May 2010 • Issue #395

AMSTATNEWS

The Membership Magazine of the American Statistical Association • *http://magazine.amstat.org/*

Significance Magazine— An ASA and RSS PARTNERSHIP

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Amstat News welcomes news items and letters from readers on matters of interest to the association and the profession. Address correspondence to Managing Editor, *Amstat News,* American Statistical Association, 732 North Washington Street, Alexandria VA 22314-1943 USA, or email *amstat@amstat.org*. Items must be received by the first day of the preceding month to ensure appearance in the next issue (for example, June 1 for the July issue). Material can be sent as a Microsoft Word document, PDF, or within an email. Articles will be edited for space. Accompanying artwork will be accepted in graphics file formats only (.jpg, etc.), minimum 300 dpi. No material in WordPerfect will be accepted.

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VISION STATEMENT

To be a world leader in promoting statistical practice, applications, and research; publishing statistical journals; improving statistical education; and advancing the statistics profession.

MISSION STATEMENT

Support excellence in statistical practice, research, journals, and meetings. Work for the improvement of statistical education at all levels. Promote the proper application of statistics. Anticipate and meet the needs of our members. Use our discipline to enhance human welfare. Seek opportunities to advance the statistics profession.

FEATURES

***Significance* Magazine– An ASA and RSS Partnership p. 10**

Statistics Without Borders Assists with Haitian Data Collection Project

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Column Contributors

Science Policy News

Envisioning the 2020 Census **p. 29**

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.*

Brown

Contributing Editor

Lawrence D. Brown is the Miers Busch Professor in the department of statistics at the Wharton School at the University of Pennsylvania. He chaired the Committee on National Statistics (CNSTAT) panel that prepared the report "Envisioning the 2020 Census."

Master's Notebook

Analytic Engineer Has a Passion for Solving Puzzles **p. 33**

This column is written for statisticians with master's degrees and highlights areas of employment that will benefit statisticians at the master's level. Comments and suggestions should be sent to ASA Research and Graduate Education Manager Keith Crank at *keith@amstat.org.*

Contributing Editor

Justin Rowland came out of the hospitality industry to pursue a career in analytics. He is an analytic engineer at the Advanced Analytics Lab at SAS, working on applications of social network analysis, specifically fraud detection and customer retention.

Rowland

QUOTABLE

"It's one of the hazards of the job, you have to go with the data you have, not the data you wish you have."

Sean Snaith, an economist at the University of Central Florida, discussing flawed data in Carl Bialik's (The Number's Guy) column in the *Wall Street Journal. http://bit.ly/dtcHaE*

DEPARTMENTS

Statistics Workshop for Math and Science Teachers Goes International p. 53

MEMBER NEWS

cover design by Megan Murphy

STATISTICAL SIGNIFICANCE

Sastry Pantula

GIVE to ASA" is my mantra for the year. That's a ***G*** for Growth, an ***I*** for Impact, a ***V*** for Visibility, and an ***E*** for Education.

To make a significant progress on these initiatives, we need help from all members, chapters, committees, sections, and sister organizations. Already the working groups are making significant progress on these initiatives. In this column, however, I want to focus on other significant issues.

You may have gotten a hint from this month's *Amstat News* cover. I'm extremely pleased to announce an exciting development for all ASA members. Beginning with the September 2010 issue, the ASA and the Royal Statistical Society (RSS) will collaborate on the publication of *Significance,* the magazine RSS established in 2004. This partnership is the realization of a dream held by both our societies for an international outreach publication that will enhance both organizations as well as the profession of statistics.

Each ASA member will begin receiving *Significance* in the mail in the early fall. In addition, the magazine will debut a new web site in the near future (perhaps by JSM 2010), which will feature the magazine, but will also contain some members-only content for ASA and RSS members. We hope to preview the September cover at JSM in Vancouver, British Columbia, Canada, but in the meantime you can take a look at a free sample issue of the magazine here: *www3.interscience.wiley.com/journal/118500352/issueyear?year=2010.*

As you will be able to see from this sample, *Significance* has articles that show the influence of our profession, bringing us additional visibility. In this issue of *Amstat News,* we also have a brief article by *Significance* editor Julian Champkin (see page 10). If you're interested in what a jointly published *Significance* will contain, look for an article in the June *Amstat News* with information on the contents of the first joint issue.

Also, I am very pleased to announce that the ASA Board of Directors has approved the ASA's *Significance* editorial board, which consists of excellent volunteers from all our sectors:

Sharon Begley, Science Editor, *Newsweek*

Connie Citro, National Academies of Science, Senior Program Officer, Committee on National Statistics (CNSTAT)

Martha Gardner, Global Quality Leader, General Electric Global Research

Wendy Martinez, Department of Defense; JSM 2009 Program Chair

Terry Speed, Professor, Department of Statistics, University of California, Berkeley

Len Stefanski, Professor, Department of Statistics, North Carolina State University; Editor, *JASA*, Theory and Methods

Howard Wainer, Distinguished Research Scientist, National Board of Medical Examiners

Scott Zeger, Vice Provost for Research, Johns Hopkins Bloomberg School of Public Health

I am excited about their leadership on this editorial board.

Another topic that interests us all is statistical significance. Thanks to the efforts of Steve Pierson, ASA's director of science policy, and many of our ASA sections, we have a small collection of *Statistical*

Statistical Significance fliers, created by the ASA and useful in advocacy efforts with congressional staff members

Significance (*StatSig*) fliers that show how statistics is having an impact on human welfare. You can view samples of these fliers on the following web page: *www.amstat.org/outreach/statsig.cfm.* This is similar to the American Mathematical Society series *Math Moments* (*www.ams.org/mathmoments*). The *StatSig* series include articles such as: "Statisticians are vital at all stages to get safe, effective drugs and devices to market quickly and to monitor them thereafter," "Statisticians contribute to providing more and better information for a spectrum of decisionmakers—those at the kitchen table and those in the private sector, government, hospitals, and doctors' offices," "Statistics monitors the environment," and "Statisticians have developed powerful analysis tools that help keep our nation safe." These *StatSig* documents may be very useful in advocacy efforts with your congressional staff members. Summer and fall are especially good times to meet with your congressman and senators, who may be in your hometown getting ready for the November elections. Educating them about the positive impacts of our profession would have a long-term impact for us.

Speaking of advocacy, our Climate Change Policy Advisory Committee's co-chair, Montserrat Fuentes, presented a poster on the health effects of climate change at the program "Building Foundations of Innovation: STEM Research and Education," held on Capitol Hill on April 14. Visit *www.amstat.org/outreach/scipolicyprojects.cfm* for more information on the excellent activities of our science policy groups. It is important that we continue to promote the positive impacts of our profession and our association. Please contact Steve Pierson (*pierson@amstat.org*) if you have suggestions for *StatSig* or other science policy matters.

Finally, massive data are being collected routinely, meaning that misuses and misinterpretations are bound to increase. Newspapers are full of sensational stories, going from "Chocolate is good for your heart" to "Chocolate facts: it is very bad for your health." Inappropriate or incorrect uses of statistics also lead to articles like "Odds Are, It's Wrong" by Tom Siegfried in the March issue of *ScienceNews* (*www.sciencenews.org/view/feature/id/57091/title/Odds_Are%2C_Its_Wrong*). Some of our members have responded immediately to such articles in various blogs. I like the quote by ASA member Larry Wasserman in the comments section of that article: "Blaming statistics for misused statistics is like blaming medical science because of incompetent doctors."

As we help other scientists advance their science, and publish their papers, we need to continue to advise and educate them about the proper use of statistical methods and proper interpretations of their analyses. This will also require appreciation for statistical collaborations and consulting on university campuses, and more importantly, doing an outstanding job of teaching in service courses at all levels. We get to teach statistics at most in one service course for other future scientists and policymakers. Doing an outstanding job in these courses is very important. Thank you for everyone who continues to ***E***ducate the public about the proper uses of statistics, talk about the ***I***mpact of our science and increase the ***V***isibility of our association. I am sure with all of these activities and mentoring of our younger members, our association will continue to be strong and continue to ***G***row.

ASA's web page (*www.amstat.org*) has wonderful news items, updated daily. Visit it frequently. Better yet, make it your homepage!

Sastry G. Pantula

McGladrey & Pullen
Certified Public Accountants

Independent Auditor's Report

To the Board of Directors
American Statistical Association
Alexandria, Virginia

We have audited the accompanying balance sheet of the American Statistical Association (the Association) as of December 31, 2009, and the related statements of activities and cash flows for the year then ended. These financial statements are the responsibility of the Association's management. Our responsibility is to express an opinion on these financial statements based on our audit. The prior year summarized comparative information has been derived from the 2008 financial statements and in our report, dated March 19, 2009, we expressed an unqualified opinion on those financial statements.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the 2009 financial statements referred to above present fairly, in all material respects, the financial position of the Association as of December 31, 2009, and the changes in its net assets and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

McGladrey & Pullen, LLP

Vienna, Virginia
March 25, 2010

American Statistical Association

Balance Sheet
December 31, 2009
(With Comparative Totals For 2008)

Assets	2009	2008
Current Assets		
Cash and cash equivalents	$ 1,052,109	$ 863,054
Receivables, net	243,460	268,030
Prepaid expenses and other assets	186,167	268,058
Total current assets	1,481,736	1,399,142
Investments	8,459,916	6,870,981
Equity In Joint Ventures	307,782	268,903
Bond Issuance Costs	141,008	147,859
Property And Equipment, net	8,928,997	9,185,226
	17,837,703	16,472,969
	$ 19,319,439	$ 17,872,111
Liabilities And Net Assets		
Current Liabilities		
Accounts payable and accrued expenses	$ 504,458	$ 396,576
Due to joint ventures	270,970	183,533
Deferred revenue	2,308,178	2,169,963
Bonds payable – current	200,000	200,000
Total current liabilities	3,283,606	2,950,072
Bonds Payable – Less Current Portion	5,700,000	5,900,000
Interest Rate Swap Contract	488,972	631,309
	9,472,578	9,481,381
Commitments And Contingencies (Notes 11 And 12)		
Net Assets		
Unrestricted:		
Undesignated	7,753,446	1,939,900
Board designated	1,170,195	5,571,962
	8,923,641	7,511,862
Temporarily restricted	434,964	390,612
Permanently restricted	488,256	488,256
	9,846,861	8,390,730
	$ 19,319,439	$ 17,872,111

See Notes To Financial Statements.

American Statistical Association

Statement Of Activities
Year Ended December 31, 2009
(With Comparative Totals For 2008)

	Unrestricted					
	Undesignated	Board Designated	Temporarily Restricted	Permanently Restricted	2009 Total	2008* Total
Revenue and support:						
Publications	$ 2,340,662	$ -	$ -	$ -	$ 2,340,662	$ 2,592,579
Meetings	2,282,866	-	-	-	2,282,866	1,921,140
Membership	1,552,308	-	-	-	1,552,308	1,445,648
Section income	59,425	509,647	-	-	569,072	633,569
Education	440,554	23,168	20,000	-	483,722	406,937
Special projects	392,508	5,598	58,142	-	456,248	666,865
Grants and awards	383,686	-	-	-	383,686	333,404
Administration	151,353	-	-	-	151,353	176,321
Net assets released from restriction	33,790		(33,790)	-	-	-
Total revenue and support	7,637,152	538,413	44,352	-	8,219,917	8,176,463
Expenses:						
Program services:						
Publications	$ 1,843,664	$ -	$ -	$ -	$ 1,843,664	$ 1,562,915
Meetings	1,656,723	-	-	-	1,656,723	1,512,223
Special projects	1,271,802	4,337	-	-	1,276,139	1,194,980
Membership	904,508	-	-	-	904,508	825,503
Education	868,551	24,703	-	-	893,254	857,298
Section expenses	84,021	519,634	-	-	603,655	589,368
Grants and awards	359,470	-	-	-	359,470	315,811
Total program services	6,988,739	548,674	-	-	7,537,413	6,858,098
Supporting services:						
Management and general	1,197,408	-	-	-	1,197,408	1,303,344
Total expenses	8,186,147	548,674	-	-	8,734,821	8,161,442
Change in net assets before transfers, unrealized gains(losses) on investments and interest rate swap contract	(548,995)	(10,261)	44,352	-	(514,904)	15,021
Unrealized gain(loss):						
Unrealized investment gain(loss)	1,828,698	-	-	-	1,828,698	(2,920,582)
Unrealized gain(loss) on interest rate swap contract	142,337	-	-	-	142,337	(332,858)
Total unrealized gain(loss)	1,971,035	-	-	-	1,971,035	(3,253,440)
Transfer to designated net assets	4,391,506	(4,391,506)	-	-	-	-
Change in net assets	5,813,546	(4,401,767)	44,352	-	1,456,131	(3,238,419)
Net assets:						
Beginning	1,939,900	5,571,962	390,612	488,256	8,390,730	11,629,149
Ending	$ 7,753,446	$ 1,170,195	$ 434,964	$ 488,256	$ 9,846,861	$ 8,390,730

*Reclassified to conform to current year presentation.

See Notes To Financial Statements.

American Statistical Association

Statement Of Cash Flows
Year Ended December 31, 2009
(With Comparative Totals For 2008)

	2009	2008
Cash Flows From Operating Activities		
Change in net assets	$ 1,456,131	$ (3,238,419)
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation	342,542	349,046
Amortization of bond issuance costs	6,851	6,851
Equity in earnings from joint ventures	(38,879)	69,185
Contributions permanently restricted	-	(34,000)
Net unrealized and realized (gains) losses on investments	(1,726,082)	3,045,098
(Gain) loss on interest rate swap contract	(142,337)	332,858
Changes in assets and liabilities:		
(Increase) decrease in:		
Receivables	24,570	75,792
Prepaid expenses and other assets	81,891	(65,142)
Increase (decrease) in:		
Accounts payable and accrued expenses	107,882	(164,668)
Due to joint ventures	87,437	(17,780)
Deferred revenue	138,215	10,048
Net cash provided by operating activities	338,221	368,869
Cash Flows From Investing Activities		
Purchases of investments	(3,483,235)	(1,573,982)
Proceeds from sales of investments	3,620,382	1,271,896
Purchases of property and equipment	(86,313)	(10,033)
Net cash used in investing activities	50,834	(312,119)
Cash Flows From Financing Activities		
Redemption of bonds	(200,000)	(200,000)
Contributions permanently restricted	-	34,000
Net cash used in financing activities	(200,000)	(166,000)
Net increase (decrease) in cash and cash equivalents	189,055	(109,250)
Cash And Cash Equivalents		
Beginning	863,054	972,304
Ending	$ 1,052,109	$ 863,054
Supplemental Disclosures Of Cash Flow Information		
Cash paid for income taxes	$ 247,148	$ 199,500
Cash paid for interest expense	$ 321,101	$ 286,267

See Notes To Financial Statements.

2009 American Statistical Association Audit Report

American Statistical Association

Notes To Financial Statements

Note 1. Nature Of Activities And Significant Accounting Policies

Nature of activities: The American Statistical Association (the Association) was founded in 1839 and incorporated in 1841 under the not-for-profit laws of the Commonwealth of Massachusetts as a professional association serving statisticians and all individuals interested in the study and/or application of statistics. The Association's objectives are to foster statistics and its applications, to promote unity and effectiveness of effort among all concerned with statistical problems, and to increase the contribution of statistics to human welfare. The Association conducts meetings, produces publications devoted to statistical methodology and its applications, makes available information concerning the science of statistics and its contributions, cooperates with organizations in the advancement of statistics, stimulates research, promotes high professional standards and integrity in the application of statistics to problems of science and of public policy, fosters education in statistics, and in general, makes statistics of service to science and society.

A summary of the Association's programs and services follows:

Meetings: The Association provides for various workshops and meetings that serve as a forum for the latest developments in statistical theory and application. These meetings offer a concentrated opportunity for the exchange of ideas and discussion of research findings among colleagues.

Publications: The Association produces various publications and magazines. These publications represent the Association's commitment to the ongoing enhancement of statistical education and the public's understanding of statistics.

Special projects: Represent various projects undertaken to further statistics among the public. This includes expenses for various awards presented, which increase the visibility of statistics and its methods with the general public.

Education: The Association offers a wide range of continuing education opportunities which represent a forum for emerging statistics research. These programs include workshops, lectures, and expenses related to the production and sale of educational materials.

Membership: Expenses related to member service maintenance.

Grants and awards: Represent expenses related to providing advice and technical assistance, which enhance statistical education, through the support of federal, state, and local government agencies.

Section expenses: Represents the Association's organization in groups by professional subject matter. These sections facilitate professional interchanges and research opportunities in statistics.

Management and general: Includes the functions necessary to secure proper administrative functioning of the Board of Directors, maintain an adequate working environment, and manage financial and budgetary responsibilities of the Association.

A summary of the Association's significant accounting policies follows:

Basis of accounting: The financial statements are prepared on the accrual basis of accounting, whereby, revenue is recognized when earned and expenses are recognized when incurred.

American Statistical Association

Notes To Financial Statements

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

Basis of presentation: The financial statement presentation follows the recommendations of the Financial Accounting Standards Board Accounting Standards Codification. As provided by the topic for *Financial Statements for Not-for-Profit Organizations*, the Association is required to report information regarding its financial position and activities according to three classes of net assets: unrestricted net assets, temporarily restricted net assets, and permanently restricted net assets.

Cash and cash equivalents: The Association considers all highly liquid instruments, which are to be used for current operations and which have an original maturity of three months or less, to be cash and cash equivalents. All other highly liquid instruments, which are to be used for the long-term purposes of the Association, are classified as investments.

Financial risk: The Association maintains its cash in bank deposit accounts which, at times, may exceed federally insured limits. The Association has not experienced any losses in such accounts. The Association believes it is not exposed to any significant financial risk on cash.

The Association invests in mutual funds, which are comprised of shares of publicly traded companies and fixed income obligations. Such investments are exposed to various risks such as market and credit. Due to the level of risk associated with such investments and the level of uncertainty related to changes in the value of such investments, it is at least reasonably possible that changes in risks in the near term would materially affect investment balances and the amounts reported in the financial statements.

Receivables: Receivables are carried at original invoice amounts, less an estimate made for doubtful receivables based on a review of all outstanding amounts on a monthly basis. Management determines the allowance for doubtful accounts by identifying troubled accounts and by using historical experience applied to an aging of accounts. Receivables are written off when deemed uncollectible. Recoveries of receivables previously written off are recorded when received. The provision for doubtful accounts, based on management's evaluation of the collectability of receivables, was $30,718 at December 31, 2009. No interest is charged on any outstanding receivables.

Investments: Investments with readily determinable fair values are recorded at fair market value. To adjust the carrying value of the investments, the change in fair value is recorded as a component of investment income in the statement of activities.

Equity in joint ventures: The Association has investments in certain joint ventures for which the equity method of accounting is used. Under the equity method, original investments are recorded at cost and adjusted by the Association's share of undistributed earnings or losses of these joint ventures.

Property and equipment: Property and equipment are stated at cost, and are depreciated over their estimated useful lives on the straight-line method. The Association capitalizes all property and equipment purchased with a cost of $2,500 or more.

American Statistical Association

Notes To Financial Statements

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

Valuation of long-lived assets: The Association accounts for the valuation of long-lived assets in accordance with the Financial Accounting Standards Board Accounting Standards Codification. As required by the Non-Profit Entities topic of the FASB Accounting Standard Codification, *Accounting for the Impairment or Disposal of Long-Lived Assets*, long-lived assets and certain identifiable intangible assets are to be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of the long-lived asset is measured by a comparison of the carrying amount of the asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the estimated fair value of the assets. Assets to be disposed of are reportable at the lower of the carrying amount or fair value, less costs to sell.

Interest rate swap contract: The Association follows the Financial Accounting Standards Board Accounting Standards Codification, *Accounting for Derivative Instruments and Hedging Activities*, related to its participation in an interest rate swap contract in relation to its mortgage note, which is considered a derivative financial instrument. This codification standard requires that all derivative financial instruments be recognized in the financial statements at their fair value. Changes in the fair value of derivative financial instruments are recognized each period as a component of change in net assets.

Bond issuance costs: The Association paid certain customary fees as required to secure the note used to finance the acquisition of its new headquarters. These fees have been capitalized and are being amortized over the term of the bonds. Amortization expense was $6,851 for the year ended December 31, 2009.

Board designated net assets: The Board of Directors has designated $1,170,195 at December 31, 2009, of unrestricted net assets to be used for various section activities and other board-approved projects.

Revenue and support: Membership dues are recognized ratably over the applicable membership period to which they apply. Payments for memberships, subscription sales, product sales, or services to be rendered and received in advance are deferred to the appropriate period.

Meeting revenue is recognized at the time the meeting takes place. Amounts received in advance of the meeting are shown as deferred revenue.

Publication revenue is recognized upon delivery of the material.

All donor-restricted revenue is reported as an increase in temporarily or permanently restricted net assets, depending on the nature of the restriction. When a restriction expires (that is, when a stipulated time restriction ends or purpose restriction is accomplished), temporarily restricted net assets are reclassified to unrestricted net assets and reported in the statement of activities as net assets released from restrictions. Temporarily restricted net assets are reported as unrestricted net assets if the restrictions are met in the same period.

