%) and Geographic Support (19%).

For details, see the ASA Community blog entry at <http://tinyurl.com/13StatPBR>. ■

STATtr@k

Staying Motivated and Achieving Success in Graduate School: A Few Common and New Suggestions

Doug Baumann and Jeff Nisen, Purdue University Department of Statistics



Earning an advanced degree can sometimes feel like running a gauntlet full of tests, research reports, deadlines, and—at times—very little sleep. There is little doubt that even the most energetic and passionate students will at some time feel overwhelmed by how much work they must complete, become unmotivated to finish their tasks, or—in the most extreme case—contemplate giving up on graduate school altogether and start looking for a job.

A quick Google search for “graduate school tips” will yield an abundance of information from a variety of sources, most of which seem to more or less offer the same common set of suggestions about how to stay motivated. Rather than add another chapter to this same old story, we aim to take an alternative approach by examining five common suggestions and then investigating potential failed motivation antecedents. Additionally, we offer some less common advice accrued from our own experiences and those of graduate students in our program.

Get Organized

“A place for everything, and everything in its place.”
~ Isabella Mary Beeton

Often, the first recommendation we receive when we’ve hit a motivation wall is to create a to-do list. For many of us, just listing each of the tasks we need to

complete each day or week is enough to get working again. These lists not only serve to clearly lay out what we need to do, but also what we’ve accomplished.

Why is it effective?

Simply stated, classes can be overwhelming and research seemingly insurmountable. Large (or difficult) projects can have a paralyzing effect on our motivation, and breaking the project down into manageable tasks can help us make quick work of an otherwise unapproachable assignment or research endeavor. Creative organization, such as ranking each task based on deadlines or degree of difficulty, can elucidate connections between tasks that previously were unclear. The level of detail and structure included involve a bit of personal taste; the best system for you may take some trial and error, but in the end, your motivation will thank you.

Trust Yourself

“Whether you think you can or think you can’t, you are right.” ~ Henry Ford

It is common to hear words of encouragement throughout our graduate careers, and sometimes the kind assurances are difficult to believe. There are the times when your self-confidence will be challenged the most and you may start to doubt yourself and your abilities. We may often feel insufficiently intelligent to produce quality research, especially when we compare ourselves to our peers, our professors, and the greater scientific community. At this time, you must remind yourself that many smart people gave you the chance to succeed in their program because they believe in you and your abilities. Use this fact as an excuse to be proud of yourself and your accomplishments.

Why is it effective?

Confidence is often our greatest motivator. It is human nature to compare ourselves to those around us, and doing so can certainly have negative consequences. Rather than evaluating ourselves based on our peers, taking an introspective approach can be a great boon to our confidence. Take time to seriously consider the skills you have, and even those you

don't. You might find that while your peers have better research skills than you do, you may be a better communicator or teacher. Perhaps your skills lie more in the ability to understand a wide variety of topics and their interconnections rather than in your ability to prove complex theorems. Creating a list of your abilities can serve as a reminder that you are unique, intelligent, and deserve to be in graduate school. Such lists also can be great motivators; by clearly outlining your strengths and weaknesses, you can be proactive in honing your skills.

Trust the Process

"Doubt is the vestibule which all must pass before they can enter the temple of wisdom."
~ C. C. Colton

Part of what makes dissertations so difficult to create is that they typically do not come with instructions. In addition to trusting yourself, graduate life requires a substantial amount of trust in the experience and guidance of your major adviser. It is likely that many students have graduated from your program already, and if not, each of your professors has been through the graduate school process themselves. The system is designed to help you accomplish your goals, and it works.

Why is it effective?

Completing a graduate degree can be daunting, even more so when the measure of success is unknown. The standards for degree completion, both at the master's and doctorate levels, are often perceived as almost entirely ambiguous. By placing trust in the process, some of the onus feels lifted from our shoulders; the path forward may not be entirely clear, but each step can be made with a bit more confidence. Admittedly, trusting the process can be quite difficult. It can be hard to let go of the uncertainty, but there are ways to actively clear some of the fog. Reading the dissertations produced by former students, or even those written by your major adviser and committee members, can go a long way toward helping you understand exactly what is expected of you. Although it may be uncomfortable, communicating your feelings to your peers and your adviser can be cathartic, even if they are unable to offer advice beyond "trust the process."

Develop a Broad Set of Interests

"The whole secret of life is to be interested in one thing profoundly and in a thousand things well."
~ Horace Walpole

Although somewhat counterintuitive, one of the most effective ways to stay motivated in coursework and research is to take time to have fun. Having

something enjoyable to look forward to at the end of the day, like watching the big game or working on a new artistic endeavor, can help keep you focused and motivated. These hobbies can even be related to statistics; side projects, national data analysis competitions, or coursework not directly related to your research can help you maintain a high level of excitement and enjoyment in your daily routine.

Why is it effective?

If excelling in coursework and research was always easy, staying motivated wouldn't be an issue. In reality, however, graduate studies can be a bit of a 'progress rollercoaster,' with peaks of high success and productivity and valleys of accomplishment doldrums. It is easy to become disillusioned when an extensive analysis doesn't run as expected (or worse, doesn't run at all), or when a homework problem gets the best of us. Hobbies can help us stay at least somewhat sane in the face of these challenges, perhaps because they help us stay positive. In lieu of hobbies, though, it is still possible to remain optimistic and energetic when the going gets rough. With a bit of practice, failures or roadblocks can be seen as small successes or even opportunities. After all, even a failed experiment can teach us quite a bit, especially what doesn't work.

Everyone Goes Through It

"The difference between stumbling blocks and stepping stones is how you use them." ~ Unknown

When all else fails, we might be advised that feeling insecure and unmotivated is entirely normal or that these feelings are just a fact of graduate student life. While, on the surface, this might not be the most comforting advice, there is a fair amount of truth in it. To quote a cliché, "Misery loves company." We often find solace in knowing that our experiences and emotions, especially the negative ones, are not unique.

Why is it effective?