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

American Statistical Association

Notes To Financial Statements

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

Income taxes: The Association is exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code. In addition, the Association qualifies for the charitable contribution deductions and has been classified as an organization that is not a private foundation. However, the Association is required to report unrelated business income to the Internal Revenue Service and the state of Virginia, as well as pay certain other taxes to local jurisdictions. The Association incurred approximately $327,368 in income tax expense on unrelated business income related to the net income earned on advertising sales for the year ended December 31, 2009.

On January 1, 2008, the Association adopted the accounting standard on accounting for uncertainty in income taxes, which addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this guidance, the Association may recognize the tax benefit from an uncertain tax position only if it is more-likely-than-not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. The guidance on accounting for uncertainty in income taxes also addresses de-recognition, classification, interest and penalties on income taxes, and accounting in interim periods.

Management evaluated the Association's tax positions in 2008 and concluded that the Association had taken no uncertain tax positions that would require disclosure. The Association files income tax returns in the U.S. federal jurisdiction. With few exceptions, the Association is no longer subject to U.S. federal, or state and local income tax examinations by tax authorities for years before 2006.

Fair value of financial instruments: The carrying amounts including cash and cash equivalents, accounts receivable, investments, accounts payable and accrued liabilities approximate fair value because of the short maturity of these instruments. The carrying amount of bonds payable and the interest rate swap contract approximate fair value because the interest rates on these instruments fluctuate with market interest rates available to the Association with similar terms and maturities.

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

Prior year information: The financial statements include certain prior year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the Association's financial statements for the year ended December 31, 2008, from which the summarized information was derived.

Reclassifications: Certain amounts in the 2008 financial statements have been reclassified to conform to the 2009 presentation with no effect on the previously reported change in net assets.

American Statistical Association

Notes To Financial Statements

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

Recently adopted accounting pronouncements: On May 28, 2009, the Subsequent Event disclosure topic of the FASB Accounting Standards Codification was issued. This topic is intended to establish general standards of accounting for and disclosures of events that occur after the balance sheet date, but before financial statements are issued or are available to be issued. It requires the disclosure of the date through which an organization has evaluated subsequent events and the basis for that date—that is, whether that date represents the date the financial statements were issued or were available to be issued. This disclosure should alert all users of financial statements that an organization has not evaluated subsequent events after that date in the set of financial statements being presented. The Association has adopted this and incorporated the required disclosure below.

Subsequent events: The Association evaluated subsequent events for potential required disclosure through March 25, 2010, which is the date financial statements were available to be issued.

Note 2. Receivables

Receivables consist of the following at December 31, 2009:

Trade accounts receivable	$ 134,737
Other receivables	74,127
Due from joint ventures	47,958
Grants receivable	17,356
	274,178
Less provision for doubtful accounts	30,718
	$ 243,460

Note 3. Investments

Investments, at fair market value, consist of the following at December 31, 2009:

Equity mutual funds	$ 5,153,791
Fixed income mutual funds	3,228,085
Money market	78,040
	$ 8,459,916

The following summarizes investment income for the year ended December 31, 2009:

Interest and dividends	$ 261,777
Realized loss	(102,616)
	159,161
Unrealized gain	1,828,698
	$ 1,987,859

Interest, dividends, and realized losses are recorded in the applicable revenue and support line items in the statement of activities.

American Statistical Association

Notes To Financial Statements

Note 4. Equity In Joint Ventures

The following schedule presents summarized financial information from the joint ventures in which the Association has equity ownership. Amounts presented for the year ended December 31, 2009, include the accounts of Journal of Computational and Graphical Statistics (40% equity), Technometrics (60% equity) and Journal of Agricultural, Biological, and Environmental Statistics (65% equity).

Condensed income statement information:	
Revenues	$ 394,585
Expenses	332,544
Net income	$ 62,041
Condensed balance sheet information:	
Total assets	$ 819,009
Total liabilities	265,486
Net equity	$ 553,523

Note 5. Property And Equipment

Property and equipment and accumulated depreciation at December 31, 2009, and depreciation expense for the year ended December 31, 2009, are as follows:

	Estimated Lives	Cost	Accumulated Depreciation	Depreciation Expense
Building	30 years	$ 7,320,951	$ 874,412	$ 244,031
Building leasehold improvements	30 years	1,170,369	133,684	39,243
Building renovation	30 years	23,100	2,414	783
Office equipment	5 years	85,235	75,810	2,396
Furniture and fixtures	5 years	211,869	153,552	41,160
Computer equipment	3 years	122,170	119,129	3,912
Software	3 years	204,161	135,857	11,017
Land	-	1,286,000	-	-
		$ 10,423,855	$ 1,494,858	$ 342,542

American Statistical Association

Notes To Financial Statements

Note 6. Temporarily And Permanently Restricted Net Assets

Temporarily restricted net assets are available at December 31, 2009, for the following purposes and net assets were released from restriction by incurring expenses satisfying the restricted purpose:

	Balance December 31, 2008	Restricted Contributions	Investment Income	Released	Balance December 31, 2009
Access to Statistics Fund	$ -	$ 1,500	$ -	$ 40	$ 1,460
CA Jacobs Award	7,026	-	166	-	7,192
Chambers Award (ACM Software)	17,670	-	417	-	18,087
Chemostatistics Award	3,085	-	70	-	3,155
Cox Scholarship	104,015	6,588	2,421	8,907	104,117
Deming Lecture Fund	25,632	-	2,153	1,490	26,295
Dixon Award	-	15,000	493	500	14,993
EC Bryant Award	25,724	-	1,962	2,500	25,186
Excellence in Statistics Fund	-	400	-	-	400
Griffifth Mentoring Award	-	11,866	311	3,199	8,978
Marquardt Memorial	5,957	-	702	747	5,912
MG Natrella Scholarship Fund	27,534	-	615	1,000	27,149
Mood - Wilks Supplement	1,572	-	938	-	2,510
Noether Funds	23,179	-	5,232	8,148	20,263
Other Short Term Restricted	-	20,000	-	1,943	18,057
Promoting Statistics Fund	-	1,715	-	-	1,715
Waksberg Award	68,637	-	1,603	-	70,240
Waller Education Fund	5,362	-	574	500	5,436
Wilks Memorial	4,344	-	380	1,500	3,224
Wray Smith Sch. Fund	29,810	-	681	1,000	29,491
Youden Award	41,065	-	2,355	2,316	41,104
	$ 390,612	$ 57,069	$ 21,073	$ 33,790	$ 434,964

Permanently restricted net assets consist principally of accumulated contributions for various awards, lecture series, and scholarships. These assets consist of the following at December 31, 2009:

	Balance December 31, 2008	Additions	Balance December 31, 2009
Deming Lecture Fund	$ 67,275	$ -	$ 67,275
EC Bryant Fund	60,000	-	60,000
Marquardt Memorial Fund	26,250	-	26,250
Noether Memorial Fund	206,506	-	206,506
Waller Fund	20,000	-	20,000
Wilks Memorial Fund	47,143	-	47,143
Youden Award	61,082	-	61,082
	$ 488,256	$ -	$ 488,256

American Statistical Association

Notes To Financial Statements

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

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

(1) The duration and preservation of the fund
(2) The purposes of the organization and the donor-restricted endowment fund
(3) General economic conditions
(4) The possible effect of inflation and deflation
(5) The expected total return from income and the appreciation of investments
(6) Other resources of the Association
(7) The investment policies of the Association

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

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

For the year ended December 31, 2009, the Association had the following endowment-related activities:

	Board-Designated	Temporarily Restricted	Permanently Restricted
Endowment net assets – December 31, 2008	$ 5,571,962	$ 390,612	$ 488,256
Contributions	-	57,069	-
Board-designated revenue	538,413	-	-
Transfers	(4,391,506)	-	-
Net appreciation and income	-	21,073	-
Appropriation of endowment assets for expenditure	(548,674)	(33,790)	-
Endowment net assets – December 31, 2009	$ 1,170,195	$ 434,964	$ 488,256

American Statistical Association

Notes To Financial Statements

Note 7. Retirement Plans

The Association has a 401(k) profit sharing plan and a money purchase plan. Both plans cover substantially all full-time employees from date of hire. Under the terms of the 401(k) profit sharing plan, the Association will match 100% of the participating employee's contributions up to 3% of the employee's salary. Under the terms of the money purchase plan, the Association contributes 6% of an eligible employee's compensation to the plan. Contribution expense to the plan is as follows for the year ended December 31, 2009:

Money purchase plan	$ 159,134
401(k) profit sharing plan	72,877
	$ 232,011

Note 8. Related Party Transactions

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

The following schedules summarize the Association's financial activity with the joint ventures for the year ended December 31, 2009:

Due from Joint Ventures:	
Journal of Computational and Graphical Statistics	$ 12,264
Technometrics	18,113
Journal of Agricultural, Biological, and Environmental Statistics	17,581
	$ 47,958
Due to Joint Ventures:	
Technometrics	$ (44,160)
Journal of Computational and Graphical Statistics	(30,043)
Journal of Agricultural, Biological, and Environmental Statistics	(196,767)
	$ (270,970)
Maintenance Agreement Revenue:	
Technometrics	$ (19,000)
Journal of Computational and Graphical Statistics	(13,000)
Journal of Agricultural, Biological, and Environmental Statistics	(13,000)
	$ (45,000)

American Statistical Association

Notes To Financial Statements

Note 9. Bond Payable

On August 1, 2005, the Association entered into an agreement with the Industrial Development Authority of the City of Alexandria to issue $6,500,000 of Industrial Development Revenue Bonds on behalf of the Association to finance the purchase and renovation of a new headquarters building. The Bonds are secured by a letter of credit (LOC) issued by SunTrust Bank and bear an adjustable interest rate periodically set by a remarketing agent. The LOC agreement between the Association and SunTrust Bank, dated August 1, 2005, bears an interest rate of 1.135%.

Annual principal payments on the bond payable at December 31, 2009 are due in future years as follows:

Years Ending December 31,	
2010	$ 200,000
2011	200,000
2012	200,000
2013	200,000
2014	200,000
2015 – 2030	4,900,000
	$ 5,900,000

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

In connection with the mortgage note, the Association has agreed, among other things, to (1) maintain an unrestricted liquidity ratio not less than 80% of the funded debt, and (2) maintain a debt coverage ratio of 1.25 to 1.

Note 10. Interest Rate Swap Contract

The Association has an interest rate swap contract with a bank to reduce the impact of changes in the interest rates on its variable mortgage note. The swap contract was entered into for a ten-year period commencing on October 14, 2005. The notional principal amount of the interest rate swap contract is $5,900,000 as of December 31, 2009. In accordance with the swap contract, the Association pays a fixed rate of interest of 3.99% and receives a variable interest rate equal to the USD-BMA municipal swap index 0.26258% at December 31, 2009. The Association recognized a gain of $142,337 under the interest swap contract, for the year ended December 31, 2009. At December 31, 2009, the fair value of the swap contract was a liability of $488,972. The swap contract terminates in August 2015.

Note 11. Commitments

Hotel space

The Association reserves hotel space for its conventions several years in advance. The contracts stipulate the number of rooms to be reserved and the time period for which they are to be reserved. As of the date of this report, contracts for hotel space had been entered into through 2015. However, due to the numerous variables involved, the Association's potential liability under these contracts cannot be determined.

Employment agreement:

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

American Statistical Association

Notes To Financial Statements

Note 11. Commitments (Continued)

The Association executed a three- year agreement in 2010 with another organization to develop a magazine. Committed amounts include web-site development costs of approximately $77,000.

Note 12. Contingencies

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

Note 13. Fair Value Measurement

The Statement of Financial Accounting Standards Board Accounting Standards Codification on *Fair Value Measurements* establishes a single authoritative definition of fair value, sets out a framework for measuring fair value, and requires additional disclosures about fair value measurements. This standard applies to all assets and liabilities that are being measured and reported on a fair value basis. The standard requires disclosure that establishes a framework for measuring fair value in GAAP, and expands disclosure about fair value measurements. This statement enables the reader of the financial statements to assess the inputs used to develop those measurements by establishing a hierarchy for ranking the quality and reliability of the information used to determine fair values. The statement requires that assets and liabilities carried at fair value will be classified and disclosed in one of the following three categories:

Level 1: Quoted market prices in active markets for identical assets or liabilities.

Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

In determining the appropriate levels, the Association performs a detailed analysis of the assets and liabilities that are subject to the standard. At each reporting period, all assets and liabilities for which the fair value measurement is based on significant unobservable inputs are classified as Level 3. There were no Level 3 inputs for any assets held by the Association at December 31, 2009.

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

	Total	Level 1	Level 2	Level 3
Financial assets:				
Equity mutual funds	$ 5,153,791	$ 5,153,791	$ -	$ -
Fixed income mutual funds	3,228,085	3,228,085	-	-
Money Market	78,040	-	78,040	-
	$ 8,459,916	$ 8,381,876	$ 78,040	$ -
Financial liabilities:				
Interest rate swap contract	$ 488,972	$ -	$ 488,972	$ -

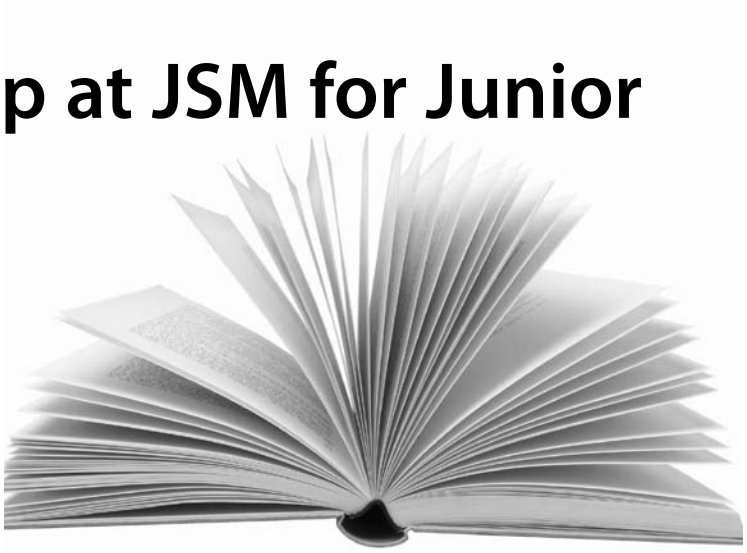
American Statistical Association

Notes To Financial Statements

Note 13. Fair Value Measurement (Continued)

The equity and fixed income mutual funds of the Association are publicly traded on the New York stock exchange and are considered a Level 1 item. Money market funds are priced based on their stated interest rates and quality ratings. The interest and quality ratings are observable at commonly quoted intervals for the full term of the instruments and are, therefore, considered Level 2 items. The Association's interest rate swaps are pay-fixed, receive-variable interest rate swaps based on LIBOR swap rate. The LIBOR swap rate is observable at commonly quoted intervals for the full term of the swaps and therefore is considered a Level 2 item.

Writing Workshop at JSM for Junior Researchers



The National Institute of Statistical Science (NISS) and the American Statistical Association will hold a free writing workshop for junior researchers in August in conjunction with JSM 2010 in Vancouver. The goal of the workshop is to provide instruction in writing journal articles and grant proposals. It is designed for researchers with a recent PhD (in the past three years) in either statistics or biostatistics, and they will receive top priority when registering.

The one-day session is scheduled for Sunday, August 1. At the end of the session, mentors will meet with participants to go over the writing samples they submitted (as described below). The participants will prepare a revision of the critiqued portion of their paper and give it to their mentor by Tuesday evening, August 3. A lunch will be provided on Wednesday, August 4, by which time the participants will receive additional feedback on their revisions. The lunch will also be used to provide general feedback to the participants, mentors, and organizers. Participants must agree to attend both the Sunday session and the Wednesday lunch.

As part of the registration process, participants will be required to provide a recent sample of their writing (manuscript), which will be reviewed by a senior mentor. The sample could be a current draft of an article being submitted for publication, or it could be a grant proposal. (Prior experience suggests that the best results come from submitting an early draft of something that is written solely or primarily by the participant.)

The mentors will be former journal editors and program officers, who will critique a portion of the submitted material. Individual feedback will be provided at the opening session, and participants will be expected to prepare a revision. In addition to the individual feedback, there will be a one-day session of general instruction in effective writing techniques and a follow-up lunch.

Attendance will be limited and will depend on the number of mentors available. Use the online application form available at *www.amstat.org/meetings/wwjr/index.cfm?fuseaction=main*. Applications are due by June 1, and successful applicants will be notified by June 30. Applications received after June 1 will be considered if space is available.

Funding is anticipated for partial travel support for researchers at U.S. institutions. Current PhD students who are completing their degree before the end of the summer and who will be at U.S. institutions in the fall will also be considered. If space is available, researchers at non-U.S. institutions will be admitted to the workshop, but they will not receive travel support.

For more information contact Keith Crank, ASA research and graduate education manager, at *keith@amstat.org.* ■

JASA Theory and Methods

Nominations Sought for Two Co-Editors

The American Statistical Association invites nominations and applications for two editors to serve as co-editors of the *Journal of the American Statistical Association,* Theory and Methods.

Established in 1888 and published quarterly in March, June, September, and December, *JASA* has long been considered a premier journal of statistical science. The Theory and Methods section publishes articles that make original contributions to the foundations, theoretical development, or methodology of statistics and probability. All submissions are rigorously refereed using a double-blind peer review process.

The new Theory and Methods editors will serve from 2011 through 2014. The current editor will continue to process accepted papers through 2011, so there will be one full year of overlap with the new editors.

Applications should be sent electronically to *journals@amstat.org,* and should include a curriculum vitae, names of three references, and a letter of interest in the position. This letter should include a brief statement of the candidate's vision for the publication, directions the candidate would pursue, and contributions she or he would make if selected as editor. Applications should be sent no later than June 4, 2010.

If you know someone who would be right for the co-editorship of this journal, please send that person's name, email address, and a brief description of his or her qualifications to *journals@amstat.org.* The search committee will consider your nomination along with others received. ■

Significance Magazine— An ASA and RSS PARTNERSHIP

Julian Champkin, Editor, *Significance*

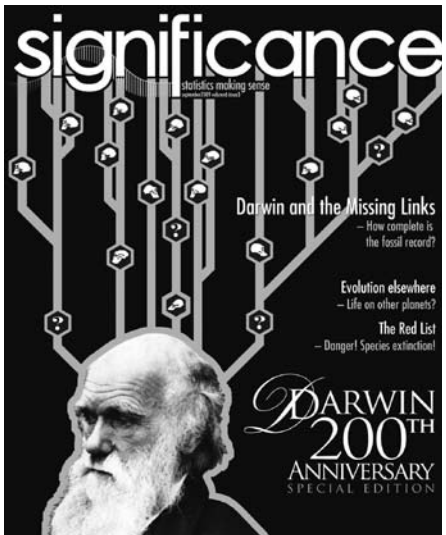
Beginning with the September 2010 issue, the ASA and the Royal Statistical Society will collaborate on the publication of the statistical outreach magazine *Significance.* Each ASA member will receive the quarterly as a benefit of membership. Here, Julian Champkin, editor of *Significance,* offers a brief introduction to the magazine.

How does a flock of a million starlings or more manage to keep itself together as it wheels about the sky? How can you fairly handicap a yacht race? Do big firms or small firms create more jobs? Is organic milk really better for your health than nonorganic? And where exactly are the certainties—and, as important, the uncertainties—in climate change?

Statistics holds the answer to all of these questions. *Significance* is a magazine about statistics.

Our front cover, besides looking rather wonderful, has a tagline that describes much of what we do. It says "statistics making sense."

So we write about statistics. Almost every interesting or important decision in the world today involves statistics, either obviously or in its background. Which means that we write about the world—and pretty nearly everything that is in it.



Would reintroducing commercial whaling send whale species into extinction? Does obesity really make you more at risk from swine flu? How can the Large Hadron Collider hope to extract the signature of dark matter from a billion collisions a second? In the wake of the failure of nations to agree at the Copenhagen Summit, can individual actions make a significance impact to reduce emissions?

We have asked how many civilians actually died during the invasion of Iraq—and how many soldiers died two centuries earlier during Napoleon's march on Moscow in 1812, and whether an 18th century graph-drawer of genius or Tolstoy's *War and Peace* best conveys the immensity of that military and human disaster. And we have asked whether cows really do face north more often than east, west, or south.

But we are not always as frivolous as that last example. We once happily devoted many pages to how to classify the flavors and tastes of Scotland's 400-odd life-enhancing, single-malt whiskeys.

We write our pieces for professional statisticians, for academic statisticians, for student statisticians—and, perhaps most importantly, for people who are not statisticians at all. We try to make statistics understandable to everyone. We try not to dumb it down. We are a magazine, not a peer-reviewed journal of technical papers, which means that our language is lighter. However, our content is as stimulating and challenging as if we phrased it in the most obscure academic jargon. Some parts are easy reads; some are mind-stretchingly hard; some are contentious; a few might be infuriating; all, we hope, are interesting.

We began, back in 2004, as an outreach magazine of the Royal Statistical Society (RSS) in Great Britain. But statistics is a worldwide discipline, and the world gets smaller all the time. Our authors are and always have been international—mainly statisticians themselves, who turn their own technical papers into readable pieces for those outside their own discipline, subdiscipline, or still narrower speciality. Our magazine has never been parochial—though we are happy to write about any "parish" as long as it is interesting to the rest of the world as well.

> "It means that the magazine can grow: in readership, in frequency, and in influence. It can become a true, worldwide voice of statisticians shouting for the cause of statistics."