It is easy to have a negative attitude toward side projects, collaborations, or even your own research. At the heart of our lack of motivation may be a sense that the work we are doing is something we do not want to do, either because we do not find it interesting or we do not fully understand its importance. It is useful to take a moment to remind yourself of the big picture. Why are you working on the project? The work you are doing is important to someone, whether that person is you, your adviser, or your collaborators, and you're working on the project because you have the skills needed to make a significant contribution. ■

ASA: A 'Big Tent' Organization

Dionne Price, FDA; George W. Williams, Amgen, Inc.; and Monica Johnston, Mostly Math

The American Statistical Association is a strong, vibrant organization with approximately 18,000 members—the largest community of statisticians in the world. It is an organization with a diverse membership from academia, industry, and government who are doing research and promoting high-quality statistical practice. The ASA is an inclusive, “big tent” organization with members from a wide range of professional and personal backgrounds. Still, there are opportunities for growth allowing increased activity and engagement for both new and current members.

Indeed, there is more room in the tent. Wouldn't it be nice if when we celebrate the ASA's 175th anniversary in Boston in 2014, we had increased in number to 20,000? The ASA Committee on Membership Retention and Recruitment (CMRR) is working diligently toward the objective of membership growth. In this column, we want to highlight the value of ASA membership and involvement in an effort to continue to grow our tent.

The ASA provides opportunities for members to remain current on new methodologies and to continue to grow professionally. The ASA can serve as one's professional home. Key benefits of ASA membership include access to its journals and networking through innumerable workshops and conferences. In a recent membership survey, gaining knowledge via the ASA's publications was the most popular ASA benefit. New publications have been added recently, including *Statistics in Biopharmaceutical Research* and *Significance*.

In the same survey, ASA conferences were the second-most valued benefit identified by ASA members. With more than 6,000 statisticians attending the Joint Statistical Meetings (JSM), there are opportunities to increase one's professional network, connect with statisticians from around the world, and interact with role models through mixers, business meetings, roundtable discussions, the Career Placement Service, and personal outreach. In general, JSM provides a great opportunity to learn about new topics while meeting others with similar interests.

The ASA has a strong interest in meeting the needs of underserved groups such as early-career statisticians, applied statisticians, and consulting statisticians. In response to the needs of early-career statisticians, STATtr@k was created (<http://statrak.amstat.org>). This year, the ASA held its first Conference on Statistical Practice. This conference was specifically targeted to

applied statisticians, consultants, and students interested in applied statistics.

The ASA is organized into sections, chapters, and committees that recognize its diversity and provide avenues to participate in a variety of ways. Recently, two new sections were created: the Section for Statistical Programmers and Analysts and the Section on Statistical Learning and Data Mining. Through this organizational structure, the ASA provides continuing education, webinars, awards, advertising, mentoring, etc. Statisticians have an opportunity to further expand their horizons by participating in and volunteering in support of the ASA.

Given the benefits of ASA membership, what can we do to retain, recruit, and renew members? Many members initially joined the ASA at the recommendation of an adviser, colleague, or employer. Hence, we request faculty to continue to encourage participation in ASA activities among students, colleagues to recommend renewal of membership by lapsed members, and leaders in industry and statistical agencies to promote ASA membership and involvement. We should all strive to attract new members from other quantitative areas such as mathematics and computer science that have a strong tie to statistics. Please join us in the “Member Get a Member” campaign as a mechanism for growing the ASA's membership. See www.amstat.org/membership/mgm for details.

One of the challenges in the growth of ASA membership includes the lack of conversion to full membership as students transition to young professionals. Members of the CMRR have a 2012–2013 goal of achieving 90% retention for students after graduation. We are exploring mechanisms such as student focus groups to understand the factors that promote (or hinder) conversion from student to regular membership.

Additional opportunity lies in increasing ASA regular membership from the industry and government sectors. Colleague-to-colleague outreach and role modeling may be particularly valuable in these sectors. As some long-term ASA members have stated, membership in a professional organization is an investment they have made in their own careers.

The ASA's 175th Anniversary Committee and the ASA Committee on Membership Recruitment and Retention encourage you to personally participate in attracting and retaining ASA members so even more can benefit from being committed to and active and engaged in all that a big tent symbolizes and can offer. ■

Hans Rosling, Webster West Headline eCOTS 2012

The Electronic Conference on Teaching Statistics (eCOTS) will take place from May 14-18, 2012, with keynote presentations by technology innovators Hans Rosling of the Gapminder Foundation and Karolinska Institute and Webster West of Texas A&M taking place on May 18.

The conference themes are “Debating Some of the Big Ideas About Teaching Statistics,” “Statistics for the Modern Student,” and “Reaching Out and Building Relationships Beyond the College Statistics Classroom.”

There will be approximately four 20–30 minute webinars by invited and peer-reviewed session leaders each day from May 14–16. Conference registrants are encouraged to attend the webinars as they are under way, asking questions and interacting with other conference attendees; however, the webinars will be recorded and available for registrants to view by May 17. Also on May 17, virtual workshops lasting up to two hours will take place. These will provide an overview of materials being produced as part of National Science Foundation-funded work in statistics education.

Along with the keynote presenters, session leaders from each webinar will be arranged into panels—each focusing on a conference theme—for question-and-answer sessions. Finally, there will be a peer-reviewed virtual ‘poster’ session. All posters will be recorded and posted at www.CAUSEweb.org/ecots so participants can view them and ask questions or make comments throughout the week. Poster

presenters will be encouraged to check back often and respond to any questions or comments about their work.

Like the United States Conference on Teaching Statistics (USCOTS), eCOTS was designed to focus on undergraduate-level statistics education (including AP Statistics), with the target audience being statistics teachers. Whereas USCOTS is held in odd-numbered years, eCOTS will occur during even-numbered years. It is hoped that eCOTS will be a forum in which statistics educators from around the world can network as they

learn how to incorporate new ideas, methods, and resources into their existing courses or programs. The registration fee for attending eCOTS is \$15.

This virtual conference will be hosted by the Consortium for the Advancement of Undergraduate Statistics Education (CAUSE) at www.CAUSEweb.org. The conference program committee is chaired by Michelle Everson of the University of Minnesota (email questions about the program to gaddy001@umn.edu). Registration information and conference updates will be available at www.CAUSEweb.org. ■

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First ASA Conference on Statistical Practice in the Books

Phil Scinto

I am happy to report that after nearly three years of planning and organizing, the first ASA Conference on Statistical Practice successfully took place from February 16–18 in Orlando, Florida, at the Renaissance Orlando at SeaWorld (www.amstat.org/meetings/csp/2012).

Nearly 300 participants were informed, and even entertained, by invited speakers through courses, tutorials, sessions, and the keynote address delivered by ASA President Bob Rodriguez.

Perhaps the most pleasant surprise was that nearly 100 conference attendees stayed for the feedback session late Saturday afternoon, revealing that the objectives of the conference were well met and the conference was thoroughly enjoyed. In addition, there were many good suggestions for improvement that will be highly considered for 2013. At the end of the feedback session, everyone had a good time during the end-of-conference prize drawing. In addition to several dozen coffee mugs, we raffled off admissions to the 2013 conference, a beach blanket and tote bag, and a two-night stay at the Renaissance Orlando at SeaWorld.

I would like to thank everyone who made this first conference a success, including the conference attendees, members of the ASA Board of Directors, ASA staff members, and members of our organizing and annual conference committee. We are all looking forward to the second annual conference and hope to see you all in New Orleans, Louisiana, from February 21–23, 2013. Check the ASA website for upcoming details.

The Conference on Statistical Practice aims to bring together hundreds of statistical practitioners—including data analysts, researchers, and scientists—who engage in the application of statistics to solve real-world problems on a daily basis. The conference provides an opportunity to learn about the latest statistical methodologies and best practices in statistical design, analysis, programming, and consulting and is designed to aid applied statisticians in improving their abilities in consulting with customers and organizations. Specific conference objectives for attendees include the following:

- Learn statistical techniques that apply to your job as an applied statistician
- Learn how to better communicate with customers
- Learn how to have a positive impact on your organization ■





Fred Faltin gives a talk titled, "Statistical Consulting: Working Collaboratively with Nonstatisticians."



Attendees line up to view posters during the ASA's first-ever electronic poster session.



Don Ryan talks about statistical analytics in marketing decisionmaking.



Iain Johnstone gives a talk titled, "Accreditation: A Perspective from the Committee."



ASA staff help attendees register for the conference.



Eric Nantz teaches the short course, "Introducing R for Statistical Analysis."

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Burnham

The Wildlife Society's highest honor, the Aldo Leopold Memorial Award, was recently awarded to **Kenneth P. Burnham**, professor emeritus of the department of fish, wildlife, and conservation biology at Colorado State University (CSU). The award recognizes individuals who have made significant contributions to wildlife conservation.

Burnham began his career as a statistician for the U.S.

Fish and Wildlife Service and continued as an area statistician for the USDA Agricultural Research Service in the southeast United States. His early research produced a wide variety of statistical methods used by ecologists around the world. These methods had a profound impact on the science behind numerous monitoring programs, including the northern spotted owl, endangered desert tortoise, endangered fish on the Colorado River, salmon passage through hydro dams on the Columbia River, and assistance in planning and conducting the 2000 U.S. Census.

Starting in 1988, and for the next 21 years, Burnham held the position of assistant unit leader for the Colorado Cooperative Fish and Wildlife Research Unit at CSU. His work led to effective insights into a broad range of biological systems in many places throughout the world. He is a longtime member and Fellow of the ASA.

The award is named after Aldo Leopold, who is considered the "father" of wildlife science. Following Leopold's death in 1948, the Wildlife Society has annually awarded an individual the Aldo Leopold Memorial Award in his honor. ■

Ming Yuan, associate professor in the H. Milton Stewart School of Industrial and Systems Engineering (ISyE), was recently awarded the Coca-Cola Junior Professorship for a three-year term.

The Coca-Cola Junior Professorship is supported by a gift from Coca-Cola to support research and development in ISyE. Endowed professorships, such as this one, are awarded to outstanding faculty, ensuring them the resources they need to remain at the forefront of their fields and to lead teaching and research efforts in their key areas.

In addition to this recent honor, Yuan was the recipient of the National Science Foundation Career Award in 2009 for his exemplary work in sparse modeling and estimation with high-dimensional data. He also was named a Distinguished Cancer Scholar from the Georgia Cancer Coalition in 2007 and was the recipient of the John van Ryzin Award in 2004.

Yuan earned his PhD in statistics from the University of Wisconsin at Madison. He also holds a master's in computer science from the University of Wisconsin and a bachelor's in electrical engineering and information science from the University of Science & Technology of China. Yuan's current research interests include statistical learning, bioinformatics, and methods of regularization. ■

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Janet Norwood

The Section on Statistical Genetics and the department of biostatistics in the school of public health at the University of Alabama at Birmingham (UAB) request nominations for the eleventh annual Janet L. Norwood Award for Outstanding Achievement by a Woman in the Statistical Sciences.

The award recipient will deliver a lecture on September 12 at the UAB award ceremony and receive travel expenses and a \$5,000 prize.

Eligible individuals are women who have completed their terminal degree and made extraordinary contributions to the statistical sciences.

They also should have an outstanding record of service to the statistical sciences, with an emphasis on both their own scholarship and teaching and leadership of the field in general and of women in particular and who, if selected, are willing to deliver a lecture at the award ceremony.

Nominations should include a full curriculum vitae accompanied by a letter of no more than two pages describing the nature of the candidate's contributions. Contributions may be in development and evaluation of statistical methods, teaching of statistics, application of statistics, or any other activity

that can arguably be said to have advanced the field of statistical science. Self-nominations are acceptable.

Send nominations by June 29 to David B. Allison, distinguished professor, associate dean for science, school of public health, at dallison@uab.edu. Electronic submissions of nominations are encouraged. The winner will be announced July 6, 2012.

For details about the award, visit www.soph.uab.edu/ssg/norwoodaward/aboutaward. ■

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



The 8th International Meeting of R Users
June 12-15, 2012
Vanderbilt University, Nashville, Tennessee
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The useR! 2012 meeting will offer:

- a pre-conference short course by renowned statistician Bill Venables
- 18 tutorials by leading experts in statistics and computing
- a platform for ideas on data analysis, visualization, and novel applications
- the latest and greatest from the R community and the Core Development Team

*Hosted by the **Department of Biostatistics, Vanderbilt University** and the **R Foundation for Statistical Computing***

sectionnews

Biometrics

The Biometrics Section will sponsor four Continuing Education (CE) courses and six invited sessions at the 2012 Joint Statistical Meetings in San Diego, California. Following is a list of the CE courses and invited sessions.