One of the best compliments the magazine has been paid was from a member of the RSS who said that his spouse, no statistician herself, would take away and read every issue before he could get his hands on it.

One of the best compliments, yes, but not the best. That came when the American Statistical Association decided that its members too might like to receive the magazine. The link is more than a compliment: It is an opportunity as well. It means that the magazine can grow: in readership, in frequency, and in influence. It can become a true, worldwide voice of statisticians shouting for the cause of statistics. When the first ASA/RSS joint issue reaches you—sometime around September—I hope you enjoy it. I hope also that you will come to feel it is your own, and that you will send us your comments and feedback, your letters, and your ideas for it—and help shout for us.

And if, with luck and inspiration, you feel that your shouting could take the form of an article, then please write for us as well. That too would be more than welcome. You are giving me as its editor the most exciting challenge anyone could wish for. I will need your help to rise to it. ■

Students Hope to Cash In on a Closer Look at the Census

Teens Use Math to Evaluate the Census Count and Its Impact on the House of Representatives and Redistricting

More than 2,400 high school juniors and seniors participated in Moody's Mega Math (M3) Challenge on March 6 and 7. Team members spent up to 14 hours using their math know-how to evaluate U.S. Census Bureau methods in order to make recommendations for undercount adjustment, the best method for apportioning the U.S. House of Representatives and the fairest way to draw congressional districts. The teams of teen math whizzes submitted papers based on their findings, hoping to win a portion of the $100,000 in scholarship prizes after a rigorous two-stage judging process and presentation to a panel of professional mathematicians.

Because of the political ramifications of the final census count and its effect on congressional apportionment, there is considerable interest in the adjustment for the undercount, which is believed to have been quite significant in many areas in the 2000 census. Therefore, as the 2010 census begins, this year's problem, "Making Sense of the 2010 Census: To Count or Not to Count, That Is the Question," was especially timely and relevant.

The problem called for student teams to aid Congress by first deciding whether the census figures should be adjusted for the undercount, and if so, to indicate how. If the solution they supported introduced errors, they were required to estimate how large their counts were compared to the undercounts. Teams were also asked to recommend to Congress a method for apportioning the House of Representatives and were required to justify their recommendation as to why this method was superior for dealing with this issue. Finally, the students were asked what recommendations should be made to the states to ensure that congressional districts were fairly drawn. In all aspects of the problem, teams were required to quantify their findings using mathematical modeling techniques, develop and defend their models, and justify their conclusions.

"The enthusiasm and energy that we have seen for this contest from thousands of high school teachers and students is terrific," says Michelle Montgomery, M3 Challenge project director, who is marketing director for the Society for Industrial and Applied Mathematics. "The application of mathematics to real problems with social and political implications and the realization that you can use mathematics to do really useful things is exactly in line with the mission of SIAM."

All viable solution papers will undergo an extensive, blind judging process during the next eight weeks. Judging occurs in three stages: a triage phase in which all but the best submissions are eliminated; a second phase in which papers that are in contention for prizes are further calibrated, with judges arriving at and tentatively ranking the top 46 papers (six elite papers and 40 honorable mentions); and the third and final phase, which involves presentations by the top six teams at Moody's corporate headquarters in New York, New York, on Wednesday, April 28, immediately followed by the awards ceremony.

Now in its fifth year, Moody's Mega Math Challenge is an Internet-based math competition open to high school juniors and seniors living in the 18 states along the East Coast. Funded by The Moody's Foundation and organized by SIAM, it challenges students, working in teams of three to five, to solve an open-ended, realistic, applied math-modeling problem focused on a real-world issue. This year, 531 teams participated in the competition, an increase of about 37% over last year. The M3 staff monitors many web sites to detect cheating and has received emails during challenge weekend directing organizers to potential rule-breakers. Some teams have been disqualified for using online homework help or question-and-answer sites.

To see the 2010 challenge problem, visit *http://m3challenge.siam.org/login/login.php*.

To see if your local high school participated in the M3 Challenge, go to *http://m3challenge.siam.org/pdf/2010_partic.pdf*. And to view the winners and for information on the challenge, visit *http://m3challenge.siam.org*. ■

National Research Council's Evaluation of VIGRE Program Released

William E. Kirwan, Mark L. Green, and Neal D. Glassman

This article originally appeared in the March 2010 issue of the American Mathematical Society's newsletter Notices.

In the 1980s and 1990s, there was concern within the mathematical sciences community that postsecondary education in the mathematical sciences was in trouble. A series of challenges was identified in important national reports, including in particular the following:

- "Renewing U.S. Mathematics: Critical Resource for the Future" (1984), also known as the David Report after the chair of the committee, former presidential science advisor Edward David
- "Educating Mathematical Scientists: Doctoral Study and the Postdoctoral Experience in the United States" (1992), also known as the Douglas Report after committee chair Ronald Douglas
- The report of an international panel convened by the National Science Foundation, "Report of the Senior Assessment Panel for the International Assessment of the U.S. Mathematical Sciences" (1998), also known as the Odom Report after panel chair General William Odom

Together, these reports painted a picture for the mathematical sciences that focused on three major challenges: inadequate funding, insufficient numbers of students interested in mathematics, and shortcomings in the shape and direction of postsecondary mathematics education.

Student Issues

These reports raised four issues concerning students: (1) the number of students receiving degrees, (2) the lack of racial and gender diversity among the mathematics graduate student body, (3) the declining fraction of U.S. citizens receiving advanced degrees in mathematics, and (4) the lack of sufficient postdoctoral fellowships for new doctorates.

Four issues were identified with respect to the structure of training in the mathematical sciences: (1) increasing the breadth, (2) providing a better balance of education and research, (3) decreasing the time to degree, and (4) creating a more positive learning experience.

Members of the Committee to Evaluate the National Science Foundation's Vertically Integrated Grants for Research and Education (VIGRE) program were:

William E. Kirwan (chair)
Efraim Armendariz
John A. Burns
C. Herbert Clemens
Dona L. Crawford
Cristine M. Cumming
Lawrence Craig Evans
Charles L. Fefferman
Martin Golubitsky
Mark L. Green
Leo P. Kadanoff
Daniel L. Solomon
Lynn Arthur Steen
Karen L. Vogtmann
Eric W. Welch
Shmuel Winograd

In response to all these concerns, Donald Lewis, then director of the Division of Mathematical Sciences (DMS) at the National Science Foundation (NSF), wrote a "dear colleague" letter to the mathematical sciences community, based on recommendations of a DMS special emphasis panel, which introduced and justified the Grants for the Vertical Integration of Research and Education in the Mathematical Sciences (VIGRE) program.

The panel recommended that the VIGRE program enable departments to carry out innovative educational programs at levels beyond then-current department resources. The panel also saw the program achieving a change of culture in departments, resulting in broadening opportunities through new curriculum development and research experiences. Although the goals of the VIGRE program have changed from year to year, they have consistently included

- integration of research and education
- enhanced interaction across undergraduates, graduates, postdoctoral fellows, and faculty

- broadened educational experiences of students to include workforce and early research opportunities
- more students motivated to study mathematics and statistics.

VIGRE has been a continuing DMS program since 1999, but it had not been externally evaluated until NSF, in 2007, requested the appointment of a committee of the National Research Council's (NRC's) Board on Mathematical Sciences and Their Applications. The charge to this committee included the evaluation of past and current practices for steering and assessing the VIGRE program and recommendations on how to improve it.

At about the same time, NSF also commissioned a report, "Increasing the Quantity and Quality of the Mathematical Sciences Workforce Through Vertical Integration of Cultural Change," by Margaret Cozzens. This report recounts some successes of the VIGRE program but is not meant to be a formal evaluation.

The NRC Report

NRC's report, "Evaluation of the NSF's Program: Grants for Vertical Integration of Research and Education in the Mathematical Sciences," was released in August 2009 and is available from the National Academies Press (*www.nap.edu*). It is the result of four meetings over two years during which the study committee interviewed NSF program managers; leaders (and some students) involved with VIGRE programs that were successful (renewed); leaders of some programs that either were not renewed or were canceled before the scheduled five-year expiration); and individuals involved in site visits preliminary to the selection of awardees or to VIGRE grantees at their three-year evaluation point.

The committee was also able to review a substantial amount of data collected by NSF and data in site-visit reports and proposal evaluations, although it was denied access to data that NSF is required to keep confidential. The committee conducted an independent survey of all doctorate-granting departments in the United States to determine faculty and administration attitudes toward VIGRE, and the committee used much of the data collected annually by the American Mathematical Society.

The first VIGRE grants wrapped up only five years ago; some of them were renewed and are only now finishing. Because change of the sort envisioned by VIGRE is necessarily slow (as are trends in enrollment and composition of mathematics student bodies), neither NSF nor NRC expected that this evaluation would be able to discern strong indications of the effectiveness of the program. In addition, data and impressions from interviews are often contradictory, or at least not sufficient to draw firm conclusions, which adds to the difficulties in attributing effect to cause in the presence of so many confounding variables. Nevertheless, the committee was able to reach a number of conclusions and recommendations for the VIGRE program.

The program's instances of clear success suggest that it provides real value, but its instances of failure suggest that some change is needed, and so the committee recommended that the VIGRE program be continued with some programmatic changes. The two most important of these changes are that (1) NSF is to allow greater flexibility in the design of individual grants by giving consideration to proposals that address only some of the goals of the VIGRE program—to date, such proposals would not be entertained, and (2) that there be scope for greater local initiative in finding ways to achieve these goals.

Vertical Integration

It is a worthy aspiration for VIGRE program RFPs to call simultaneously for vertical integration from undergraduate education to postdoctoral research; for departmentwide change across all subdisciplines; and simultaneous and significant change in a department's undergraduate, graduate, and postdoctoral programs. However, this call should not be seen by NSF as the only path to achieving the goals of the program or to realizing the recommendations of the national panels. The committee has seen many examples of benefits to education, breadth of experience, and culture from interactions across some vertical divisions, such as postdoctorals mentoring graduate students or graduate students mentoring undergraduates.

The sense of the committee members is that there are benefits to connectivity; but the committee did not see evidence that all of those elements of vertical integration need to be present in a department in order to see any benefits. For example, proposals that build on the particular strengths of a department might not necessarily span all educational levels from undergraduate to postdoctorals, and they might involve fewer faculty members but with more release time for each.

Another possibility is for VIGRE to include students preparing to apply advanced mathematics to nonacademic settings, such as in a professional master's program. Allowing for greater flexibility might encourage institutions with innovative but less inclusive ideas to submit proposals to the VIGRE program. It is notable that NSF has independently broadened its offering of workforce programs through initiatives that complement the VIGRE

program, and this recommended broadening of VIGRE is consistent with that larger trend.

The committee recommended that the goals of any future VIGRE program be clear, consistent, and well publicized. In all phases of the award process, the focus must be on both programmatic quality and scientific quality. Data required from proposers and awardees should concentrate on a small number of carefully chosen benchmarks.

Some departments that responded to the committee's email survey felt that the burden of proposal preparation—requiring extensive departmental participation and coordination—was not commensurate with the likelihood of receiving an award. A less burdensome preliminary process might also encourage greater institutional participation. For this reason, the committee recommended that a preproposal step be inserted into the VIGRE application process.

Accomplishments of VIGRE Grantees

There have been numerous successful individual activities instituted by VIGRE grantees; many of these are included in Margaret Cozzens's book. For example, North Carolina State has begun an environmental statistics practicum linking statistics undergraduates and clients, and the University of Chicago brings large numbers of students in grades 7 through 12 for a summer mathematics enrichment program. The University of Illinois at Urbana-Champaign introduced a research experience for graduate students to give graduate students in their first and second years an early research experience.

The University of Wisconsin introduced collaborative undergraduate research labs, where teams of undergraduates, graduates, and faculty explore mathematical topics, both pure and applied. The University of Washington conducted a workshop on working in industry to inform graduate students and postdocs about careers in industry and national labs. UCLA offers opportunities for graduate students to dip their toe into applications through a program of graduate summer internships with professors in the sciences, engineering, and medical schools.

NSF has not established any formal way to ensure that successful initiatives sponsored under VIGRE awards can be maintained at the conclusion of awards. To remedy this, the committee recommended that NSF convert the VIGRE program to one with longer-duration awards: a norm of 10 years, if a five-year review is satisfactory, though the second five-year award might be smaller and more focused than the initial award. Accompanying this change, the committee recommends that NSF require winning departments' home institutions to make a commitment to sustain successful new initiatives resulting from VIGRE as the NSF funding phases down.

Quantifiable Goals

NSF needs to develop quantifiable goals for the VIGRE program and link these to consistent data requirements for all grantees and throughout the life of the VIGRE program. These steps will aid in maintaining a transparent evaluation process for the revised program and enable NSF to track the successes of individual VIGRE grants, thus informing future decisions about program continuation.

The committee observed that successful innovations at VIGRE sites were not being publicized in a way that maximized their potential for implementation at other universities. NSF should take the lead in developing a framework and infrastructure for a central source for information and communication regarding the successful initiatives of individual VIGRE awardees. In addition, all awardees should maintain and provide access to a VIGRE web site even after the expiration of their VIGRE award. Also, departments should be encouraged to disseminate examples of their VIGRE activities by, for example, developing resources that could be picked up by other departments.

VIGRE is a program designed to increase departmental interaction and cooperation; but it excludes a large portion of the graduate student and postdoctoral population: foreign nationals. Although they may participate in VIGRE activities, they are ineligible for financial support. This decision may be out of NSF's control, but the committee believes that the goals of the VIGRE program as well as the national need to recruit the most talented people worldwide for positions in academe, industry, and government would be well served by the inclusion of foreign nationals in the program. This recommendation is in line with the 2005 report, "Policy Implications of International Graduate Students and Postdoctoral Scholars in the United States," written by the NRC's Committee on Science Engineering and Public Policy.

Although it is difficult to attribute changes in an institution's mathematical sciences department to its VIGRE grant as opposed to other factors, the committee believes that the VIGRE program has produced a number of qualitative changes in mathematics and statistics departments that have held a grant and, through the proposal process, even some that have not. These include increasing the integration of students and faculty, providing more early opportunities for student research, helping to create a more welcoming culture for mathematics education at all levels, and offering a broader and more interdisciplinary range of options. ■

Member Spotlight

Tasneem Zaihra

Zaihra

Well, here I am. Officially, I guess, I am well on my way to a career in the vibrant world of statistics. The word "statistics" has caused many a person to cringe when I have mentioned my background, as if it was worse than root canal. However, working in statistics has been an enriching experience for me. As clichéd as it may sound, my journey to achieve the best is proving a wonderful and thrilling ride.

I have a very humble background. I was born and brought up in a small town in India, in a place where few have the audacity to dream and to reach for the stars. And yet here I am today, freeing myself from all norms, striving toward a professional career.

My ideas and achievements are a mirror image of my parents, my teachers, and my education, especially with respect to my high school math teacher. She constantly reminded us that though we lived in a small town with only six hours or so of power supply each day, that would not be written anywhere on our transcripts. She inspired me with the courage to dream and reinforced my father's preaching that it does not matter what kind of society we are born in or the lack of resources we may have: What truly matters is the kind of society we leave behind, and the people we touch.

Despite all odds, I completed my PhD in statistics at the University of Windsor in Ontario, Canada, with a supervisor who has been an inspiration. My dissertation was titled, "Inference on Some Epidemiological Indices and Variance Function in Semiparametric Analysis of Count Data." My research included the analysis of correlated and clustered counts, and proportions, which occur frequently in the field of biostatistics.

As I progressed toward my PhD, I was often unsure of my path, contemplating teaching, research, and the corporate world, with their respective pros and cons. I was leaning toward teaching, and it has now become my calling.

I work as an assistant professor at the University of New Brunswick in Saint John, New Brunswick, Canada. My first day of teaching found me excited but nervous, and a bit uneasy, not knowing how the students would behave, if I would be able to convey all the materials effectively, if I should be more of a mentor than a teacher. So much to teach—but also to learn.

I enrolled in diploma in university teaching (DUT) here at the university. It has been a great program for giving me a better insight to the world of teaching, in relation to an academic discipline, skills in educational design, and to the assessment of teaching-learning interactions. DUT has helped me in more precisely defining my teaching goals.

As a teacher, my goal has become not simply to educate students but also to give them a reason to learn and be a part of the learning. I want to encourage my students to achieve their true potential, so they can enter the real world armed with new knowledge, drawing their own conclusions, creating an identity and a new frontier for themselves.

I believe in an egalitarian classroom where both teacher and student are partners in a two-way process. As a teacher, I believe my role is to act as catalyst in their learning process by encouraging them to ask questions: the first step in the process of learning.

On the research side, with my supervisor I have co-authored a paper, "Interval Estimation of Risk Differences for Data Sampled from Clusters," which has been published in *Statistics in Medicine*. Another paper I wrote, which is about to be published, concerns interval estimation of epidemiological indices.

I would like to strike a balance between teaching and research—the other essential part of my job function. Both the academic and the volunteer areas have fine-tuned my various abilities, enabling me with a strong work ethic. I hope that my passion for challenges and education will make some difference wherever I go and to whomever I meet. And there is one particular joy on this journey: my husband, my pillar of support and strength and the latest chapter of my life's inspiration.

One thing I learned so far is to enjoy the journey itself and not to be blinded by the goal. Have fun, and don't let any one thing take over your life. Always believe in yourself, have faith, and trust the decisions you make. ■

Programs That Make a Difference

The American Mathematical Society is honoring two programs that do an outstanding job of bringing more individuals from underrepresented minority groups into the mathematical sciences. The annual Mathematics Programs That Make a Difference award highlights two programs that have developed successful methods for increasing participation of these groups in the field.

For 2010 the honored programs are the department of computational and applied mathematics (CAAM) at Rice University and the summer program in quantitative sciences at Harvard School of Public Health (HSPH).

"Both of the programs recognized this year have had remarkable success in attracting and successfully mentoring underrepresented minorities," said Susan Loepp of Williams College, who served as chair of the selection committee. "The individual guidance and personal connections each program provides for their students have proved to be a key part of their extraordinary track records."

Department of Computational and Applied Mathematics, Rice University

The department of computational and applied mathematics at Rice University has been one of the most successful departments in the nation in mentoring and producing mathematical sciences doctorates drawn from underrepresented minority groups. In the past 25 years, the department has produced 34 PhDs from these groups. Additionally, CAAM has produced 43 female PhDs. Graduates of the program have gone on to distinguished careers in government labs, industry, and academia.

Summer Program in Quantitative Sciences, Harvard School of Public Health

The aim of the summer program in quantitative sciences at the Harvard School of Public Health is to attract mathematically talented students from underrepresented minority groups to consider graduate school and careers in biostatistics and public health. Each year, between six and 12 minority students have participated in the program, and it is also open to students from other groups underrepresented in graduate education in public health, such as first-generation college students, low-income college students, and handicapped students. Graduates of the program hold leadership positions in the biostatistics community and have received prestigious fellowships and grants.

Of the 131 program participants known to have received their undergraduate degrees, at least 87 (66%) have completed graduate degrees or gone on to pursue graduate studies, at least 67 (51%) have pursued graduate study related to health or medical school, and 40 (31%) have gone on to pursue graduate training in statistics or biostatistics. Two students are in graduate programs at the Harvard School of Public Health, and 20 have received either master's or doctorate degrees at HSPH.

The program, which began admitting students in 1994, is one of the first of its kind in the nation and has served as a model for similar programs throughout the country. Its remarkable success can be traced to the strong personal connections it develops with the students.

Read the citations and descriptions of the Mathematics Programs That Make a Difference award at *www.ams.org/employment/makeadiff.html.* ■

Statistics Without Borders Assists with Haitian Data Collection Project

James J. Cochran, Project Director, Statistics Without Borders

Left to right: Haitian statistics professor Robert Philipe and data collector Riccardo Bonjean Yves meet with Statistics Without Borders (SWB) volunteers Fritz Scheuren and Justin Fisher in Port-au-Prince, Haiti.

Since early February, a team of Statistics Without Borders (SWB) volunteers has been advising representatives of SciMetrika, LLC (an 8(a) firm that focuses on providing solutions to advancing human health) on the design and execution of a survey in Haiti. Data collected will be used to assess the impact of the magnitude 7.0 earthquake of January 12.

The epicenter of this earthquake was near the town of Léogâne, only 16 miles west-southwest of the Haitian capital and population center of Port-au-Prince. Thousands of people died, and homes, businesses, government buildings, and national landmarks throughout the region collapsed or suffered structural damage, resulting in the displacement of millions of survivors.

In the aftermath of any natural disaster, it is critical to develop reliable estimates of the extent of damage to homes and displacement of people as well as the nature of the displacements (temporary or permanent, current living conditions of the displaced, and so on). It is on these issues that SciMetrika and SWB are focusing.

Three SWB volunteers—Jim Ashley, Justin Fisher, and Fritz Scheuren—spent a week in Haiti in late March working with SciMetrika's president and CEO, Jean Orelien. There were five purposes for this trip:

> To work with local Haitian authorities and professors of statistics to assess the situation and the potential difficulties to data collection
>
> To work with the SWB project director, Jim Cochran, and other SWB volunteers to design a questionnaire and plan for executing the study
>
> To assist with cognitive testing, field testing, translation, and back-translation of the questionnaire and instructions for data collectors and their supervisors
>
> To advise on revising the questionnaire and data collection plan based on what is learned from the pilot testing
>
> To design a random digit dialing sample of phone numbers

While the original geographic focus of this study was Port-au-Prince and suburbs such as Carrefour and Petion-Ville, the work of Orelien and the SWB team has led SciMetrika to consider expanding the project to the national level.