CE Courses

- Smoothing Splines: Methods and Applications
Instructor: Yuedong Wang
- Statistical Methods for Genome-Wide Association, Copy Number Variants and Rare Variants Analysis
Instructors: Hongzhe Lee and Wei Pan
- Statistics Analysis with Missing Data
Instructors: Rod Little and Trivellore Raghunath
- Design and Analysis of Biomarker Studies for Risk Prediction
Instructors: Tianxi Cai and Yingye Zheng

Invited Sessions

- Recent Methodology Developed for the Design of Early-Phase Clinical Trials
Organizer: Thomas Braun
- Statistical Challenges and Innovative Solutions for Correlated Data
Organizer: Peiyong (Annie) Qu
- Statistical Methods for High-Dimensional Complex-Structured Object Data
Organizer: Veera Baladandayuthapani

Award Competitions

The section also announces the results of the 2012 David Byar Award competition. A record high of 62 submissions was received. Through an anonymous review process, the award committee chose **Yang Ning** of The Johns Hopkins University for “Reducing the Sensitivity to Nuisance Parameters in Nonstandard Likelihood,” with co-author Kung-Yee Liang. Additionally, travel awards were given to the following:

Huaihou Chen of Columbia University for “A Marginal Approach to Reduced-Rank Penalized

Spline Smoothing with Application to Multilevel Functional Data,” with co-authors Yuanjia Wang, Myunghee Cho Paik, and H. Alex Choi

Shuo Chen of Emory University for “A Bayesian Hierarchical Framework for Modeling Brain Connectivity of Neuroimaging Data,” with co-author F. DuBois Bowman

Jeff Goldsmith of The Johns Hopkins University for “Corrected Confidence Bands for Functional Data Using Principal Components,” with co-authors Sonja Greven and Ciprian Crainiceanu

Min Jin Ha of The University of North Carolina for “Testing and Estimation of Partial Correlation Networks,” with co-author Fred A. Wright

Peisong Han of the University of Michigan for “Conditional Empirical Likelihood Inference for Unbalanced Longitudinal Data,” with co-authors Peter X.-K. Song and Lu Wang

Yen-Tsung Huang of Harvard University for “Joint Analysis of SNP and Gene Expression Data in Genome-Wide Association Studies,” with co-authors Xihong Lin and Tyler VanderWeele

Han Liu of The Johns Hopkins University for “The Nonparanormal Skeptic,” with co-authors Fang Han, Ming Yuan, John Lafferty, and Larry Wasserman

Jennifer Sinnott of Harvard University for “Omnibus Risk Assessment via Accelerated Failure Time Kernel Machine Modeling,” with co-author Tianxi Cai

The Byar award winner will receive \$1,500, and travel award winners will each receive \$800.

Visit the biometrics section website at www.bio.rh.ccf.org/Biometrics for the latest in Biometrics Section news.

Quality and Productivity

This year’s Quality and Productivity Research Conference will take place from June 4–7 in Long Beach, California, and feature a wide range of technical sessions covering topics in reliability, the

To view
section news in
its entirety, visit
[http://magazine.
amstat.org](http://magazine.amstat.org).

design and analysis of experiments (including computer experiments), statistical process control, and measurement systems analysis.

On June 4, Di Michelson of SAS Institute will provide the short course “Topics in Statistical Process Control.” Registration is open for both the short course and conference. See www.qprc2012.com for details.

Also, the section will sponsor one invited session and four roundtable events during the 2012 Joint Statistical Meetings in San Diego, California. Christine Anderson-Cook organized the invited session “Statistical Engineering Case Studies in Industry and Government,” inviting Peter Parker of NASA, Grant Reinman of Pratt & Whitney, and William Brenneman of Procter & Gamble to speak. Ron Snee will serve as discussant. The roundtables include the following:

- “Multivariate Process Monitoring for Nonmanufacturing Applications,” with Blair Christian
- “Common Misconceptions in Response Surface Modeling,” with Thomas Bizik
- “Enabling Process and Product Robustness with Data-Driven Decisions,” with Daksha Chokshi
- “Differences Between a Career in Clinical Statistics vs. Industrial Statistics,” with Todd Coffey

After JSM, the Fall Technical Conference will take place in St. Louis, Missouri, from October 4–5. The theme is “Statistics and Quality: Expanding the Horizon.” Two short courses will be offered on the day before the conference and two more on the day after. For information, visit the conference website at <http://amstat-online.org/spes/2011/11/10/call-for-papers-2012-fall-technical-conference>.

The section is always interested in receiving proposals for short courses. Contact Rachel Silvestrini at rtjohnso@nps.edu for more information.

For more information about the section, visit *Amstat News* online at <http://magazine.amstat.org/?cat=17>.

Survey Research Methods

The Survey Research Methods Section education officer, Marilyn Seastrom, organized four webinars for the spring of 2012. The first, titled “Practical

Tools for Nonresponse Bias Analysis,” is scheduled for April 24 and will be presented by Kristen Olson of the University of Nebraska-Lincoln and Jill Montaquila of Westat.

There is a fee to view each webinar, and the cost depends on the length of the presentation, which is typically two hours. Participants are allowed one web connection and one audio connection to view the presentation.

To register for the upcoming webinar, visit www.amstat.org/sections/srms/webinar.cfm.

Additionally, the section is sponsoring two roundtables and one Continuing Education course for this year’s JSM in San Diego, California. The first roundtable, led by Lars Lyberg of the University of Stockholm, Sweden, is titled “Total Survey Error in Practice.” The second, led by Joe Sakshaug of the Institute for Employment Research, Nuremberg, is titled “Challenges with Linking Survey and Administrative Data Set.”

The Continuing Education course, “Paradata in Survey Research,” will be presented by Frauke Kreuter of the University of Michigan.

For details, visit the Survey Research Methods Section news online at <http://magazine.amstat.org/blog/category/membernews/amstatsections>.

chapternews

Chicago

The ASA’s Chicago Chapter is hosting a conference on May 4, titled “America the Predictable? Different Approaches to Understanding and Forecasting Political Election Results.” Speakers include Allan Lichtman (The Keys to the White House: Forecast for 2012), John G. Geer (Political Attack Advertising), Forrest Nelson (Iowa Electronic Markets), and Filippo Menczer (Tracking the Diffusion of Political Ideas in Social Media). For more information and to register, visit www.123signup.com/event?id=ckhvm.

To list your section’s news in *Amstat News*, send an email to Managing Editor Megan Murphy at megan@amstat.org with the details.

The following events are the latest additions to the ASA's online calendar of events. Announcements are accepted from education and not-for-profit organizations only. To view the complete list of statistics meetings and workshops, visit www.amstat.org/datetime.

* Indicates events sponsored by the ASA or one of its sections, chapters, or committees

» Indicates events posted since the previous issue

2012

June

1-22—Financial Time Series Analysis: High-Dimensionality, Nonstationarity, and the Financial Crisis, Singapore

For more information, visit www2.ims.nus.edu.sg/Programs/012hidim/index.php or contact Claire Tan, 3 Prince George's Park, Singapore, International 118402, Singapore; 65161892; imstlf@nus.edu.sg.

*3-6—SRCOS Summer Research Conference, Jekyll Island, Georgia

For details, visit www.sph.emory.edu/srcos2012 or contact Bob Waggoner, Rollins School of Public Health, 1518 Clifton Road, N.E., #318, Mailstop: 1518-002-3AA (SPH: Biostatistics), Atlanta, GA 30322; (404) 727-7693; rwaggon@emory.edu.

4-6—Workshop on Parameter Estimation for Dynamical Systems, Eindhoven, The Netherlands

For more information, visit www.few.vu.nl/~shota/peds2.php or contact Shota Gugushvili, De Boelelaan 1081a, Amsterdam, International 1081 HV, The Netherlands; +31 (0)20 5987980; s.gugushvili@vu.nl.

*4-7—Quality and Productivity Research Conference (QPRC), Long Beach, California

For details, visit www.qprc2012.com or contact Daniel Jeske, Room 2605, STAT-COMP Building, 900 University Ave., Riverside, CA 92521; (951) 827-3014; daniel.jeske@ucr.edu.

6-9—MedicReS World Congress on Good Medical Research, Vienna, Austria

For more information, visit www.ic2012.medicres.org or contact Burcin Akicier, Armada Is Merkezi Kat 12 Sogutozu, Ankara, International 06100, Turkey; +905072072777; info@bsb.com.tr.

>>8-15—Algebraic Statistics 2012, Penn State University, University Park, Pennsylvania

For more information, visit www.math.psu.edu/morton/aspsu2012/index.html or contact Sonja Petrovic, 326 Thomas Bldg., University Park, PA 16802; as2012@psu.edu.

>>10-13—2012 ASA Conference on Radiation and Health, Kennebunkport, Maine

For details, visit www.amstat.org/meetings/radiation/2012/index.cfm or contact Lisette Werbowetzki, 732 N. Washington St., Alexandria, VA 22314; (703) 684-1221; lisette@amstat.org.

>>11-14—International Conference on Establishment Surveys, Montréal, Québec, Canada

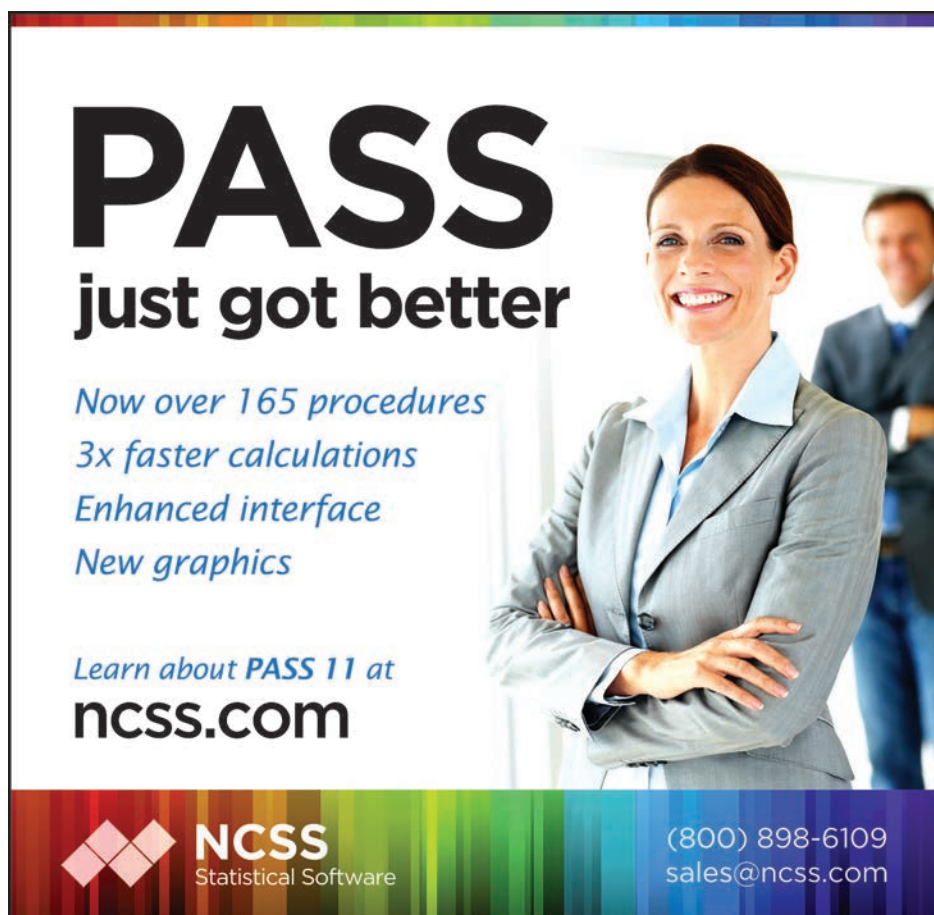
For more information, visit www.amstat.org/meetings/ices/2012/index.cfm or contact ASA Meetings, 732 N. Washington St., Alexandria, VA 22314; (703) 684-1221; meetings@amstat.org.

>>13-15—The 19th IMS/ASA Spring Research Conference (SRC) on Statistics in Industry and Technology, Cambridge, Massachusetts

For details, visit www.stat.harvard.edu/SRC2012 or contact Tirthankar Dasgupta, 1 Oxford St., Cambridge, MA 02138; (617) 496-8911; dasgupta@stat.harvard.edu.

13-15—37th Annual Summer Institute of Applied Statistics, Provo, Utah

For more information, visit statistics.byu.edu/37th-annual-summer-institute-applied-statistics or contact Amy Royer, 223 TMCB, Provo, UT 84602; (801) 422-4506; aroyer@stat.byu.edu.



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14–15—Symposium on Modeling Immune Responses from Complex Data, Rochester, New York

For details, visit cbim.urmc.rochester.edu/education/2012-symposium or contact Jeanne Holden-Wiltse, Dept. of Biostatistics and Computational Biology, University of Rochester, 601 Elmwood Ave., Box 630, Rochester, NY 14618; (585) 275-0386; jeanne_wiltse@urmc.rochester.edu.