The project has progressed quickly. By all accounts the assistance provided by SWB has been invaluable, and the data collected through this effort promises to be of great utility to humanitarian organizations in their efforts to identify needs and provide aid to the victims of this earthquake. In addition, SWB volunteers are gaining critical experience and learning important lessons about project management and execution under extreme conditions. SWB also hopes this project will lead to the establishment of a long-term relationship with the Haitian academic community.

> “SWB volunteers are gaining critical experience and learning important lessons about project management and execution under extreme conditions.”

A telephone charging station outside Port-au-Prince

SWB is an apolitical organization under the auspices of the American Statistical Association, comprised entirely of volunteers. It provides pro bono statistical consulting and assistance to organizations and government agencies in support of these organizations' not-for-profit efforts to deal with international health issues as broadly defined. The organization's vision is to achieve better statistical practice, including statistical analysis and design of experiments and surveys, so that international health projects and initiatives are delivered more effectively and efficiently.

For more information about SWB or to offer project suggestions, contact either SWB co-chair: Jim Cochran at *jcochran@cab.latech.edu*, (318) 257-3445, or Gary Shapiro at *g.shapiro4@verizon.net.* ■

Parmesan or Pretzel? WSS Helps Demonstrate 'Counting America'

Ameliz Vogel, U.S. Bureau of Labor Statistics

February 27 marked the second annual African–American History Program Free Family Day at the Marian Koshland Science Museum in Washington, DC. This year's theme was "Counting America," an event about the history and the perceptions surrounding the decennial U.S. Census. In addition to the Washington Statistical Society (WSS), the program included representatives from the Bureau of the Census, the National Archives, and the American Anthropological Association.

To illustrate the census theme, the group demonstration featured a capture-recapture study using a large bowl filled with Pepperidge Farm goldfish crackers, to simulate a lake populated with fish. Pretending to be wildlife ecologists, the presenters caught a sample of the goldfish population, tagged them, and released them back into the wild of the fishbowl. During the presentation the captured pale yellow, Parmesan-flavored goldfish were replaced with an equal number of dark brown pretzel goldfish—in effect "tagging and releasing" the first sample.

A second sample was selected from the fishbowl, and the proportion was determined of tagged pretzel fish that were recaptured. Since the total number of pretzel fish in the population was known (the representatives made sure to count their first tagged sample), the presenters were able to estimate the total population size contained within the fishbowl from the proportion of pretzel fish that were caught in their second sample. By accumulating the results through repeated sampling, with the assistance of museum visitors, the estimate became a better and better approximation of the true population size of all fish in the pond—Parmesan and pretzel.

How does this demonstration relate to the census theme of the event? Capture-recapture methods are also used to estimate homeless populations. An investigator may visit a location and interview homeless people present on the day of the visit. By returning to that same location on subsequent visits and noting the proportion of the same individuals who were interviewed during the first visit, the total homeless population for that location can be estimated.

Koshland Museum's Family Day was a smashing success, with about 150 visitors in attendance, from elementary school children to adults. The WSS representatives were asked wonderful questions and the demonstration engaged the visitors. Of course, offering small paper cups with extra "nonexperimental" goldfish for snacking may have helped in attracting an audience. To view the web announcement about the event, visit *www.koshland-science-museum.org/events/pastevent.jsp?id=392.* ■

Editor Sought for *CHANCE* Magazine

Nominations and applications are being sought for the next editor of *CHANCE* magazine. Working with the editorial board and the ASA's magazine staff, the editor will provide direction and vision for the magazine, which has been published by the ASA for more than 20 years. The editor's term will be from 2011 to 2013.

Along with a curriculum vitae and the names of two references, the applicants should provide a statement of vision for *CHANCE*. The vision statement should address opportunities and niches for *CHANCE* as a complement to the ASA and Royal Statistical Society's magazine *Significanc*e.

To submit a nomination, include the name and contact information of the nominee and a brief description of the nominee's qualifications.

Nominations and applications should be submitted by June 21 and emailed to Megan Murphy, ASA communications manager, at *megan@amstat.org.* ■

CHANCE Highlights

Collecting Data in Challenging Settings is Featured Article in Latest Issue

Mike Larsen, Editor, *CHANCE* Magazine

Volume 23, issue 2, begins with an article by **Jana Asher** on collecting data in challenging settings. In particular, Asher describes her experiences conducting in-person survey interviews in East Timor. She gives us personal anecdotes, practical statistical advice, and an interesting story.

Qi Zheng explains the origins of the Luria-Delbrück distribution and its role in studying evolutionary change in E. coli. The statistical reasoning underlying the phenomenon has a connection to the distribution of slot machine returns.

Holmes Finch's article, "Using Item Response Theory to Understand Gender Differences in Opinions on Women in Politics," compares and contrasts item response models and how they describe a data set. The models are explained using formulas, pictures, and examples.

In *CHANCE* 22(4), **Jürgen Symanzik** proposed a puzzle based on 10 data points and a set of seven instructions. Contest winner **Stephanie Kovalchik,** a graduate student at UCLA, provided a solution in the form of an amusing letter and an illustrative graphic. The 10 data values were flight times in seconds recorded on the log 10 scale of the Space Shuttle Challenger. **Brad Thiessen** earned honorable mention for his graph that included temperature and historical facts.

Bernard Dillard asks, "Who turned out the lights?" We are all concerned with energy demand and production. Dillard uses a discrete wavelet transformation to analyze electricity consumption data measured on a frequent time scale. The fit of the model is used in multiscale statistical process control. The ultimate goal is to be able to accurately predict points of extreme energy demand and respond appropriately.

Students in virtually all statistics courses learn something of least squares estimation when studying prediction of an outcome from an explanatory variable. **Ivo Petras** and **Igor Podlubny** ask whether there is a reasonable alternative to the default criterion. "Least Circles" is presented for your consideration.

To introduce students to concepts of design of experiments, instructors sometimes have students conduct taste tests of various food items, such as gummy bears (see *CHANCE* 23(1)). **John Bohannon, Robin Goldstein,** and **Alexis Herschkowitsch** compared dog food and pâté. Really, they did. Read about their design and the results in this issue.

Howard Wainer, in his Visual Revelations column, writes about the graphics in the 2008 National Healthcare Quality Report and State Snapshots. Usefully and accurately displaying information graphically is important and challenging. Wainer makes suggestions for improving some of the displays.

Ronald Smeltzer shows us an early time-line bar graph by Philippe Buache depicting the water level of the Seine in Paris from 1732 to 1767. The picture creatively and effectively depicts data in print before the advent of modern printing techniques.

Continuing a series of articles on postage stamps, **Peter Loly** and **George P. H. Styan** discuss stamps issued in sheets with 5x5 Latin square designs. Color versions of the stamps, as well as previous articles on stamps, are available online at *www.amstat.org/publications/chance.*

Jonathan Berkowitz's puzzle celebrates the 2010 Winter Olympics, which were held in his home city of Vancouver, British Columbia, Canada. The puzzle, "Employs Magic," is actually five smaller puzzles, each a cryptic five-square of 10 words.

The ASA Executive Committee met recently and voted to continue *CHANCE* for another three years in both print and online. The next executive editor will serve in 2011–2013. The committee also voted to make the online version of *CHANCE* free to ASA's student members. Thus members of the ASA with certified student status will be able to access *CHANCE* online as a member benefit. This is a great development, because students are potential long-term subscribers and future authors. They also can be inspired by the significant role that probability and statistics plays in major studies and activities. This development might motivate others to submit articles to *CHANCE* to entertain and influence this group.

The magazine is offered to institutions in online deals through Springer. *CHANCE* went online in 2008. In 2009 there were 153 online deals, which means that 3,730 institutions are exposed to *CHANCE*. Full-text downloads of articles in 2009 numbered in the hundreds per month. Did you know that you can get, via email, a table of contents notification for C*HANCE*? Go to *www.springer.com/mathematics/probability/journal/144* and look in the right column of the page.

Please send comments and submissions to *CHANCE* editor Mike Larsen at *mlarsen@bsc.gwu.edu.* ■

Journal of Computational and Graphical Statistics Highlights

Animation, 3D Visualization, and Movies in JCGS

David A. van Dyk, Past-editor, *Journal of Computational and Graphical Statistics*

MRI brain image, which shows a contour of a brain along with several contours of the activation level in a PET experiment. The image becomes an interactive 3D graphic in the online article. To see the image download *http://pubs.amstat.org/doi/suppl/10.1198/jcgs.2010.191ed/suppl_file/supp_l.pdf.* You must be using Adobe Reader 9 and may need plug-ins.

The March issue of the *Journal of Computational and Graphical Statistics* opens with an editorial overview of the potential usage of animation, 3D visualization, and movies in electronic versions of *JCGS* articles. An example is the still frame of the MRI brain image, which becomes an interactive 3D graphic in the online article. The supplement to the editorial gives multiple illustrations and point-by-point instructions to authors who hope to jazz up their articles with modern visualization methods. The supplement also links to all the examples. The editorial and the movie supplements are open access.

The editorial points toward what we believe is the future for publication of sophisticated visualization, graphical, and computational methods—an appropriate starting point for an issue focused on innovative statistical graphics, the analysis of massive spatial data sets, boosting, and multiscale techniques.

The scientific portion of the issues begins with a group of four articles on graphical methods. First up is "A Layered Grammar of Graphics," where **Hadley Wickham** describes an extended tool that aims to concisely describe the components of a graphic in order to gain insight into its underlying structure. Next, in their colorful article, "Rainbow Plots, Bagplots, and Boxplots for Functional Data," **Rob J. Hyndman** and **Han Lin Shang** describe a new set of graphical tools for visualizing large sets of functional data. Each of the final two papers in the section presents a new type of plot. **J. C. Gower, P. J. F. Groenen,** and **M. Van De Velden** present "Area Biplots" to visualize the results of a principle component analysis, and **John H. J. Einmahl, Maria Gantner,** and **Günther Sawitzki** present "The Shorth Plot" to investigate probability mass concentration.

The next session is composed of three articles on nonstationary spatial models. It is interesting to compare how all three of them apply their proposed methodology to model U.S. rainfall patterns. **Zhengyuan Zhu** and **Yichao Wu** open the section by tackling computational challenges involved with likelihood based estimation and kriging prediction in large nonstationary spatial data in "Estimation and Prediction of a Class of Convolution-Based Spatial Nonstationary Models for Large Spatial Data." Next, **Yu Yue** and **Paul L. Speckman** present a fully Bayesian method based on adaptive thin-plate splines in their article "Nonstationary Spatial Gaussian Markov Random Fields." The section concludes with **Ya-Mei Chang, Nan-Jung Hsu,** and **Hsin-Cheng Huang's**

method for "Semiparametric Estimation and Selection for Nonstationary Spatial Covariance Functions."

A short section on boosting begins with "Boosting for Correlated Binary Classification," where **Adeniyi J. Adewale, Irina Dinu,** and **Yutaka Yasui** present two variants of boosting that are designed for correlated binary responses. In the second article of the section, **Gerhard Tutz** and **Jan Gertheiss** present a feature extraction technique that uses boosting to identify relevant components of the signal in "Feature Extraction in Signal Regression: A Boosting Technique for Functional Data Regression."

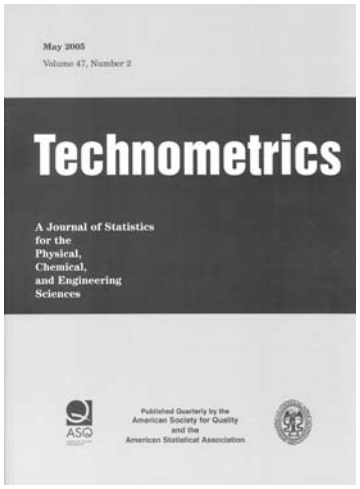
The issues concludes with an article on multiscale inference, "The Block Criterion for Multiscale Inference About a Density, with Applications to Other Multiscale Problems," by **Kaspar Rufibach** and **Guenther Walther;** an article on robust estimation, "An Exact Least Trimmed Squares Algorithm for a Range of Coverage Values," by **Marc Hofmann, Cristian Gatu,** and **Erricos John Kontoghiorghes;** an article on kernel density estimation, "Fast Computation of Kernel Estimators," by **Vikas C. Raykar, Ramani Duraiswami,** and **Linda H. Zhao;** and an article on extracting circadian rhythmic patterns in animal-activity time-series data, "Statistical Computations on Biological Rhythms I: Dissecting Variable Cycles and Computing Signature Phases in Activity-Event Time Series," by **Hsieh Fushing, Shuchun Chen,** and **How-Jing Lee.**

To view the computer code and data sets used in the articles along with additional illustrations and technical details in the online version of *JCGS*, visit the web site at *http://pubs.amstat.org/loi/jcgs.* ■

Technometrics Highlights

May Issue Features Advances in Reliability

David M. Steinberg, Editor *Technometrics*



Advances in applied reliability are a primary topic in the May 2010 issue of *Technometrics.* The first article, by **Yili Hong** and **William Q. Meeker,** is on "Field-Failure and Warranty Prediction Based on Auxiliary Use-rate Information." Traditionally, such predictions have been based on the length of time that a unit is in service. Actual product usage, although often more important than calendar time, is usually not available. New technology is changing that situation.

Sensors and smart chips are being installed in many modern products and can provide feedback to the manufacturer on how the product has been used and the environment in which it was used. Hong and Meeker develop methods that take advantage of the usage data, with a cycles-to-failure model to compute predictions and prediction intervals for the number of warranty returns. The paper was motivated by the need to predict warranty returns for a product with multiple failure modes and cycles-to-failure/use-rate information available for many of the units via connection to a network. The authors present prediction methods for both units connected and units not connected to the network. The ideas are illustrated using this applied problem. Further insight into the benefits of use-rate models is provided by a comparison of asymptotic variances comparing the cycles-to-failure and time-to-failure models.

The article by Hong and Meeker is our featured article in the issue. It can be accessed freely from the journal web site at *http://pubs.amstat.org/loi/tech.*

Todd L. Graves, Christine Anderson-Cook, and **Michael S. Hamada** consider the problem of assessing system reliability when data are available at the system, subsystem and component level. Their article, "Reliability Models for Almost-Series and Almost-Parallel Systems," considers model forms that allow for the assessment and modeling of possible discrepancies between reliability estimates based on these different levels of data. Understanding the potential conflicts between data permits a more realistic representation of the true uncertainty of the estimates and enhances understanding of inconsistencies that might guide further improvements to the system model. The new methodology is illustrated with several examples.

Massimiliano Giorgio, Maurizio Guida, and **Gianpaolo Pulcini** use degradation data to assess reliability in their article, "A State-Dependent Wear Model with an Application to Marine Engine Cylinder Liners." Their work was motivated by an interesting application: the need to describe the wear of cylinder liners of some identical heavy-duty diesel engines for marine propulsion, which are observed via a staggered inspection.

The authors propose a new wear model in which the transition probabilities between process states, unlike models with independent increments, depend on the current system state. A time and state space discretization is introduced to obtain the likelihood function. The model parameters and reliability characteristics of the liners are then estimated and the wear growth during future inspection intervals is predicted. The homogeneity of wear data and the goodness-of-fit of the proposed model are tested. A simplified maintenance scenario is also considered to show the need for accurate modeling of the wear process for planning condition-based maintenance activities. Fortran code and executable programs, as well as the cylinder liner data, are available online as supplemental material.

Our next article, by **Xiao Wang** and **Dihua Xu,** also considers the use of degradation data. In "An Inverse Gaussian Process Model for Degradation Data," they study maximum likelihood estimation when a class of inverse Gaussian processes is used to model degradation. Both intersubject heterogeneity and covariate information can be incorporated into the model in a natural way. The EM algorithm is used to obtain the maximum likelihood estimators of the unknown parameters, and the bootstrap is used to assess the variability of the maximum likelihood estimators. Simulations are used to validate the method. The model is fitted to laser data, and corresponding goodness-of-fit tests are carried out. Failure time distributions in terms of degradation level passages are calculated and illustrated. Macros in R for implementing the analysis are available online as supplemental material.

Aparna V. Huzurbazar and **Brian J. Williams** examine the use of flowgraph models for modeling recurrent event data. Their article, "Incorporating Covariates in Flowgraph Models: Applications to Recurrent Event Data," proposes a framework for incorporating covariates in flowgraph models, with application to recurrent event data in systems reliability settings. A flowgraph is a generalized transition graph originally developed to model total system waiting times for semi-Markov processes. The focus of flowgraph models is expanded by linking covariates into branch transition models, enriching the toolkit of available data analysis methods for complex stochastic systems. The ideas are illustrated on two applications, one in reliability and the other in medicine.

Bending load tests are used to assess the strength of brittle materials such as ceramics for spacecraft and aircraft. The sizes of the test units and the fraction of units at each size affect the efficiency of these tests. **Kazuyuki Suzuki, Toshie Nakamoto,** and **Yohtaro Matsuo** address the test design problem in their article, "Optimum Specimen Sizes and Sample Allocation for Estimating Weibull Shape Parameters for Two Competing Failure Modes."

Examining data on both fracture strength and location and taking account of both internal and surface cracks, the authors find that tests with two specimen sizes and a maximal ratio of volumes provide the most precise estimation. Tests with an equal number of specimens at each size achieve precision close to that of the optimal allocation. The proposed tests can drastically reduce both the number and total volume of specimens when compared to a conventional "single-specimen size test" without any reduction in the precision of the estimators.

The next *Technometrics* article, by **Martin L. Hazelton,** considers "Statistical Inference for Transit System Origin-Destination Matrices." The problem here is to make inferences for the matrix of origin-destination (O-D) trip rates for a transit system based on counts of the passengers boarding and alighting at each stop. The observed data provide only indirect information about the O-D rates through a highly indeterminate system of linear equations. Calculation of the model likelihood is computationally prohibitive for even moderately large systems. So the article instead adopts a sampling-based Bayesian approach.

Existing work on the wider problem of O-D traffic rate estimation for general transport networks has failed to produce an efficient sampling methodology for sizable applications. However, this work derives a suitable MCMC algorithm by generating candidate trip vectors directly from the feasible set using a Markov model of passenger behavior. The resulting sampler moves freely around the posterior support without any need for explicit specification of the feasible trip set. This methodology is applicable regardless of whether the O-D matrix is assumed to possess any given structure. The methods are illustrated through analysis of a case study on O-D trip rates for a bus service in the San Francisco Bay Area.

The issue closes with three articles on experimental design. The first of these, by **Pi-Wen Tsai** and **Steven G. Gilmour,** examines "A General

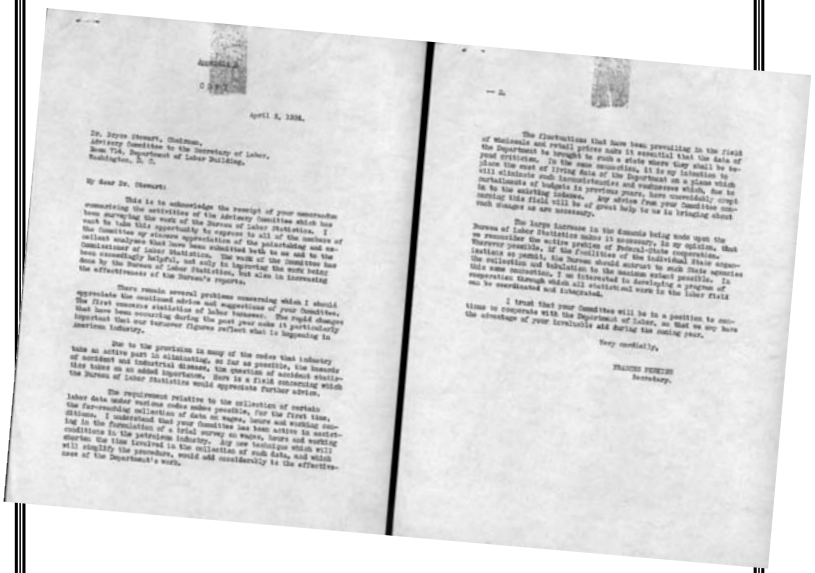
Criterion for Factorial Designs Under Model Uncertainty." This work is motivated by two industrial experiments in which rather extreme prior knowledge was used to choose a design. Building off these examples, the authors study the QB criterion, which aims to improve the estimation in as many models as possible by incorporating experimenters' prior knowledge. The generalization and application of the criterion to different types of designs are presented. The relationships between QB and other criteria for different situations are explored. The authors show that QB provides a bridge between alphabetic optimality and aberration. The two case studies illustrate the potential benefits of the QB criterion. R programs for calculating QB are available online as supplemental materials.

Sunanda Bagchi develops a novel twist on orthogonal main effect plans (OMEPs) in her article, "Main Effect Plans Orthogonal Through the Block Factor." Many industrial experiments require different numbers of levels for different factors. OMEPs for such asymmetrical experiments often require a large run size. If blocking is needed, run size usually becomes even larger. This article shows that there are situations where the use of blocks may actually be helpful in finding an OMEP with a small run size. For example, the article shows how to set up a saturated OMEP for a $33n23n$ experiment in $3n$ blocks of size 4 each for every Hadamard number n. In each of these plans, the three-level factors are nonorthogonal to the block factor but are pairwise "orthogonal through the block factor." The two-level factors are orthogonal to the block factor.