>>14–15—Project-Based Introductory Statistics Workshop, Middletown, Connecticut

For more information, visit qac.blogs.wesleyan.edu/summer-workshop or contact Lisa Dierker, 207 High St., Middletown, CT 06459; (860) 685-2137; ldierker@wesleyan.edu.

17–21—ISBIS 2012, Bangkok, Thailand

For more information, visit www.isbis2012-thailand.org or contact David Banks, Department of Statistical Science, Box 90251, Duke University, Durham, NC 27708; (919) 684-3743; banks@stat.duke.edu.

18–29—Joint 2012 MBI-NIMBioS-CAMBAM Summer Graduate Workshop Stochastics Applied to Biological Systems, Columbus, Ohio

For more information, visit www.mbi.osu.edu/eduprograms/graduate2012.html or contact Rebecca Martin, 1735 Neil Ave., Columbus, OH 43210; (614) 688-3519; rebecca@mbi.osu.edu.

20–22—Using Lean Six Sigma to Prevent Avoidable Readmissions, Chicago, Illinois

For details, visit www.wcbf.com/quality/5112 or contact Selina Mirpuri, First Floor, Jubilee House, Merrion Avenue, London, International HA7 4RY, UK; 800 959 5346; selina.mirpuri@wcbf.com.

20–24—8th International Symposium on Statistics, West Lafayette, Indiana

For more information, visit www.stat.purdue.edu or contact Diane Martin, 250 N. University Ave., West

Lafayette, IN 47907; (765) 494-3141; martindl@purdue.edu.

23–25—International Conference on the Interface Between Statistics and Engineering, Tainan, Taiwan

For more information, visit conf.ncku.edu.tw/icise or contact Shuen-Lin Jeng, No. 1, Univeristy Road, Tainan, International 701, Taiwan; 886-6-2757575-53600; sljeng@mail.ncku.edu.tw.

24–27—32nd Annual International Symposium on Forecasting, Boston, Massachusetts

For details, visit <http://forecasters.org/isf/index.html> or contact Pam Stroud, 53 Tesla Ave., Medford, MA 02155; (781) 234-4077; isf@forecasters.org.

25–27—3rd Annual Pacific Coast Statisticians and Pharmacometricians Innovation Conference (PaSiPhIC), San Luis Obispo, California

For more information, visit www.pasiphic.calpoly.edu or contact Brian Smith, One Amgen Center Drive, MS 38-3-B, Thousand Oaks, CA 91360; (805) 447-1378; brsmith@amgen.com.

25–29—SAMSI Summer Program: Nonlocal Continuum Models for Diffusion, Mechanics, and Other Applications, Research Triangle Park, North Carolina

For more information, visit www.samsi.info/workshop/nonlocal-continuum-models-diffusion-mechanics-and-other-applications or contact Karem Jackson, 19 T.W. Alexander Drive, RTP, NC 27709; (919) 685-9324; admin@samsi.info.

27–29—Using Lean Six Sigma and Process Improvement to Improve Patient Satisfaction: Improving Quality, Safety, and Experience, Boston, Massachusetts

For details, visit www.wcbf.com/quality/5113 or contact Selina Mirpuri, First Floor, Jubilee House, Merrion Avenue, London, HA7 4RY,

UK; (+1) 800 959 5346; selina.mirpuri@wcbf.com.

>>27–29—WCBF's Using Lean, Six Sigma, and Process to Improve Patient Satisfaction: Improving Quality, Safety, and Experience, Chicago, Illinois

For details, visit www.wcbf.com/quality/5113 or contact Selina Mirpuri, 30 S. Wacker Drive, 22nd Floor, Chicago, IL 60606; (800) 959-6549; selina.mirpuri@wcbf.com.

July

1–4—IMS Asia Pacific Rim Meetings, Tsukuba, Japan

For more information, visit <http://ims-aprm2012.org/index.html> or contact Runze Li, Department of Statistics, Penn State University, University Park, PA 16802-2111; (814) 865-1555; rli@stat.psu.edu.

3–5—Leeds Annual Statistical Research (LASR) Workshop, Leeds, United Kingdom

For more information, visit www.maths.leeds.ac.uk/statistics/workshop/lasr2012 or contact Kanti Mardia, University of Leeds, School of Mathematics, Woodhouse Lane, Leeds, International LS2 9JT, UK; workshop@maths.leeds.ac.uk.

3–6—International Statistical Ecology Conference (ISEC) 2012, Oslo, Norway

For more information, visit www.cees.uio.no/news/2010/isec2012.html or contact Carl Schwarz, Statistics and Actuarial Science, Burnaby, British Columbia, V5A1S6, Canada; (778) 782-3376; cschwarz@stat.sfu.ca.

3–6—Fields Institute International Symposium on Asymptotic Methods in Stochastics, in Honor of Miklós Csörgö's Work, Ottawa, Canada

For more information, visit www.fields.utoronto.ca/programs/scientific/12-13/stochastics or contact Rafal Kulik, 585 King Edward Ave., Ottawa, International K1N6N5, Canada; rkulik@uottawa.ca.

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

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

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

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

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

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

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

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

of references to ACHBiostat@uams.edu. University of Arkansas for Medical Sciences is an AA/EOE.

District of Columbia

■ Small DC biostatistical firm (www.statcollab.com) involved in medical research and consulting seeks several biostatisticians to perform project coordination, data analysis, SAS programming, and report writing. Send cover letter (include Ref: ASA-BIO-1201), résumé, writing sample, program sample, and unofficial transcripts (graduate and undergraduate) by email (office@statcollab.com), fax (202) 247-9701, or by snail mail: Statistics Collaborative, Inc., 1625 Massachusetts Ave., NW, Suite 600, Washington, DC 20036.

Florida

■ Biostatistician or epidemiologist. The Jaeb Center for Health Research, a non-profit clinical trials coordinating center in Tampa, Florida, has an open position for a biostatistician or epidemiologist interested in an academic medical research environment offering an excellent opportunity for professional growth. Master's degree required. Work will involve data analyses, manuscript preparation, and protocol development. Details at www.jaeb.org. Cover letter & CV to: stats@jaeb.org. EOE/DFWP.

■ The department of statistics at UCF has an opening beginning August 2012 for a 9-month instructor. An MS or PhD in statistics or closely related field is required. Applicants must apply at www.jobswithucf.com. Upload letter of interest, teaching statement, CV, graduate transcripts, and list three references. Have three letters of reference sent to Dr. Schott, Department of Statistics, UCF, P.O. Box 162370, Orlando, FL 32816-2370. University of Central Florida is an equal opportunity affirmative action employer. Women and minorities are strongly urged to apply. Search documents may be viewed by the public upon request in accordance with Florida statute. AA/EOE.

■ Senior statistician. The InfiLaw System, a consortium of independent law schools, headquartered in Naples, FL, is accepting applications for an experienced statistician capable of modeling, market segmentation, and design of experiments.

NORC at the UNIVERSITY of CHICAGO

NORC at the University of Chicago is an independent research organization headquartered in downtown Chicago with additional offices on the University of Chicago's campus, in the D.C. Metro area, Atlanta, and Boston. With clients throughout the world, NORC collaborates with government agencies, foundations, educational institutions, nonprofit organizations, and businesses to provide data and analysis that support informed decision making in key areas including health, education, economics, crime, justice, energy, security, and the environment. Learn more about NORC's leadership and experience in data collection, analysis, and dissemination at:

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

<http://norccareers.silkroad.com>

NORC is an affirmative action, equal opportunity employer that values and actively seeks diversity in the workforce.

Arizona

■ T/TE Associate/Full Professor in Biostatistics, University of Arizona, Public Health. The successful candidate will develop and teach graduate-level courses, mentor graduate students, and contribute to the research and service mission of the college. Review will begin on April 27, 2012, and continue until the position is filled. For a complete listing of position duties, qualifications, and to apply, please visit www.uacareertrack.com/applicants/Central?quickFind=203042. University of Arizona is an AA/EOE.

Arkansas

■ Located in Little Rock, the pediatric biostatistics program at the University of Arkansas for Medical Sciences is recruiting a master's-level biostatistician to become an integral part of a collaborative analytical unit specializing in clinical research. Minimum qualifications include proficiency in SAS/R, two years professional experience; some graduate experience may qualify. Please forward a cover letter, résumé, and two names

Survey Sampling Statistician

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

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

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

We are currently recruiting for the following statistical position:

Survey Sampling Statistician

Job Code 4621BR

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

Westat offers excellent growth opportunities and an outstanding benefits package including life and health insurance, an Employee Stock Ownership Plan (ESOP), a 401(k) plan, flexible spending accounts, professional development, and tuition assistance. To apply, go to www.westat.com/jobs and enter **4621BR** in the space provided.



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Research Corporation*

Applicants should possess a master's degree in statistics and at least 10 years' experience in a business statistical environment and Six Sigma Green Belt certification. PhD degree is preferred. Details are available at www.infilaw.com. The InfiLaw System is an Equal Opportunity Employer.

Georgia

■ The Winship Cancer Institute of Emory University Biostatistics and Bioinformatics core has MS-level senior biostatistician ref-22825BR and bioinformatics analyst ref-20894BR positions. We are recruiting candidates w/ experience in clinical trials, genomics areas, and Bayesian methods. Preference will be given to candidates w/cancer research experience. Applicants should submit a cover letter, CV, and three reference letters to: MS Search Committee reference number 22825BR. See www.emory.jobs. Winship Cancer Institute of Emory University is an equal opportunity/affirmative action employer. The

Clinical Professor of Biostatistics

A Position in the Collaborative Studies Coordinating Center

Department of Biostatistics



UNC
GILLINGS SCHOOL OF
GLOBAL PUBLIC HEALTH

The Collaborative Studies Coordinating Center (CSCC) in the Department of Biostatistics at The University of North Carolina at Chapel Hill (UNC) is seeking applications for a Clinical Track faculty position beginning in Fall 2012. The faculty appointment will be in the Department of Biostatistics in UNC's Gillings School of Global Public Health. Applicants are sought at the Professor level. A doctoral degree in Statistics, Biostatistics, or equivalent is required. Applicants should have broad research and teaching interests, substantial experience directing multi-center clinical trials and epidemiological studies, and the ability to engage in collaborative research with investigators at UNC and other universities and research centers. Candidates should have a strong publication record and have at least five years of experience as coordinating center Principal Investigator, including at least three multi-center projects in an academic setting and have experience teaching at least two different courses at the graduate level.

Founded in 1971, the CSCC is the longest-running, NIH-funded Coordinating Center with a portfolio of studies spanning various disease areas. The University of North Carolina is among the nation's top public research universities, with dynamic programs in biostatistics, epidemiology, statistical genetics, bioinformatics, and medicine. The application deadline is June 30, 2012.

To apply, use the electronic submission website at <http://jobs.unc.edu/2502402> and upload PDF versions of your CV, cover letter, and research and teaching statements. Candidates must also arrange for three letters of recommendation to arrive via email at bseagrov@bios.unc.edu. Letters should be addressed to:

Faculty Search Committee
c/o Betsy Seagroves, Department of Biostatistics
CB #7420, McGavran-Greenberg Hall
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-7420

At the UNC Gillings School of Global Public Health, diversity, inclusiveness and civility are core values as well as characteristics of the School. We strongly encourage applications from diverse individuals, including but not limited to diversity in such characteristics as race/ethnicity, color, national origin, age, gender, socioeconomic background, religion, creed, veteran's status, gender identity, gender expression, sexual orientation and disability. The University of North Carolina at Chapel Hill is an Equal Opportunity Employer.

department has a culturally diverse faculty and strongly encourages applications from women and minority candidates.

Illinois

■ Asst. Professor. Responsibilities include collaborative work within an active multidisciplinary clinical research environment, methodological research, and some teaching. Doctorate in statistics/biostatistics required. Experience with missing data methods; strong communication and computer skills required; longitudinal data and clinical trials experience preferred. Cover letter and CV to Elizabeth Avery, Dept. of Preventive Medicine, Rush University Medical Center, 1700 W. Van Buren, Suite 470, Chicago, IL 60612, Elizabeth_F_Avery@rush.edu. Rush University Medical Center is an EOE.

Maine

■ Postdoctoral opportunities in computational and systems biology in the Center for Genome Dynamics at The Jackson Laboratory (www.genomedynamics.org). Center investigators use computation, mathematical modeling, and statistics to understand the genetics of complex traits. Requires PhD in quantitative field such as computer science, statistics, applied mathematics or in biological sciences with strong quantitative background. Apply at www.jax.org/careers (JobID 2311). The Jackson Laboratory is an EOE/AA employer.