The issue concludes with an article by **Kenneth J. Ryan** and **Dursun A. Bulutoglu** on "Minimum Aberration Fractional Factorial Designs with Large N." Ryan and Bulutoglu extend our knowledge of minimum aberration (MA) regular fractional factorial (FF) designs with 2-levels and large run sizes. They extend the catalog of Xu (2009), adding 36 new MA designs: N = 256 (m = 29–36 and 100–108 factors), N = 512 (m = 26–29), N = 1024 (m = 25–28), N = 2048 (m = 24–32), and N = 4096 (m = 25–26). Such design enumeration problems are notoriously difficult with large N and/or m.

Ryan and Bulutoglu brought the newly solved problems within computational reach by changing the isomorphism check component of Xu's algorithm. They present a new, compact graph to solve regular design isomorphism problems and use the program nauty (McKay, 2007) to solve the corresponding graph isomorphism problems. ■

Treasures from the ASA Archives



April 8, 1934.

Dr. Bryce Stewart, Chairman,
Advisory Committee to the Secretary of Labor,
Room 716, Department of Labor Building,
Washington, D. C.

My dear Dr. Stewart:

This is to acknowledge the receipt of your memorandum summarizing the activities of the Advisory Committee which has been serving the work of the Bureau of Labor Statistics. I take this opportunity to express to all of the members of the Committee my sincere appreciation of the painstaking and excellent analyses that have been submitted both to me and to the Commissioner of Labor Statistics. The work of the Committee has been exceedingly helpful, not only in improving the work being done by the Bureau of Labor Statistics, but also in increasing the effectiveness of the Bureau's reports.

There remain several problems concerning which I should appreciate the continued advice and suggestions of your Committee. The first concerns statistics of labor turnover. The rapid changes that have been occurring during the past few months it particularly important that our turnover figures reflect what is happening in American industry.

Due to the provisions in many of the codes that industry take an active part in eliminating, so far as possible, the hazards of accident and industrial disease, the question of accident statistics takes on an added importance. Here is a field concerning which the Bureau of Labor Statistics would appreciate further advice.

The requirement relative to the collection of certain labor data under various codes makes possible, for the first time, the far-reaching collection of data on wages, hours and working conditions in the petroleum industry. Any new technique which will simplify the procedure, would add considerably to the effectiveness of the Department's work.

The fluctuations that have been prevailing in the field of wholesale and retail prices make it essential that the data of the Department be brought to such a state where they shall be reflect the cost of living data of the Department on a place which will eliminate such inconsistencies and weaknesses which, due to the existing indexes. Any advice from your Committee concerning this field will be of great help to us in bringing about such changes as are necessary.

The large increase in the demands being made upon the Bureau of Labor Statistics makes it necessary, in my opinion, that we reconsider the entire problem of Federal-State cooperation. Wherever possible, if the facilities of the individual State organizations so permit, the Bureau should entrust to such State agencies this same necessities. I am interested to develop a program of cooperation through which all statistical work in the labor field may be coordinated and integrated.

I trust that your Committee will be in a position to continue to cooperate with the Department of Labor, so that we may have the advantage of your invaluable aid during the coming year.

Very cordially,

FRANCES PERKINS
Secretary.

Letter from Frances Perkins (U.S. Secretary of Labor) to Bryce Stewart, Chairman of ASA's Advisory Committee to the Secretary of Labor (1934).

In this letter, Perkins thanks the committee for its previous work, and describes future issues he would like the committee to address. American Statistical Association Records, MS 349, Box 6, Folder 1, Special Collections Department, Iowa State University Library.

To find this and other treasures from the archive, visit: *www.lib.iastate.edu/spcl/manuscripts/MS349.html*. If you have questions, email *spclref@iastate.edu* or call (515) 294-6672

Committee on ASA Archives and Historical Materials

Counting Statisticians: How Many of Us Are There?

Keith Crank, ASA Research and Graduate Education Manager

Crank

In November I wrote about the problem I've had in determining the number of PhDs awarded in biostatistics in the United States. Since then I've been asked how many biostatisticians there are worldwide and how many statisticians there are working in the United States. I don't see a good way to answer either of these last two questions, except to say I don't know.

Of course, the first issue to resolve is whom to classify as a statistician or a biostatistician. The Bureau of Labor Statistics (BLS) publishes wage information by occupation. According to BLS, in May 2008 there were about 20,000 statisticians in the U.S. workforce. The BLS includes biostatisticians in the statistician category, but it does not include statistics/biostatistics faculty at colleges and universities. Nor does it include managers. Granted, these classifications make sense for BLS, since the data are used for salary comparisons. But they don't help much in estimating the number of people in our discipline.

Lacking a direct method of estimating the number of statisticians, is there an indirect method that might provide reasonably good estimates? For example, can we estimate the number of statistics faculty and the number of managers who are statisticians? Counting statistics faculty in statistics and biostatistics departments is probably doable, but what about statistics faculty in other departments? And estimating the number of statisticians in management (or other) positions also appears to be problematic.

What about approaching this from the supply side? Can we count the number of people getting statistics/biostatistics degrees and go from there? There are obvious problems with this approach. What about migration—between countries and between disciplines? How do we adjust the number of master's degrees to account for students who go on for the PhD? Can we account for people who die, retire, or leave the workforce for other reasons?

These are obvious issues, but even counting the number of degrees (bachelor's, master's, and PhD) is not easy. At the PhD level there are at least three sources that attempt to count the number of PhDs in statistics and biostatistics from U.S. institutions. Although this seems like a fairly straightforward thing to do, the three sources give different numbers (see Figure 1). (When I say this is seemingly straightforward, I mean that the Integrated Postsecondary Education Data System (IPEDS) data from the Department of Education and the National Science Foundation (NSF) data are based on a complete enumeration with near 100% response rates. The difference between them is that IPEDS data comes from the institution and NSF data comes from the individual degree recipients.)

The AMS numbers are lower than both the NSF and IPEDS numbers. This happens for two reasons. First, AMS has lower response rates, and it does not try to adjust for nonresponse. (AMS simply totals up the counts it receives. It does not try to estimate the number of degrees from departments that do

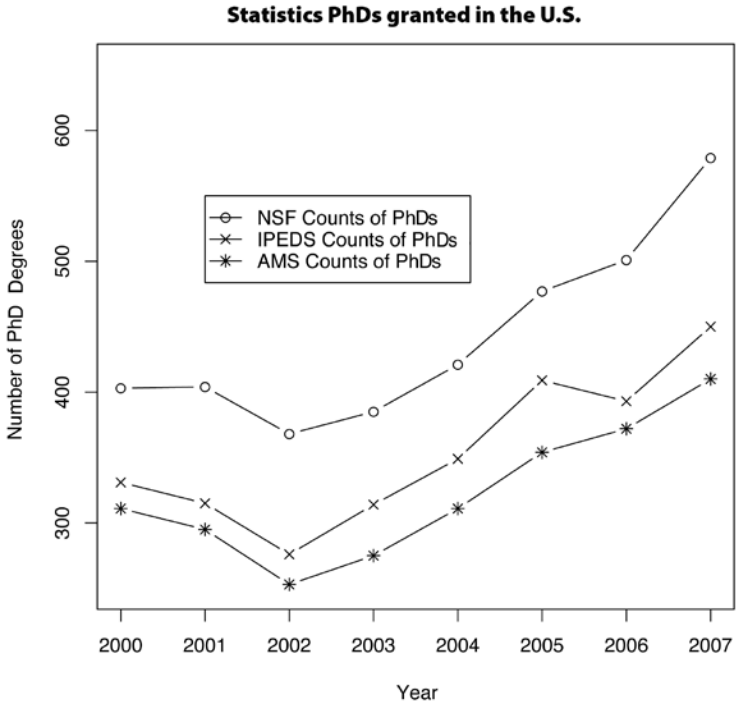


Figure 1. At the PhD level there are at least three sources that attempt to count the number of PhDs in statistics and biostatistics from U.S. institutions.

not respond.) Second, NSF and IPEDS have multiple categories for statistics, including mathematical statistics, general statistics, biostatistics, biometrics, business statistics, educational statistics, and social science statistics.

If we restrict our categories to mathematical statistics, general statistics, biostatistics, and biometrics, the numbers are in closer agreement. Figure 2 is a graph of the biostatistics/biometrics counts for 2000–2007. Here the lower AMS figures can reasonably be attributed to nonresponse, and everything looks good, at least on the surface (but see my November 2009 article in *Amstat News* for concerns about these numbers). Figure 3 is a graph of the mathematical/general statistics counts. As with the biostatistics/biometrics degrees, there is general agreement between the three sets of data. But if there is an issue of undercoverage in the AMS data, one wonders why the NSF and IPEDS numbers aren't higher. (Note: The 2007 number from NSF is substantially higher than the other two and may be reasonably accurate.)

In conclusion, I don't know how many statisticians there are. If anyone has ideas on this matter, please let me know. But, for now, if I am asked how many of us there are, my response will have to be, "Given the high demand and low unemployment, evidently there are not enough."

To contact me, send an email to *keith@amstat.org*. Questions or comments about this article, as well as suggestions for future articles, are always welcome. ■

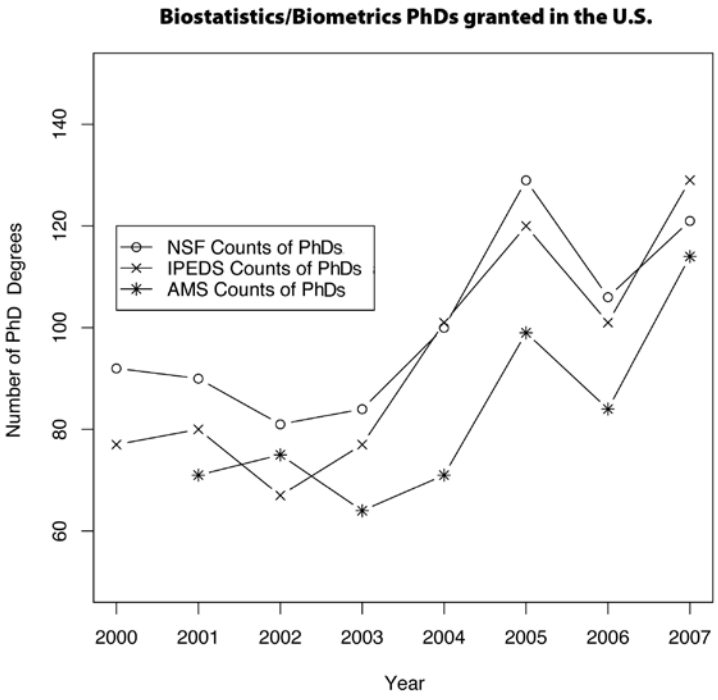


Figure 2. Biostatistics/biometrics counts for 2000–2007

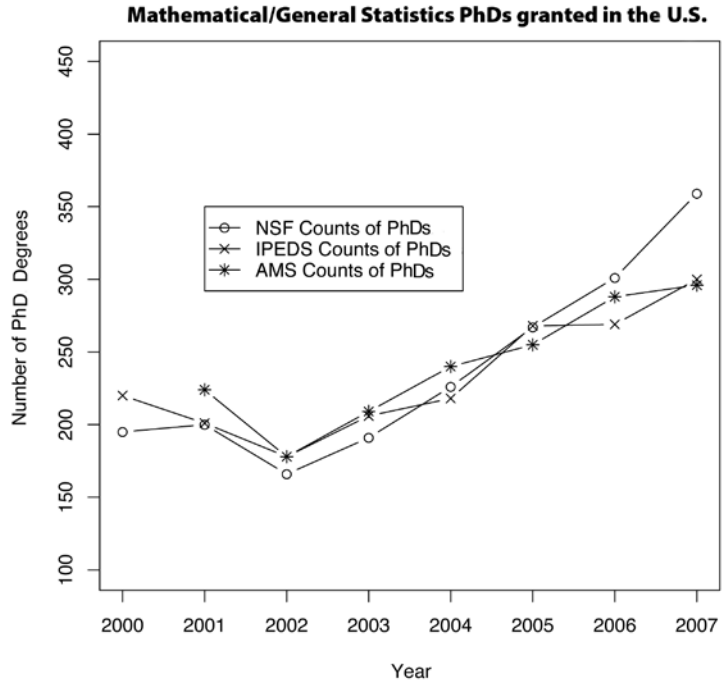


Figure 3. Mathematical/general statistics counts

MASTER'S PROGRAM

Does your school offer an online master's degree? Highlight the advantages of your school's master's in statistics program in an upcoming issue of *Amstat News*. Or, if you are a student who has recently graduated with a master's degree in statistics we would like to hear from you. Email *Amstat News* Managing Editor Megan Murphy at *megan@amstat.org* or ASA Research and Graduate Education Manager Keith Crank at *keith@amstat.org*.

ASA-SIAM Series

Understanding the Review Process for ASA-SIAM Books

Sara Murphy, Acquisitions Editor, SIAM series

Each published book in the ASA-SIAM series began either as a book proposal or draft manuscript. If you have ever wondered how the submission and review process works for publishing a book, read on.

As an acquisitions editor, I make contact with potential authors in many different ways: networking at conferences, having an editorial board member suggest someone for me to talk to, or via a cold call or email from an author. If an author is interested in publishing in the ASA-SIAM series, the first thing he or she needs to do is submit a completed copy of our standard book proposal form (available at *www.siam.org/books/authors/proposal_info.php*), along with a tentative preface, table of contents, sample references, and, optionally, some sample chapters or a whole draft. I consult with the series editor-in-chief, Lisa LaVange (University of North Carolina, Chapel Hill), to discuss potential, effective reviewers for the material, and then I send the book proposal out to three to six prospective reviewers.

The reviewers answer a standard list of questions about the book's content, organization, and audience. Sample questions include:

> What is your general opinion of the material?
>
> What groups of statisticians and applied mathematicians would be interested in this work? Why?
>
> Would the proposed book be used as a textbook? If so, for what courses?
>
> Do you recommend that the ASA and SIAM publish the book?

Reviewer comments are shared anonymously with the author, who is invited to respond to the comments to clarify important points that may have been misunderstood or to agree or disagree with reviewer suggestions. The original reviews and the author's responses play an important part in whether a book author is offered a publishing contract in the ASA-SIAM series.

If a book is contracted for publication without the author's submitting sample chapters or a draft, there is one more review before production begins. Once the manuscript is complete, it is sent to two or three reviewers for what is called the manuscript review. Some of these reviewers will have reviewed the book during its proposal stage, while others will be seeing the manuscript for the first time. The manuscript review provides the author with comments on the entire draft, along with suggestions before the book enters the production stage. After receiving these anonymous reviews, the author makes any final revisions and submits the manuscript for production.

If you are interested in submitting a book proposal for the ASA-SIAM series, please download a proposal form from the SIAM web site at *www.siam.org/books/authors/proposal_info.php* or contact me, Sarah Murphy, at *murphy@siam.org*. Potential reviewers should also email me, with your full name, mailing address, email address, and a list of topic areas in which you would feel comfortable being a reviewer. We cannot guarantee that you will be used as a reviewer, but if the opportunity arises, you will be contacted. Reviewers for the ASA-SIAM series are compensated with complimentary books from SIAM's catalog (*www.siam.org/catalog*). ■

Envisioning the 2020 Census

Lawrence D. Brown, Miers Busch Professor, University of Pennsylvania

I'm honored to have Lawrence Brown write this month's science policy column on a report on the 2020 Census written by a National Academies' committee that he chaired. With the 2010 census in its final stages and the U.S. Census Bureau planning for the 2020 census, it is an ideal time for ASA membership to hear the highlights of this report.

-Steve Pierson, ASA Director of Science Policy, *pierson@amstat.org*

The 2010 census is well under way. As of Census Day, April 1, according to the U.S. Census Bureau's "participation rate" data on the Web, an estimated 52% of households had already mailed back their forms. As this column goes to press, nonresponse follow-up (NRFU) should be in full swing.

Although the census now appears to be running smoothly, serious problems occurred in the planning earlier in the decade that could have jeopardized accuracy of the count. These problems drove estimated census costs up to almost $15 billion, or about $115 per housing unit on average. Back in 1970, when the mailout-mailback paradigm first replaced 100% in-person enumeration, census costs were about $17 per household on average in today's dollars. It is not at all too early to think seriously about the planning process for 2020—something the Census Bureau, to its credit, has already begun. Indeed, it is necessary now to begin considering fundamental changes to census research and development (R&D) to avoid the pattern of escalating per-housing-unit real-dollar costs that has characterized censuses since 1970.

I recently chaired the Committee on National Statistics Panel to Review the Design of the 2010 Census Program of Experiments and Evaluations (CPEX), which was charged not only to comment on CPEX itself but also to identify lessons learned from the 2010 census that could improve the planning for 2020. The panel's final report, "Envisioning the 2020 Census," released February 22, issues a clarion call for a revitalization of the Census Bureau's R&D infrastructure and a clear set of goals to guide R&D for 2020. (The panel's previously released interim and letter reports on CPEX are bound with the final report; see *www.nap.edu/catalog.php?record_id=12865*.)

Panel's Recommendations

Since the current approach of a mailout-mailback enumeration based on a master address list with in-person follow-up of nonrespondents was first used, the real dollar-per-housing-unit cost (2009 dollars) of the U.S. census has increased by more than 600%. In contrast, the real dollar-per-housing-unit cost of recent Canadian censuses (in 2008 Canadian dollars) remained constant at $39–$40 for the 1996, 2001, 2006, and 2011 censuses.

The unprecedentedly high per-housing-unit cost expected for 2010 resulted in part from planned long-term investments—improvements to the Census Bureau's TIGER geographic database (essential for accurate geographic coding and mapping of addresses) and the testing and implementation of the continuous American Community Survey (ACS). High costs also resulted from a failed initiative to automate the nonresponse follow-up operation, which is now using traditional paper-and-pencil questionnaires instead of hand-held computers, as originally planned.

Moreover, contributing to cost increases over the entire 40-year span has been the accretion of operations to address special situations. These operations have not been fully evaluated to determine their benefits and costs. Underlying this accretion and the failure to achieve major steps forward on a timely basis, such as the NRFU automation initiative, is a largely incremental approach to census design and an R&D program that is often unfocused and ineffective.

Census Quality

The overall quality of the census enumeration using the current mailout-mailback methodology has

From left: Former Census Directors Martha Farnsworth Riche and Vincent P. Barabba stand beside Congressman Charlie Dent and Senator Tom Carper during the introduction to the bill "Census Oversight Efficiency and Management Reform Act of 2010." Seven former directors of the U.S. Census Bureau, including both Republicans and Democrats, have endorsed the bill.

New U.S. Census Bureau Autonomy Bill

Congresswoman Carolyn Maloney, Congressman Charlie Dent, Senator Tom Carper and Senator Tom Coburn have introduced the bill "Census Oversight Efficiency and Management Reform Act of 2010" or H.R. 4945/S. 3167, which would make the U.S. Census Bureau more autonomous and make its director's term a fixed, five-year appointment. Maloney had introduced a more aggressive version of this bill earlier in this Congress and in the previous Congress. Those bills, endorsed by the ASA Board of Directors, would have made the bureau an independent establishment.

H.R. 4945/S. 3167 keeps the Census Bureau within the Department of Commerce but would have the director report directly to the Secretary of Commerce, provide the director more latitude in communicating with Congress, and grant the director more authority over the Census Bureau personnel and operations.

improved between 1970 and 2000, to the point at which major continued improvement is unlikely. The net undercount of the population (measured by the demographic analysis method) decreased from 2.7% in 1970 to 0.1% in 2000. Moreover, the difference in net undercount rates between African-Americans and all others decreased from 4.3 percentage points in 1970 to 3.1 percentage points in 2000.

These figures mask large numbers of offsetting errors of omission: both of people who should have been counted and of duplicate or other types of erroneous enumeration of people who should not have been counted. Given trends that make census-taking more difficult, it is unlikely that the increased costs anticipated for the 2010 census will achieve much, if any, further increase in quality.

Social and Technological Change

Changes in the U.S. population since 1970 that have made census-taking more difficult are well known. They include increased immigration, including illegal immigration, and therefore the existence of communities that are wary of cooperating with the census and in which English is not the primary language. Changing norms in residence and living arrangements have also complicated the concept of a single, usual place of residence for many people, including children in joint custody, people with seasonal homes, and commuter workers or couples who maintain a separate workweek residence.

More broadly, the public's willingness to respond to surveys has declined significantly over the past three decades. Nevertheless, important dynamics are dramatically changing the environment in which the census is taken, offering opportunities to make the 2020 census markedly more cost effective. It is difficult to paint a reliable picture now of the United States in 2020, but it is easy to conceive of the Internet as being the primary method for communication and conducting household business for the great majority of residents, combined with the likelihood that a large fraction of U.S. households may opt not to receive ordinary mail or may ignore much or all of it. It is also likely that administrative records will provide timely, high-quality, and inexpensive information that would be a useful input to a variety of census operations. Clearly, the design of the 2020 census should be dramatically different to accommodate such changes.

Toward a New Vision

To escape the pattern of incremental and often unfocused R&D for the next census, which leads to escalating costs with diminishing returns on quality, the Census Bureau will need to overhaul its approach for planning the 2020 census. Our panel urged the Census Bureau to motivate its R&D efforts by setting a clear and publicly announced goal of reducing the inflation-adjusted per-housing-unit cost to that of the 2000 census (subtracting the cost of the 2000 census long-form sample), while holding coverage errors (appropriately defined) to approximately the 2000 levels. Such a goal would recognize that an increase in real dollar-per-housing-unit cost for 2020 over 2010 would be unjustified in comparison with the experience of other developed nations and unacceptable in a time of fiscal imbalance.

Our panel also urged the Census Bureau to immediately develop a limited number of strategic visions for the 2020 census that are likely to meet its announced goals for costs and quality. By strategic visions we mean start-to-finish strategies for conducting all major census operations in order to confront looming threats and implement new technologies. Priorities for evaluations of the 2010 census and for experiments and tests in the 2011–2018 period should be set to enable the 2020 census R&D program to investigate a handful of research

questions whose resolution will determine which of the visions of the next census are feasible and cost effective and which are not.

All involved, including Congress and the administration, need to recognize that a modernized census with substantial cost savings in 2020 can be achieved only through effective research and planning over the course of the 2010–2020 decade. Therefore, all involved need to fund and pursue research efforts commensurately.

From Here to There

In the past, the U.S. Census Bureau led the world in goal-oriented R&D for continuous improvement of its censuses and surveys. The fruits of that R&D included such pathbreaking achievements as the use of probability sampling in censuses and surveys; computerized processing of census returns; mail-out-mailback enumeration; the use of dual systems estimation for census coverage measurement; the TIGER geographic coding and mapping system; and the design and implementation of the ACS as a replacement for the census long-form sample.

Yet over the past two or three decades, the cumulative effects of actions and inactions—on the part not only of the Census Bureau, but also of the Department of Commerce and Congress—have led to this situation: R&D for the decennial census and other programs too often is limited to incremental improvements in existing systems; is executed without using best practices for the design of experiments and tests; expends scarce resources on testing factors that are already well established in the literature while neglecting to test factors that are unique to the scope and scale of the census or another program; is fragmented organizationally; is not well integrated with operations; is not considered a key driver of future directions or new operational procedures; and lacks resources commensurate with needs.

To make possible a truly focused R&D program for 2020 census planning, the Census Bureau will need to take immediate steps to develop the necessary tools for effective planning and evaluation. These tools include an improved, transparent cost model of census operations and well-documented data from all 2010 census operations in formats suitable for research and evaluation. The Census Bureau will also need to take immediate steps to revitalize its research infrastructure. These steps include a thorough assessment of the Census Bureau's posture toward R&D compared with other data collection organizations and the development of means for research to break out of existing organizational "silos."

Science Policy Actions

ASA signs letter of support for House and Senate bills to make the U.S. Census Bureau more autonomous and to make its director's term a fixed, five-year appointment

ASA President sends letter with ASA's review of the public draft of *The Common Core K–12 Mathematics Standards*

A seventh *Statistical Significance*, titled "Statistics Informs Energy Policy," is finalized

ASA President signs letter regarding risk-limiting audits in California legislation

ASA signs letter to promote STEM (Science, Technology, Engineering and Mathematics) education in the upcoming reauthorization and Secondary Education Act (ESEA). ASA President sends separate letter promoting statistics education in ESEA reauthorization

Our panel recommended that the Census Bureau should comprehensively review the R&D practices and organization of other national statistics offices and survey organizations in academia and the private sector, with the goal of modernizing and strengthening the bureau's own R&D program. Necessary steps also include re-establishing a position such as that of associate director of methodology and standards; reestablishing a strong Center for Survey Methods under a centrally influential associate director; integrating research across programs and with operational planning; integrating census and ACS research; and renewing and refreshing mechanisms for obtaining outside expert advice.

Positive Steps

We are heartened by the positive reaction of the Census Bureau to our panel's report and by the concrete steps that the Census Bureau is taking to begin 2020 census planning now, with the development of a small number of visions of alternative ways of conducting the census and plans for R&D beginning in 2011–2012. R&D focused on these alternatives could lead to more cost-effective ways of updating the Master Address File (to the benefit of the ACS and other household surveys in addition to the census); the strategic use of the Internet and other response modes to save paper and improve data quality; the possible use of administrative records in nonresponse follow-up operations; and the full implementation of hand-held technology for a "paperless" census. ■

Constance F. Citro and Daniel L. Cork contributed to this article.

Have You Checked Out *CHANCE* Lately?

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Analytic Engineer Has a Passion for Solving Puzzles

Justin Rowland, SAS Solutions OnDemand

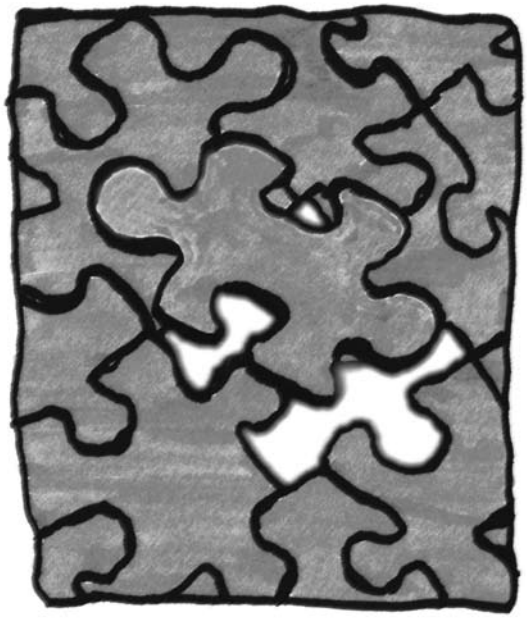
Across all industries, organizations are generating and collecting massive amounts of data to improve operations and make better decisions. Some companies already have their own analytical teams; others are just beginning to realize the value of investing in analytic capabilities. Regardless of how an organization uses its collected data, there remains a tremendous benefit in having external data specialists provide a fresh perspective. In 2007, SAS CEO Jim Goodnight created the Advanced Analytics Lab (AAL) to further assist organizations make the most of their data, leveraging cutting-edge SAS tools and a team of individuals who live and breathe data (like me).

Here at AAL, we work on a variety of interesting problems. Some colleagues are forecasting how much a cable company stands to gain or lose from lowering its rates. Others have analyzed factors that cause inmates to return to jail after release. Perhaps the most common problem we are working on is fraud detection. Many banks, insurance companies, health-care, and welfare organizations have fraud detection systems in place, but they have no methods for linking individuals to known fraudulent activity.

We use SAS Social Network Analysis (*www.sas.com/solutions/fraud/social-network*) to connect the dots between individuals, revealing fraud rings that once went undetected. However, the software can be applied to any data set in which there are connections between different entities. For one project, we are using SNA to identify influential customers for a telecommunications company.

A typical project begins with the client providing data and a set of objectives. The client usually provides data in the same form that it is captured and stored—in multiple files from a relational database. The first task is exploratory data analysis, in which the analyst gains an understanding of the variables and discovers how the tables relate to each other. Examining the quality of the data is also necessary (for example, determining how many missing values each variable has).

The next step is to combine the multiple files into as few files as possible. For fraud projects, this usually means having one data set for transactions, one for accounts, and one for individuals. Once the tables have been cleaned and combined, the analytical work can begin. (A general rule of thumb is that about 85% of a project is preparatory work.) The



analytical work involved varies from project to project, depending mostly on the objectives provided by the client. Some examples include predictive modeling, clustering, survival analysis, and time-series forecasting.

For students with an enthusiasm for math and statistics, working with data would be a great career choice. Job openings are expected to continue to rise, salaries are substantial, and the work is rewarding—it's like working on complicated puzzles with a team of smart people. I especially like that I am able to use my creativity and problemsolving skills every day.

My advice to students interested in this line of work is to attend a program that not only teaches theory but also offers a chance for practical experience. I was fortunate enough to have attended two of these programs, receiving a bachelor's in discovery informatics from the College of Charleston (*www.di.cofc.edu*) and an MS in analytics from North Carolina State University (*www.analytics.ncsu.edu*). Both programs allowed me to apply the analytical techniques that I learned in the classroom to real-world projects, which greatly helped prepare me for my career.

Lastly, I recommend that students either attend a program that teaches SAS programming or learn it on their own. There are many tools available for working with data, but none that I have tried come close to offering the power and control that SAS does—and no, I'm not required to say that. ■

Inviting You to Slovenia

Host of ICOTS-8, International Conference on Teaching Statistics

Andrej Blejec, Chair of ICOTS-8, President of Statistical Society of Slovenia

Conferences of the International Conference on Teaching Statistics (ICOTS) are flagship meetings of International Association for Statistics Education (IASE), organized every four years in different parts of the world. This year, ICOTS is held in Slovenia and is locally coordinated by Statistical Society of Slovenia. The conference will begin July 11, followed with five days of presentations, each starting with interesting plenary lectures given by Hans Rosling, Jessica Utts, Cliff Konold, Gerd Gigerenzer, and Anuska Ferligoj.

The international program committee is working on an attractive program with more than 350 invited papers, about 150 contributed papers, and 50 posters. Among the teachers workshops, the ASA will provide a Meeting Within Meeting workshop. For details and abstracts see the ICOTS web page, *http://ICOTS8.org.*

Slovenia is an interesting country to visit. Formerly part of Yugoslavia, it has been a sovereign country since 1991. It joined the European Union in 2004 and Euro zone in 2007. It is a small country of 20,000 square kilometers and about 2 million inhabitants. Slovenia and its capital city, Ljubljana (ICOTS host town), are known as among the safest places in the world. The native language is unique in the family of Slavic languages because it is spoken only by Slovenians. English is spoken by the majority of people, especially the young ones.

The landscape of Slovenia is very diverse: Due to the smallness of the country, you can be either between the mountain peaks or at the seaside within an hour or so. The most eastern part of the Alps, the so-called Julian Alps, made of white limestone, ends in the northwestern part of Slovenia. The highest peak, Triglav ("three heads"), was the inspiration for the ICOTS logo. The mountain chain, suitable for hiking, borders the northern part of the country.

In the heart of the country lies Ljubljana. The medieval city—guarded by a dragon—narrows between the castle hill and river. Now it is a pedestrian area, with the modern part emanating from there. The city was already there in Roman times, located on the crossing of roads connecting west and east, north and south. Many interesting cities—including Venice, Vienna, Salzburg, and Budapest—are only few hundred kilometers away.

You are warmly invited to attend ICOTS, not only to be part of an inspiring meeting but also to enjoy the relaxed atmosphere of evening gatherings in numerous cafés along the riverbank.

To learn more about Slovenia, visit the official web site, *www.slovenia.info*. For information about ICOTS–8, visit the conference web site, *http://icots8.org.* ■

Deming and Fisher Lecturers Announced

As the ASA membership gears up for JSM 2010, those planning to attend the annual meetings must decide which sessions to attend and which activities to undertake. There are several to choose from, but the keynote addresses are special. Each speaker was chosen specifically for his or her vast knowledge of statistics and dedicated work in the field. Here we introduce these speakers and hope you will consider attending their addresses.

James

Deming Lecturer

Brent C. James, MD, M.Stat.

"Better: Dr. Deming Consults on Quality for Sir William Osler"

Tuesday, August 3, 4 p.m.

Brent James is the chief quality officer and executive director of the Institute for Health Care Delivery Research at Intermountain Healthcare in Salt Lake City. He is known internationally for his work in clinical quality improvement, patient safety, and the infrastructure that underlies successful improvement efforts, such as culture change, data systems, payment methods, and management roles.

Through the Intermountain Advanced Training Program in Clinical Practice Improvement (ATP), he has trained more than 3,500 senior physician, nursing, and administrative executives, drawn from around the world, in clinical management methods, with proven improvement results (and more than 30 "daughter" training programs in six countries).

Before coming to Intermountain, James was an assistant professor in the department of biostatistics at the Harvard School of Public Health, providing statistical support for the Eastern Cooperative Oncology Group (ECOG); and he staffed the American College of Surgeons' Commission on Cancer.

He earned BS degrees in computer science (electrical engineering) and medical biology; an MD degree (with residency training in general surgery and oncology from the University of Utah); and a master of statistics degree.

A participating member of the National Academy of Science's Institute of Medicine, James also is a fellow of the American College of Physician Executives and has won numerous awards including the *Utah Business Magazine* "Health Care Heroes" Lifetime Achievement Award in 2009.

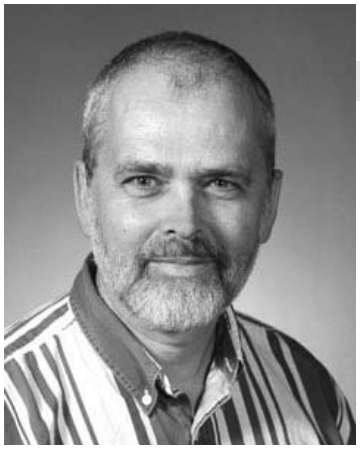
He serves on several nonprofit boards of trustees dedicated to clinical improvement.

Nomination Deadline

July 15 is the deadline date for nominations for the 2011 Deming Lecturer. The awardee will give the Deming Lecture (an invited paper) at the Joint Statistical Meetings and receive a $1,000 honorarium, an award plaque, and travel expenses.

The individual nominated should have either of two accomplishments: (1) made significant contributions in fields related to those in which W. Edwards Deming devoted his career, including survey sampling, statistics in the transportation industry, quality management, and quality improvement, or (2) made significant contributions through effective promotion of statistics and statistical thinking in business and industry.

Contact the committee chair, A. Blanton Godfrey, at *abgodfre@ncsu.edu* for questions. For information on the award visit the Deming Lecturer web site at *www.amstat.org/careers/demingleclureaward.cfm*. Nominations can be sent electronically to Pam Craven at *pamela@amstat.org* or by mail to the ASA office, attention: Award Nominations, 732 North Washington St., Alexandria, VA 22314–1943.



Lindsay

COPSS Fisher Lecture

Bruce Lindsay

"Likelihoods with Hidden Variables"

Wednesday, August 4, 4 p.m.

Hal S. Stern, Chair, COPSS Fisher Lecture Committee

The 2010 Council of Presidents of Statistical Societies (COPSS) has named Bruce Lindsay, Willaman Professor of Statistics at Pennsylvania State University, to deliver the Fisher Lecture at the Joint Statistical Meetings in Vancouver. Lindsay is a deserving awardee; as one of his supporters wrote, "Like Fisher himself, Bruce brings keen geometric insight to bear on problems of practical relevance." He is well known for developing statistical theory that serves as a basis for sound statistical practice.

Lindsay was born in Oregon and earned his bachelor's degree in mathematics at the University of Oregon in 1969. Following a stint in the U.S. Coast Guard, Lindsay completed his PhD in biomathematics at the University of Washington in 1978. Following a one-year postdoctoral appointment at Imperial College in London, he accepted an appointment in the department of statistics at Penn State. He has been there ever since; he was named a distinguished professor in 1991 and was named the Willaman Professor of Statistics in 2004.

Lindsay is a Fellow of the ASA and the Institute of Mathematical Statistics. He was previously recognized with the COPSS Snedecor Award in 1995–1996 for contributions to biometrics. He has more than 75 refereed publications in top statistics journals and has received continuous external support for his research from the National Science Foundation since 1980. He has served as the doctoral advisor for 26 PhD students, many of whom now serve as faculty members. Also, he has given distinguished lectures at numerous universities and conferences around the world.

There are numerous research contributions for which Lindsay is being recognized, almost all having to do with his body of work on likelihood-based inference. He has made a number of significant contributions to the study of mixture models. Mixture models are often used to represent a population as being comprised of a mixture of subpopulations. Lindsay has created a general geometric theory for the study of mixture models and a basic theory for nonparametric inference for such models. Mixture models are widely used in the social sciences and increasingly in bioinformatics and computational biology. Thus there is, in the Fisher tradition, a strong link to practical problems.

Lindsay also developed a key theory for addressing nuisance parameter bias, which has been used extensively in measurement error models. Measurement error models attempt to address the situation where we are unable to precisely measure a key variable, like food intake, that may be related to an outcome of interest, perhaps disease incidence. It is a challenging yet important problem to assess the impact of the variable while taking into account the variability associated with our measurement process.

A third significant contribution is Lindsay's development of the composite likelihood. Composite likelihoods are used in problems for which a complete joint distribution for all of the variables of interest cannot be obtained. The composite likelihood is a form of approximation, and Lindsay's theory helped develop some of the properties of the approximation. This work has had a significant impact on the development of spatial models, which are now prevalent in many domains of science.

Lindsay's varied contributions to statistical theory underlie important practical methods used for spatial models, measurement error models, and mixture models across a wide range of scientific domains. These contributions mark Lindsay as an innovator in the Fisher style and make him a worthy choice to deliver the lecture named in Fisher's honor. ■

Are You Seeking a Statistician?

Reserve an Executive Suite at the 2010 Joint Statistical Meetings and **let us help you!**

Contact Amy Farris at *amy@amstat.org* for more information.

Registration will remain open through July 13.

Onsite registration opens July 31.

Each Executive Suite employer receives:

A PRIVATE, FURNISHED BOOTH for your exclusive use throughout the meeting. Use it as an office, interview booth, or meeting space. It will give you the freedom to schedule interviews with potential employees whenever you like, without the need to reserve space on an hourly basis.

REGISTRATION FOR THE JSM PLACEMENT SERVICE, which includes up to 10 position listings. Also, up to five representatives and three guests from your organization will have access for conducting onsite interviews.

ONLINE ACCESS TO APPLICANT DATA AND RÉSUMÉS IN ADVANCE. Beginning June 1 and continuing through September 30, search our online service for qualified candidates based on specific criteria. Print résumés and pursue contacts before JSM starts, and continue to access this resource after the meeting for those last-minute openings.

AN ONSITE COMPUTER AND PRINTER IN YOUR SUITE. Eliminate waiting in line at the message center. Research and communicate with new applicants as they register.

JSM 2010 CANADA
Vancouver, British Columbia

SPECIAL RECOGNITION ONLINE AND ONSITE. Executive Suites are designated in the online listing of employers and noticed by candidates. Leave your prospective employees with a lasting impression of your company's commitment to hiring talented statisticians. You also will receive JSM Sponsorship Program credit for your purchase!

PERSONALIZED SERVICE from JSM Career Placement staff members, who will answer your questions and help with your interview traffic.

To reserve your Executive Suite, register online as soon as possible.
Executive Suites are limited and have sold out in each of the last four years!
www.amstat.org/meetings/jsm/2010/placement

ASA Meetings Survey Results

ASA Membership Surveys Committee

The Membership Surveys Committee has analyzed responses to the recent survey on ASA meetings. The goal of the survey was to identify potential areas of improvement that would yield more meaningful meetings experiences among the ASA membership and potential new members.

Survey questions explored the benefits of membership, the Joint Statistical Meetings, involvement in professional societies other than ASA, ASA-sponsored thematic meetings, chapter and regional meetings, and alternative technology modes—webinars, videoconferences, and Internet-based training. The target population was current ASA members as of July 2009, sampled with equal probability, for a total sample size of approximately 2,600 members. That is considerably larger than the typical sample size the group has used in the past.

This change is due in part to a falloff in response rates over the last five surveys (see Survey Activity at the end of this article), but also because we wanted to do more in-depth probing in this particular survey. The final data set consisted of 1,358 completed interviews, including partials, for an interview rate of 52.4%. Most of the analysis in this report was performed on 1,290 fully completed responses. We present our findings in sections devoted to the major themes of the survey.

Membership Benefits

We asked participants how they view five key membership benefits: professional identity; recognition and credentials; career networking and employment opportunities; statistical knowledge shared and gained through ASA conferences; statistical knowledge shared and gained through ASA workshops and trainings; and statistical knowledge shared and gained through ASA publications. Table 1 presents the proportion that rated each benefit as important or very important among the overall membership population and among the four largest employment categories.

Gaining knowledge via ASA publications was clearly the most popular benefit: 85.1% overall and over 82% across all major membership categories ranked this as important or very important. As might be expected, ASA conferences ranked a close second, rated by 75.8% of participating members as important or very important. A very high proportion of students (87.5%) considered networking and employment opportunities as an important/very important benefit, compared to only 59.6% academic statisticians (nonstudent) who thought similarly. ASA workshops and training came in with the lowest ranking, but this category still garnered the support of the majority (57%). It seems reasonable to conclude that the ASA should continue to provide all these benefits to its members but that the ASA may try to further enhance some of its services.

JSM Attendance

The survey results match ASA records on JSM attendance in the past three years (see Survey Activity). On average, about 25% of respondents attended any specific JSM held in the last five years. Slightly more than half (50.2%) attended at least one JSM in the last five years. Surprisingly, about 40% of non-U.S. respondents have attended at least

Table 1—Percentage of Survey Participants Who Rank the Membership Benefits as "Important" or "Very Important" (%)

	Professional Identity, Recognition, Credential	Networking/ Employment Opportunity	Knowledge Gain via Conferences	Knowledge Gain via Workshops/ Training	Knowledge Gain via Publications
Overall	65.2	67.6	75.8	57.0	85.1
University (nonstudent)	65.4	59.6	78.3	48.2	88.7
Industry/ Business	68.0	72.3	73.0	66.4	84.2
Government	65.3	68.7	79.0	60.7	82.4
Student	72.4	87.5	77.4	62.7	82.9

one JSM in the last five years. Younger members, particularly ASA members age 30 and under, had a much lower attendance rate, compared to their fellow ASA members.