■ Bioinformatics analyst opportunity at the Center for Genome Dynamics at The Jackson Laboratory (www.genomedynamics.org). Successful candidate will provide statistical and bioinformatics analysis support with a focus on systems genetics. Position offers opportunities for independent research and publication. Minimum requirements: PhD in a biomedical and/or biostatistics discipline or MS degree and significant relevant experience. Apply at www.jax.org/careers (JobID 3149). www.genomedynamics.org. The Jackson Laboratory is an EOE/AA employer.

Maryland

■ The department of medicine and department of epidemiology and public health (division of biostatistics and

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Requirements

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

Apply at www.census.gov, click on Jobs@census, Headquarters and NPC Employment Opportunities, Mathematical Statistician

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



bioinformatics) and the Baltimore VA Geriatric Research, Educational and Clinical Center invite applications for a biostatistician with a PhD and 3 years' experience in collaborative clinical research for a faculty appointment at the assistant or associate professor level. Visit <http://medschool.umaryland.edu/epidemiology/employ.asp>; submit CV and 3 references to ywu@epi.umaryland.edu. The University of Maryland, Baltimore is an equal opportunity, affirmative action employer. Minorities, women, veterans, and individuals with disabilities are encouraged to apply.

Massachusetts

■ Tufts Clinical and Translational Science Institute is recruiting for a statistician to work in its research design center. Responsibilities include consulting and providing biostatistics services to researchers applying for grant funding and mentoring students and teachers in clinical and translation science. The work is collaborative with research departments across Tufts and its affiliated organizations. Candidates should have a PhD in statistics or a related field. It is Tufts Medical Center's policy, consistent with federal and state law, to provide equal opportunity to all applicants and employees with respect to the administration of personnel policies and practices, including recruitment, hiring, training, promotion, transfer, compensation, benefits, disciplinary action, layoff, termination and other terms and conditions of employment, without regard to an individual's actual or perceived race, color, religion, sex, pregnancy, sexual orientation, gender identity or gender expression, national origin, age, disability, veteran status, marital status, genetic traits and any other classification protected by law; and ensure that all employment decisions are based on valid job requirements.

Ohio

■ The department of quantitative health sciences at Cleveland Clinic is recruiting for faculty, postdoctoral, and master's-level positions. Many areas are being sought, including biostatistics, data mining, health economics, health status

measures, and analysis of population-based registries. Details for all positions, as well as application instructions, are at www.lerner.ccf.org/qhs/jobs. Cleveland Clinic is a AA/EOE.

Texas

■ StataCorp, the developer of the statistical software Stata, invites applications for a senior statistician and software developer (ST-1S) position. Candidates must have a PhD in statistics, programming experience in compiled or matrix programming languages, and good communication skills. Submit CV and cover letter to hrd@stata.com. For more information, visit www.stata.com/employment. StataCorp is an EEO/AA Employer.

■ StataCorp, the developer of the statistical software Stata, invites applications for a senior biostatistician and software developer (ST-1B) position. Candidates must have a PhD in biostatistics, programming

experience in compiled or matrix programming languages, and good communication skills. Submit CV and cover letter to hrd@stata.com. For more information, visit www.stata.com/employment. StataCorp is an EEO/AA Employer.

International

■ Senior instructor of rank comparable to associate professor position in the Dept. of ISOM. Applications will be accepted until the position is filled. Excellence in teaching and PhD required by employment start date. The successful applicant is expected to play an important role in teaching and developing business statistics courses for undergraduate and MBA programs of the business school. Submit CV and three referees to stat11@ust.hk. The Hong Kong University of Science and Technology School of Business and Management is an EOE. ■

VCU Medical Center

Virginia Commonwealth University

Department of Biostatistics
Assistant Professor
Position #F34070

The Department of Biostatistics at Virginia Commonwealth University (VCU) is seeking to fill a tenure-eligible faculty position at the level of assistant professor. The candidate should have interdisciplinary research interests with the potential for external funding and scholarship that complements and expands existing expertise in the department. Research areas of particular interest include (but are not limited to) longitudinal modeling in the areas of obesity and cardiovascular metabolic risk factors. Faculty are expected to maintain extramural grant support, teach and advise graduate students, and provide departmental and university service.

The VCU Department of Biostatistics consists of 16 full-time faculty and offers both M.S. and Ph.D. programs in biostatistics, including a concentration in Genomic Biostatistics and a M.S. in Clinical Research and Biostatistics Concentration. In addition to other computational resources at VCU, our department supports its own high-performance computing cluster.

Qualifications: Ph.D. or equivalent, in biostatistics or a closely related field. Applicants must demonstrate research experience working collaboratively on growth and maturation modeling using data from large longitudinal cohorts, record of publication/presentation in area of expertise, excellent oral and written communication skills.

All candidates should have demonstrated experience working in and fostering a diverse faculty, staff, and student environment or commitment to do so as a faculty member at VCU. Potential candidates can submit applications, including a statement of research, teaching philosophy, curriculum vitae and contact information for three professional references, via mail - to Yvonne Hargrove, Department of Biostatistics, Virginia Commonwealth University, P.O. Box 980032, Richmond, VA 23298-0032 or by e-mail to yfhargro@vcu.edu.

Virginia Commonwealth University is an equal opportunity/affirmative action employer. Women, minorities and persons with disabilities are encouraged to apply.



LSU Health Shreveport

H E A L T H S C I E N C E S C E N T E R

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

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

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

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

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

Anil Nanda, MD, FACS
Professor and Chairman, Department of Neurosurgery
LSU Health Sciences Center,
1501 Kings Highway, Shreveport, Louisiana 71130-3932,
FAX: 318-675-4457
ananda@lsuhsc.edu

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The Georgia R School

The non-profit **Georgia R School** offers 4-6 month online educational programs and 4-8 week online courses on statistical software packages, including the **R Project Statistical Software** and various partial least squares (PLS) **Path Modeling** tools. Our online programs and courses are available to participants world-wide at very reasonable costs.

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- Comprehensive R Boot Camp (4-6 month online program)
- Fundamentals of using R
- Introduction to Graphics Capabilities in R
- Comprehensive Statistical Research Analyses with R
- Data Manipulation and Transformation with R
- Introduction to Programming and Simulation with R
- Generalized Linear (GLM) and Additive Modeling (GAM) with R
- Others . . .

PLS Path Modeling Online Programs and Courses:

- Comprehensive PLS Boot Camp (4-6 month online program)
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