For those who did not attend any JSM in the last five years, the most significant reason was "unable to take time away from work or school." However, many also stated "professionally, attending JSM was not a priority." For those who attended JSM, "overall length of the meetings" (i.e., four days of sessions) "and locations/cities where the meetings are held" are the highest-rated features.

ASA-Sponsored Thematic Meetings

The ASA sponsors and cosponsors thematic meetings on various statistical topics. We next probe participation and general interest in such thematic meetings among ASA members, and their opinion about the ASA's sponsoring more special topics thematic meeting and sponsoring non-U.S. meetings.

Participation in the past five years

This part focuses on the participation of respondents in 28 ASA-sponsored thematic meetings held during the past five years, starting from the May 2004 Spring Research Conference in Gaithersburg, Maryland, through the June 2009 Quality and Productivity Research Conference in Yorktown Heights, New York. Respondents were asked to indicate which ASA-sponsored thematic meeting they had attended. About 86.1% indicated that they have not attended any ASA sponsored thematic meeting during the past five years (Figure 1).

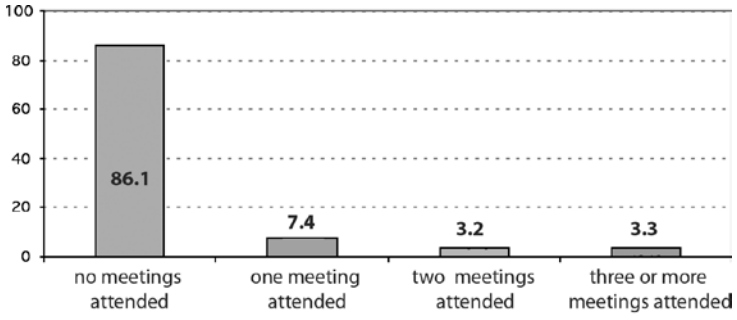


Figure 1. ASA-Sponsored Thematic Meetings Attended in the Last Five Years (%)

However, as indicated in Figure 2, almost 45% have attended at least one major meeting in statistics (not sponsored by ASA). Figure 3 indicates that a majority of these respondents are university affiliated and government affiliated (55.1% and 47.3% respectively) comparing to industry affiliated and students (40.8% and 29%, respectively).

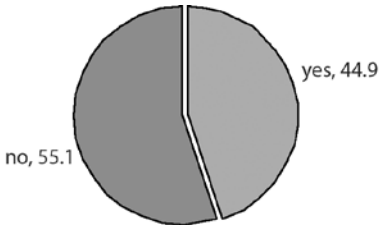


Figure 2. Attending any major meetings on statistics (Not sponsored by ASA; %)

In the past year have you attended any major meetings on statistics or statistical-related topics that were not sponsored by ASA?

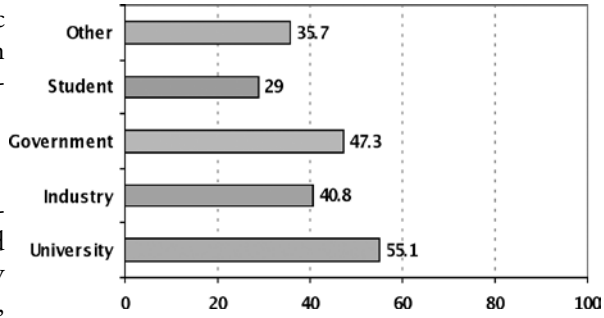


Figure 3. Attending any major meetings on statistics (Not sponsored by ASA) by affiliation (%)

Expansion on special topics of interest and outside the United States

In regard to expansion of ASA's sponsoring of thematic meetings on special topics of interest, almost 58% of the respondents agreed it would be a good idea (40.3% somewhat agree and 17.8% definitely agree). Also, regarding expansion to sponsor meetings outside the United States, almost 45% agree (27.1% somewhat agree and 17.5% definitely agree), as indicated in Table 2.

(1) Do you agree that ASA should expand its sponsorship of thematic meetings on special topics of interest?

(2) Almost all of ASA's meetings are held in the U.S. Do you agree that ASA should pursue opportunities to sponsor meetings outside the U.S., perhaps jointly with other statistical societies?

As indicated in Table 3, affiliation does not materially influence attitude toward the expansion of the ASA's efforts in sponsoring thematic meetings on special topics of interest. But in terms of expansion outside the United States, students and university affiliated members feel more strongly about it (Table 4).

Table 2—ASA Expansion on Special Topics of Interest and Outside the United States (%)

	Strongly Disagree	Somewhat Disagree	Neither	Somewhat Agree	Definitely Agree	Total
Expansion in Topics (1)	2.0	4.3	35.6	40.3	17.8	100.0
Expansion Outside the United States (2)	9.1	17.5	28.9	27.1	17.5	100.0

Table 3—ASA Expansion on Special Topics by Affiliation (%)

Occupation	Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Definitely Agree	Total
University	1.9	4.1	39.8	39.0	15.1	100.0
Industry	1.2	4.7	29.6	40.8	23.7	100.0
Government	2.0	4.1	34.0	42.9	17.0	100.0
Student	2.7	4.1	32.7	44.2	16.3	100.0
Other	2.3	4.6	37.9	37.9	17.2	100.0

Table 4—ASA Expansion Outside the United States (%)

Occupation	Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Definitely Agree	Total
University	6.2	17.2	26.7	27.7	22.2	100.0
Industry	10.9	19.0	31.2	24.9	14.0	100.0
Government	15.0	21.8	29.3	23.8	10.2	100.0
Student	7.5	11.0	24.7	36.3	20.5	100.0
Others	9.7	17.1	33.7	24.6	14.9	100.0

Membership Benefits

The membership benefit most often identified as important or very important (84% of respondents) is statistical knowledge gained through ASA publications. Knowledge shared through conferences was also important or very important to most respondents (76%). Professional identity and networking were important or very important to about 67% of respondents. Knowledge shared through workshops was considered important or very important to 56% of respondents.

More than two-thirds of respondents report belonging to other major professional associations. Of those, 17% reported their primary involvement was with the ASA, whereas 36% reported being involved in the ASA and other organizations. Almost half (48%) reported that they are primarily involved with another organization or that they are not involved in any of the associations to which they belong (i.e., they're not really involved with the ASA, despite being members).

Involvement varied significantly by location with those outside the United States being less likely to be primarily involved with the ASA (19% for U.S., 6% non-U.S.). There were no significant differences by gender, but the age of the respondent plays a big role. Those born after 1979 (respondents under 30) are much less likely to be involved in any association to which they belong (43% compared to overall 23%). Age of respondent was more related to this response than years of membership in the ASA, though these two variables are likely to be strongly correlated. This finding represents a potential focus of further research—the future of the ASA depends on its ability to attract and retain student and early career statisticians or practitioners.

Chapter and Regional Meetings

ASA extends its membership reach through chapter and regional activities. Approximately 68% of respondents believe they have a chapter in their area of residence (~20% don't know—suggesting an awareness campaign might be worthwhile), and about 73% of these are members of their local chapter, and more respondents are male (75%) than female (68%), and they tend to be longer-term members. Despite being chapter members, most (56%) do not participate regularly in chapter

activities, not because chapters are poorly organized but rather because either the location or time are inconvenient or the activities are not interesting to them. Among the most important reasons for participation in chapters are social networking, educational and professional development, and acquiring or sharing knowledge.

As for regional meetings, roughly 62% of respondents do not regularly participate in activities in their geographic area, with a sizable proportion (31%) unaware of regional events (again, suggesting either promoting more activities or awareness or incentive campaigns when in fact regional activities are offered). Almost 53% probably or definitely would attend conferences, workshops, or training opportunities in their region, and 65% think the ASA should do more to promote these types of events.

Webinars, Videoconferences, and Internet

We focus next on alternative media activities supported by ASA: webinars, videoconferences, and Internet-based training.

Participation

Respondents were asked whether they have participated in any webinar, videoconference, or Internet-based training on a statistically-related topic in the past 12 months. Among these modes, webinars were the most often attended, albeit by only 30.6%, while videoconferences and Internet-based training were attended by 11.5% and 13%, respectively.

Webinar participation by age revealed significant variation (Table 5): Younger and older responders do not appear to participate as much as other age groups. Creating content that would entice the younger ASA members would perhaps prove fruitful. Participation in videoconferences and Internet-based training across age groups did not significantly vary.

Table 5—Participation in ASA Webinars, Video-Conferences, and Internet-Based Training (%)

Date of Birth	Webinar	Video-conference	Internet-based Training
Total	30.6	11.5	13.0
1980 and after	18.4	4.4	9.6
1970–1979	27.2	11.5	12.7
1960–1969	38.4	12.5	14.3
1950–1959	35.8	11.6	14.5
before 1950	26.7	14.1	12.1

Participation variations across gender and across geography were also not statistically significant, with the exception of webinars, which appear to be more popular in the United States (33.5%) versus non-U.S. (10.6%).

Organizers

Organizers of webinars, videoconferences, and Internet-based training vary across events sponsored by the ASA. Respondents who participated in any of the three activities were asked whether the organizer was university or college faculty member, employer, professional organization, ASA national office or local chapter, commercial organization (not employer), or other. Most webinar organizers were commercial organizations (not employers; 35.2%), followed by employers (29.6%). As for videoconference organizers, employers ranked highest (45.3%), followed by universities or college faculty members (29.7%). For Internet-based training, organizers were employers (33.3%), commercial organizations (29.2%), and universities or college faculty members (28.6%), in rank order (Figure 4).

Ratings

We next asked questions about some types of technology-based meetings or training as well as their use of technology in some activities generally. Respondents were asked to rate different kinds of technology-based meetings or training. More than 80% of the respondents indicated that short seminars by experts on specific statistical topics are valuable or very valuable. Also, almost 80% of the respondents indicated one-day workshops on statistical topics are valuable or very valuable. According to the rating of the self-paced, web-based trainings, ~61% of the respondents indicated that self-paced web-based trainings are valuable or very valuable (Figure 6).

Respondents were then asked if they were willing to attend more web-based seminars, workshops, and training modules or short courses on specific statistical topics. Also, they were asked if they were willing to attend more self-paced, web-based trainings. As indicated in Figure 5, about 38% of the respondents probably would attend more self-paced, web-based seminars, workshops, and training modules or short courses on specific statistical topics (if offered by the ASA), while 11.2% of the respondents indicated that they would definitely attend. About 45.4% of the respondents would probably attend more web-based seminars, while 11.4% of the respondents indicated that they would definitely attend. Generally, 50% to 60% of ASA members would be interested in more of this type of education format.

Making conference presentations available via webcast had a very positive response. As indicated

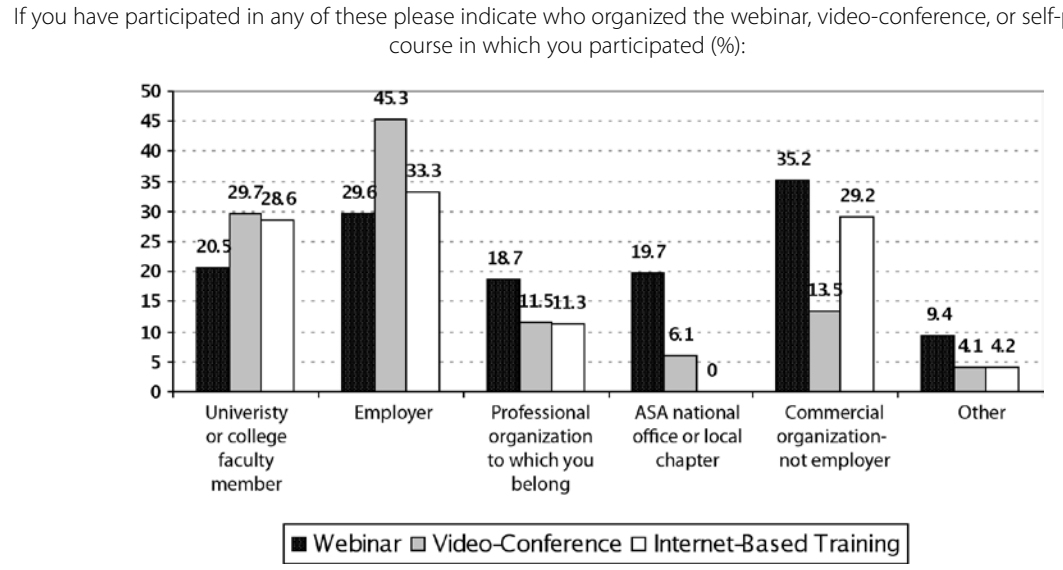


Figure 4. Organizers of webinars, video–conferences and Internet based training

Table 6—Respondents' Rating of Technology-Based Meetings or Training (%)

	Not at All Valuable	Not Valuable	Neither Valuable Nor Not Valuable	Valuable	Very Valuable	Total
Short Seminars by Experts on Specific Statistical Topics	1.3	3.0	13.8	46.6	35.3	100.0
One-Day Workshops on Statistical Topics	2.0	2.5	15.9	47.5	32.1	100.0
Self-Paced Web-Based Training	3.3	7.0	28.5	38.0	23.3	100.0

in Figure 6, about 75% indicated that it would be valuable (25.8% very valuable and 48.6% valuable) if selected JSM paper presentations were made available on demand via webcast after the conference. A consistent finding applies for presentations given at topical and thematic meetings (table not included).

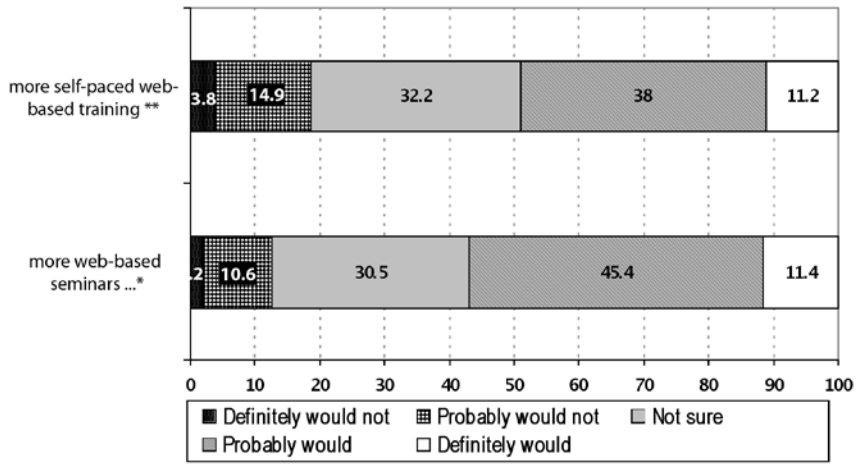


Figure 5. Respondents' willingness to attend more web–based activities

**If ASA were to offer more web-based seminars, workshops, and training modules or short courses on specific statistical topics, how likely would you be to attend?*

***If ASA were to offer more self–paced web–based training how likely would you be to participate?*

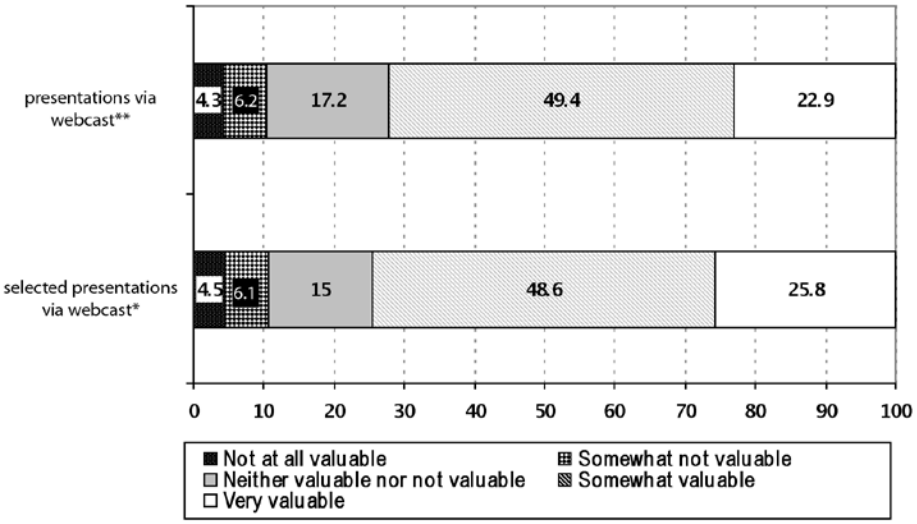


Figure 6. Offering presentations via webcast after JSM

**How valuable would it be to you if selected JSM paper presentations were made available on demand via webcast after the conference?*

***How valuable would it be to you if selected presentations from ASA-sponsored topical and regional meetings were made available on demand via webcast after the conference?*

Summary

The key conclusions from the analysis of data from the 2009 meetings survey follow.

Membership benefits

Gaining knowledge via ASA publications and conferences represents the most important benefit. Students use the ASA to network for career enhancement.

JSM

About 25% of ASA members attend any given JSM, but over a five-year period JSM attracts over 50% of ASA membership. When members can break away from work duties and/or professionally justify attending JSM, the length and location of the meetings are attractive.

ASA-sponsored thematic meetings

About 86% of the respondents indicated that they have not attended any ASA-sponsored thematic meeting during the past five years, while almost 45% have attended at least one major meeting in statistics not sponsored by the ASA, driven chiefly by university- and government-affiliated members. Most respondents (58%) feel that the ASA should expand its thematic and special interest meetings generally, while students and university-affiliated members feel more strongly about expansion outside the United States.

Chapter and regional meetings

While 68% of respondents think they have local chapters in their area, 73% of those who can be chapter members actually are, and only 56% of these are regularly active. Most members (62%) do not participate in regional meetings, but roughly as many (65%) think ASA should sponsor more such activities.

Webinars, video-conferences, and Internet

Participation. Webinars were the most often attended, albeit by ~31%, while videoconferences and Internet -based training were attended by ~25% combined. Younger and older members tend to participate less in webinars, which are more popular in the United States than outside.

Organization. Employers tend to organize videoconferences and Internet-based training, while non-employer commercial enterprises tend to organize webinars.

Ratings. About 80% of respondents indicated that short seminars and one-day workshops by experts on specific statistical topics are valuable or very valuable. Almost 61% indicated that self-paced, web-based trainings are valuable or very valuable. Generally, 50% to 60% of ASA members would be interested in more of this type of education format. Making JSM conference presentations available via webcast had a very positive response: About 75% felt that it would be valuable or very valuable. A similar finding was observed regarding presentations given at topical and thematic meetings.

Survey Activity

Here is a brief summary of survey activity overseen by the Membership Surveys Committee, as previously reported in *Amstat News*.

To assess the validity of the survey, we performed additional analysis as outlined below:

Recent Membership Surveys Committee Surveys

Survey/Cohort	Date	Response Rate	Conclusions
Recent Members, <= 5 years	April, May 2005	*n* = 611 (61%)	1. ASA awareness in college 2. Pubs and networking reasons to join 3. Most would renew; cost / bene reason for not 4. Few use chapters / sections
Career Track, 6–15 years	August 2005	*n* = 580 (57%)	1. Fewer Asian than among recent members 2. More satisfied & more likely to renew than recent members
Long Term, 16+ years	December 2005	*N* = 588 (58%)	1. Older, male, PhDs 2. Very satisfied with ASA—will renew 3. Only 0 or 1 JSM in last 5 years 4. Generally don't favor certification 5. Want to maintain expertise via journals 6. Aren't involved locally (chapter, section)
International Members	June 2006	*n* = 1088 (57%)	1. Chiefly EU, Canada, Asia 2. Mostly PhDs 3. ASA not primary professional organization, but very satisfied
ASA Journals	August 2008	*n* = 480 (39%)	1. Targeted members & non-members 2. 66% male, 63% PhDs 3. Trending more female and fewer PhDs 4. *JASA* & *TAS* are favorites, but don't read 100% 5. Online important to membership decision 6. 50% like both print and online 7. Desire more web-based, interactive data and graphics

Measurement Analysis. We compared meetings survey responses with answers received from other vehicles with exactly the same questions. Attendance at 2006–2008 JSM measured in post-JSM surveys was in close agreement with the meetings survey. Chapter membership, recorded in the ASA database, seems to differ from responders' answers, perhaps owing to somewhat decentralized nature of how chapter membership is obtained.

Nonresponse Analysis. We attempted to discern any patterns among key demographic information to explain nonresponse. At a high level, it appears that a greater incidence of nonresponse can be associated with members with any of the following attributes: a student or respondent whose highest degree is a bachelor's degree, Asian, recent members, not a chapter member, or has not recently attended JSM. Interestingly, Biopharmaceutical and Survey Research section members also tend to nonrespond more than average.

Imputation of Nonresponse. Where trustworthy data were available to impute answers in cases of nonresponse, we attempted to do so. This applied chiefly to JSM attendance 2006–2009. Nonresponse in prior periods (2004–2005) was considered nonattendance. ■

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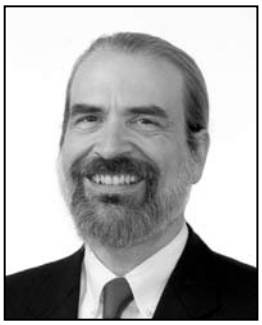
Reviewing Results from the 2009 JSM Presenter Satisfaction Survey

Dave Judkins, 2011 JSM Program Chair



Judkins

Following the 2009 Joint Statistical Meetings last summer, a new set of surveys was sent out to presenters. They were all on the subject of satisfaction with the presentation experience but had tailored questions for the various session types and presenter roles. Note that this survey was in addition to the standard satisfaction survey that is sent out to registered attendees of the JSM. That survey focuses on the satisfaction of the audience. The new survey focuses on the satisfaction of the person on the other side of the podium.

One thing ASA staff have impressed on the Committee on Meetings is the pressure placed on the entire convention planning process by the very high ratio of lecture-style presentations to total attendance. Other societies have an easier time with convention facilities because they have a lower value of this ratio—either because more of the presentations are poster presentations, which require far less floor space per presenter, or because more of the attendees do not make any presentation. If we were able to somehow reduce our value of this ratio, we would have several benefits:

More options for convention centers with adequate capacity

Lower cost at the JSM since less overall floor space would be required

Choice of a personalized program to attend, which would not be as intimidating a task for participants

Reduced walking distance between halls

Given these considerations, the new survey was launched for two reasons: to better understand the reasons why presenters prefer to give lecture-style presentations and to explore what their reactions might be to changes in convention organization rules.

The new survey also includes speaker estimates of audience size. These were collected in the hope that they would help mitigate the perennial problem of mismatched room capacity and audience draw. Every year, complaints about mismatches are the most commonly heard complaint, but it turns out to be very difficult to project audience draw. Past attempts to use chair reports of audience draw to improve the allocation of rooms to sessions have been only marginally successful. It was hoped that a new source of measurements might lead to improved allocations.

The response rate was 43%. Although I would consider this low for a survey on some question of economic suffering, it seems perfectly adequate to me as a tool for improving the satisfaction of JSM presenters. The squeaky wheel does get the grease.

Let me also add a belated note of sympathy to the Census Bureau report writers whom I used to torture as part of the mandatory statistical review of bureau reports in my younger days. I now feel their pain more distinctly. It is not easy to satisfy a panel of statisticians. The broad outline of the results seems fairly obvious when one inspects the tables even without any quantification of uncertainty. Inevitably, however, in the course of preparing a large number of even moderately complex tables and discussing what seem to be interesting points from them, one is confronted by the fact that satisfying the strictures of best statistical practice is not easy. Sparse tables invalidate asymptotic chi-square tests of independence. The use of exact tests is bedeviled by the question of whether to condition on the margins. Pair-wise *t*-tests invite a profusion of false positive findings. Bayesian procedures are attractive but my priors are different from someone else's, and this turns out to matter. Maybe, though, since the primary audience for this article is other statisticians, we can present the raw numbers for the most part and trust that you, the reader, will apply your favorite hypothesis test or shrinkage procedure with posterior Bayes estimates.

Table 1—Satisfaction by Session Type and Presenter Role

Satisfaction (Interest in future presentations in same role and session type)	**Session Type**					
	Invited or topic-contributed presenter (%)	**Panelist (%)**	**Discussant (%)**	**Regular (%)**	**Poster (%)**	**Total (%)**
I was very dissatisfied and will not do it again	2	2	8	2	9	3
I was satisfied enough that I might try it again	40	43	50	57	66	52
I was so satisfied that I am very likely to give future presentations in this format	59	55	42	41	25	45
Total	100	100	100	100	100	100
Sample size	412	51	38	516	204	1,221
p-value for chi-square test of independence (some cells fall below *n*=5)						<0.0001

Satisfaction Across Presentation Formats and Presenter Roles

Table 1 shows how presenter satisfaction varies across session types and speaker roles. Few presenters were so dissatisfied with the experience that they would never repeat it, but this feeling is most common among discussants and poster presenters: 8% of discussants and 9% of poster presenters were very dissatisfied with the experience.

In general, satisfaction was high. Overall, 45% said they were very satisfied with the session type and role. Strong satisfaction was most common among presenters at invited and topic-contributed (TC) sessions (other than the discussants). Only 25% of poster presenters were so satisfied with the experience that they are very likely to give future poster presentations. Obviously, this does not bode well for efforts to boost voluntary choice of the poster presentation format unless the poster experience is somehow improved.

Although the results about strong satisfaction seem clear enough, the results about strong dissatisfaction are in the ticklish zone of rare outcomes observed on modest sample sizes. For example, even for the large columns of invited/TC papers and poster presentations, the question arises of whether strong dissatisfaction is more common among the latter than the former. Our colleague Sujit Ghosh from North Carolina State University was inspired by this table to conduct a fully hierarchical Bayesian analysis with vague priors. It looks like a great example of what I have seen Andrew Gelman urging at meetings of advisory panels to the Institute of Education Sciences. Ghosh's graph is shown in Figure 1. From this, we see clearly that:

> Session type 1 presenters (invited and topic contributed) have higher levels of strong satisfaction and lower levels of indifferent satisfaction than the other groups. (The middle level of the three-level satisfaction scale: satisfied enough that he/she might try giving future presentations of this type again. Refers in the figure to points with a 2 in the second position.)
>
> Session type 4 presenters (regular contributed) have lower levels of strong satisfaction and higher levels of indifferent satisfaction than the other groups.
>
> Session type 5 presenters (poster) have much lower levels of strong satisfaction and much higher levels of indifferent satisfaction than the other groups.
>
> The satisfaction of type 2 and type 3 presenters is the most uncertain, with wide error bands.
>
> Strong dissatisfaction is rare.

What is less clear to the eye from the figure is whether strong dissatisfaction among poster presenters is really stronger than in other groups. The shrinkage procedure has brought the levels closer together across session types, and the error bands seem fairly wide. However, in a supplemental communication, Ghosh reports the posterior probability of p[5,1]>p[1,1] is virtually one (to be more exact it is 0.9946), so I think we can conclude with fair certainty that we need to somehow improve the poster presentation experience if we are to succeed in persuading more people to convert to posters.

Table 2 shows how satisfaction varies by experience. Repeat presenters are much more likely to present very strong satisfaction than first-time presenters. No doubt, repeat presenters who were not

pleased with their first experience screened themselves out from repeat experiences. Perhaps this indicates that we need to give a better idea to first-time presenters of what to expect from the experience. Table 3 contrasts the distributions of presentation types across first-time and repeat presenters. Repeat presenters are much more likely to be giving invited and topic-contributed talks and much less likely to be giving regular contributed talks or to be presenting posters.

Table 4 shows the link between audience size and satisfaction among all presenters except poster presenters. Not surprisingly, those with larger audiences tend to be more satisfied, but there seemed to be a point of diminishing returns. For those with more than 100 listeners, satisfaction seems to decline slightly. One of those with more than100 speakers even reported sharp dissatisfaction with the experience.

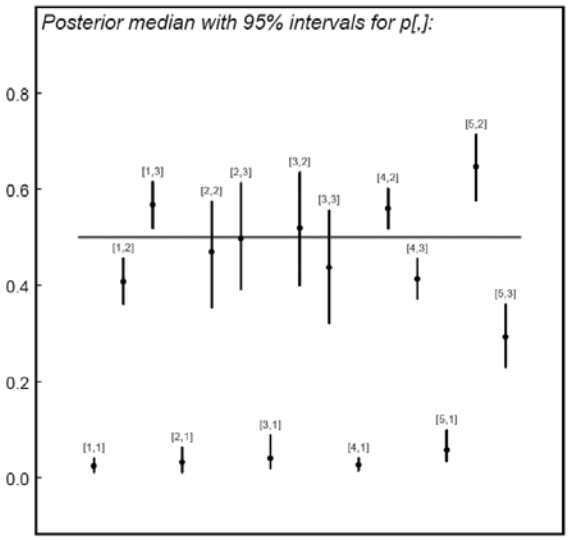


Figure 1. Presenter satisfaction by presentation type. (Presentation types 1 through 5 correspond to the columns of Table 1, respectively, and are the first number in each set of square brackets. The second number in each set of square brackets refers to the rows of Table 1, respectively.)

Table 2—Satisfaction by Prior Presentation at JSM

Satisfaction (Interest in future presentations in same role and session type)	**Was this your first presentation at the Joint Statistical Meetings?**		
	Yes (%)	**No (%)**	**Total (%)**
I was very dissatisfied and will not do it again	3	3	3
I was satisfied enough that I might try it again	65	45	52
I was so satisfied that I am very likely to give future presentations in this format	32	51	45
Total	100	100	100
Sample size	402	814	1216
p-value for chi-square test of independence			<.0001

Table 3—Session Type by Prior Presentation at JSM

Session type **Frequency** **Percent** **Row pct** **Col pct**	**Was this your first presentation at the Joint Statistical Meetings?**		
	Yes (%)	**No (%)**	**Total (%)**
Invited or topic-contributed presenter	26	38	34
Panelist	1	6	4
Discussant	2	4	3
Regular	47	40	42
Poster	24	13	17
Total	100	100	100
p-value for chi-square test of independence			<0.0001

Table 4—Table of Satisfaction by Audience for Lecture Style Presentations (all except posters)

Satisfaction (Interest in future presentations in same role and session type)	**Audience** (Audience reported by speaker)						
	<10 (%)	**10-19 (%)**	**20-49 (%)**	**50-99 (%)**	**100-199 (%)**	**200+ (%)**	**Total (%)**
I was very dissatisfied and will not do it again	9	3	1	3	0	9	2
I was satisfied enough that I might try it again	73	61	46	34	41	64	49
I was so satisfied that I am very likely to give future presentations in this format	18	37	53	63	59	27	49
Total	100	100	100	100	100	100	100
Sample size	33	290	453	182	44	11	1015
p-value for chi-square test of independence (some cells fall below *n*=5)							<0.0001

Table 5—Satisfaction of Poster Presenters by Poster Visitor Size

Satisfaction (Interest in future presentations in same role and session type)	**How many people stopped to talk with you about your poster?**						
	0 (%)	**1 (%)**	**2 (%)**	**3 (%)**	**4 (%)**	**5+ (%)**	**Total (%)**
I was very dissatisfied and will not do it again	0	25	25	25	13	7	9
I was satisfied enough that I might try it again	100	50	50	67	73	65	66
I was so satisfied that I am very likely to give future presentations in this format	0	25	25	8	13	28	25
Total	100	100	100	100	100	100	100
Sample size	1	4	4	12	15	168	204
p-value for chi-square test of independence (some cells fall below *n*=5)							0.367

Table 6—Satisfaction of Poster Presenters by Reason for Giving Poster Presentation

Satisfaction (Interest in future presentations in same role and session type)	**How did they happen to give poster?**			
	Preferred (%)	**Consented (%)**	**Forced (%)**	**Total (%)**
I was very dissatisfied and will not do it again	4	16	22	9
I was satisfied enough that I might try it again	64	61	70	65
I was so satisfied that I am very likely to give future presentations in this format	31	23	7	27
Total	100	100	100	100
Sample size	137	31	27	195
p-value for chi-square test of independence (some cells fall below *n*=5)				0.003

Table 5 presents related results for poster presenters. Note in this table most of the sample size was in the top category, so it might be hard to see a clear pattern between satisfaction and audience size. On the whole, poster presenters were less satisfied than lecturers. However, poster presenters were more satisfied than lecturers with audiences under 10. This was not rare. Thirty-three lecturers reported small audiences.

Table 6 shows how satisfaction of poster presenters varied by their reasons for giving a poster presentation. Among those who prefer to give posters, satisfaction was reasonably high. It was still lower than class of lecturer (Table 1), but it was higher than for lecturers with small audiences (Table 4). Satisfaction was lower for those asked to switch to a poster presentation and much lower for those forced to switch. Table 7 shows how satisfaction of presenters of regular contributed papers varied by perceived session coherence.

Although satisfaction declined sharply for those in incoherent sessions, it was still higher than for poster presenters who had wanted to give regular contributed papers. This would seem to argue against the practice of encouraging owners of "orphan abstracts" (those that do not fit well into any session with open slots) to switch over to a poster-style presentation. Presenters with topics of limited interest to JSM attendees are likely to be dissatisfied whether giving a lecture or presenting a poster.

Switching gears, Table 8 addresses the importance of having disciplined chairs. The majority of our chairs

Table 7—Satisfaction Among Presenters of Regular Contributed Papers by Perceived Coherence of Session

Satisfaction (Interest in future presentations in same role and session type)	**Did you feel that you were in a coherently-organized session?**		
	Yes (%)	**No (%)**	**Total (%)**
I was very dissatisfied and will not do it again	0	6	2
I was satisfied enough that I might try it again	50	69	57
I was so satisfied that I am very likely to give future presentations in this format	50	25	41
Total	100	100	100
Sample size	341	173	514
p-value for chi-square test of independence (some cells fall below *n*=5)			<0.0001

Table 8—Satisfaction of Lecturers by Schedule Adherence

Satisfaction (Interest in future presentations in same role and session type)	**Did your presentation start early, on time, or late?**			
	I started early (%)	**I started on time (%)**	**I started late (%)**	**Total (%)**
I was very dissatisfied and will not do it again	3	2	2	2
I was satisfied enough that I might try it again	58	48	67	49
I was so satisfied that I am very likely to give future presentations in this format	39	50	31	49
Total	100	100	100	100
Sample size	31	884	48	963
p-value for chi-square test of independence (some cells fall below *n*=5)				0.100

Table 9—Satisfaction by Feeling about Replacing Regular Contributed Sessions with Poster Sessions

Satisfaction (Interest in future presentations in same role and session type)	**If regular contributed sessions were replaced by poster sessions, and the only oral presentations were in invited or topics contributed sessions, would that make you less likely to attend future JSMs?**		
	Yes (%)	**No (%)**	**Sample Size**
I was very dissatisfied and will not do it again (%)	27	73	11
I was satisfied enough that I might try it again (%)	66	34	288
I was so satisfied that I am very likely to give future presentations in this format (%)	76	24	212
Total	69	31	511
p-value for chi-square test of independence (some cells fall below *n*=5)			0.0005

keep their sessions running smoothly, but when this does not happen, satisfaction is impinged. Speakers do not appreciate starting early or late.

Regarding the possibility of abolishing regular contributed sessions, this was a very unpopular idea among presenters of papers in these sessions (Table 9). Sixty-nine percent of them said that it would make them less likely to attend future JSMs. These feelings were more pronounced among those who were more satisfied with the experience of presenting such papers. Among the most satisfied group, 76% object to the possible abolishment. Even among those so unsatisfied with the experience that they will not give another regular contributed talk, 27% still object to the possible abolition of such talks.

Audience Size Projection

We have not finished analyzing the data. We would like to try to model speaker-reported audience size in terms of keywords. We identified certain speakers who attracted large audiences and will try to find ways to accommodate them better in future, but the topic may be as important as the speaker. Furthermore, although speakers vary from year to year, many of the same topics reappear year after year. Nonetheless, we do have some interesting findings about audiences.

The obvious

More prestigious session formats attract larger audiences. Table 10 shows how audience size var-

Table 10—Audience by Type

Audience (Audience Reported by Speaker)	**Session Type**				
Frequency **Percent** **Row Pct** **Col Pct**	**Invited or topic-contributed presenter (%)**	**Panelist (%)**	**Discussant (%)**	**Regular (%)**	**Total (%)**
<10	2	0	3	4	3
10–19	17	20	13	39	28
20–49	47	43	40	43	44
50–99	24	27	28	11	18
100–199	7	6	8	2	5
200+	1	4	5	0	1
Total	100	100	100	100	100
Sample size	418	51	40	528	1037

Table 11—Presenter and Chair Reports of Hall Adequacy (presenter counts)

Presenter: Were there enough seats for the audience or did people have to stand or get turned away?	**Chair: Were there enough seats available?**		
	Yes	**No**	**Total**
More seats available than needed	178	2	180
Enough seats available	156	15	171
There were not enough seats for attendees	39	27	66
Total	373	44	417
p-value for chi-square test of independence (some cells fall below *n*=5)			<0.0001

ies by session type for lecture-style presentations. Presenters, panelists, and discussants in invited and topic-contributed sessions were twice as likely to report audiences of 50 or more than were presenters of regular contributed papers. Having a prestigious session is no guarantee of a large audience. Ten of these presenters reported audiences of fewer than 10 people. Conversely, regular contributed papers sometimes pull in large audiences. However, being in a prestigious session roughly increases your audience by two-thirds.

Measurement difficulties

Chairs and presenters have widely varying estimates of audience size. The gamma association measure between them is 0.56, and the Pearson's correlation between chair estimates and the midpoints of the presenter interval estimates is 0.58. They vary more at the small end than at the large end. Where speakers saw an audience under 10, chairs saw an average audience of 34 with a minimum of five and a maximum of 110.

It is difficult to imagine how these estimates vary so widely. It seems theoretically possible that everyone deserts the room after a popular speaker, leaving the last speaker or discussant with a tiny audience, but I do not believe I have ever seen such a thing happen. When I ran a multilevel model on presenter estimates of audience size with session as a random effect, I got an intraclass correlation of 0.46. So presenters do indicate substantial variation in audience within a session, but it still seems hard to reconcile the presenter and chair estimates.

Table 11 shows that they do not even agree about when the room is filled beyond capacity. Presenters identified 66 overfill situations. Chairs identified just 44. The two agreed on just 27. If chairs and presenters disagree, should we bring in a third party to measure audience size? Perhaps we could have a network of graduate students tasked with measuring attendance. If we can't get good measures of audience size, it seems unlikely that we will ever develop good models of audience size that could lead to less unhappiness about room-size assignment.

These tables indicate that presenters at JSM are generally well satisfied with the presentation experience. Those in more prestigious session types are more satisfied, as are those with prior presentation experience, those with audiences in the range of 20 to 200, those in coherent sessions, and those with good chairs. Poster presenters are less satisfied: even those with good audiences and who prefer giving posters. It is clear the regular contributed session has a loyal following. It is hard to see how the session type could be eliminated without seeing JSM attendance drop by hundreds. There are, however, many regular contributed sessions with very small audiences. Perhaps to save convention space, we could restrict regular contributed sessions to rooms with a capacity of 50. ■

Statistics Workshop for Math and Science Teachers Goes International

Katherine Halvorsen, MWM Program Chair, and Rebecca Nichols, ASA K-16 Education Manager

The ASA is accepting registrations for its fourth annual statistics workshop for mathematics and science teachers. Titled "Meeting Within a Meeting" (MWM), the program was developed to help teachers, many of whom have little or no formal statistics training, meet current mathematics and science standards for teaching statistics. The conference will be held August 4–5 with the 2010 Joint Statistical Meetings in Vancouver, Canada, with a satellite workshop in conjunction with ICOTS in Ljubljana, Slovenia.

"One of the primary missions of the ASA is to work for the improvement of statistical education at all levels," said Ron Wasserstein, executive director. "We are pleased to reach out to the K–12 mathematics and science community through the MWM workshop and follow-up activities. It is fitting to hold this workshop for math and science teachers in conjunction with the Joint Statistical Meetings, the largest annual gathering of statisticians, where thousands from around the world meet to share advances in statistical knowledge.

"MWM will not only enhance understanding and teaching of statistics concepts in the classroom, but also provide participants with a network of statisticians and educators to assist in developing the quantitative literacy of their students," he added.

The first MWM workshop, held in Salt Lake City, in 2007, focused on middle-school math and science teachers. The success of MWM 2007 led Martha Aliaga, ASA director of education, to recommend expanding the Denver MWM workshop in 2008 to a two-day format to include separate strands for K–4, 5–8, and 9–12 teachers. MWM 2009 in Washington, DC, included parallel strands for K–4, 5–8, and 9–12 teachers on the first day with a field trip to the U.S. Census Bureau on the second day. Local DC Metro area teachers, along with teachers from around the United States, attended interactive sessions with prominent statistics educators. The Census Bureau visit included interactive presentations and activities organized by Renée Jefferson-Copeland, chief of the Census in Schools Branch of the U.S. Census Bureau. The 2009 workshop participants are participating in MWM follow-up activities, including webinars archived at *www.amstat.org/education/k12webinars.*

The MWM 2010 workshop will include workshop sessions on Wednesday, August 4, for U.S. and Canadian middle- and high-school mathematics and science teachers, with JSM statistics education sessions on Thursday, August 5, and follow-up activities throughout the 2010–2011 school year.

Members of the K-12 mathematics and science community participate in the Meeting Within a Meeting workshop during the 2009 Joint Statistical Meetings in Washington, DC.

The primary goal of the 2010 MWM program is to provide an opportunity for U.S. and Canadian mathematics and science teachers to discuss and apply the statistical concepts and data analysis tools described in the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report: A Pre-K–12 Curriculum Framework* (*www.amstat.org/education/gaise*) and the Western and Northern Canadian Protocol (WNCP) Curriculum. The ASA's MWM program is designed to enhance educators' understanding of statistics and provide them with hands-on activities they can use in their own classrooms to strengthen the teaching of statistics in their schools. Content is consistent with the Common Core standards and National Council of Teachers of Mathematics (NCTM) standards.

"Teachers will explore problems that require them to formulate questions; collect, organize, analyze, and draw conclusions from data; and apply the basic concepts of probability. The MWM program will include examining what students can be

The International Conference on Teaching Statistics (ICOTS) will be held in Ljubljana, Slovenia, July 11–16. Meeting Within a Meeting workshop presenters will be in Slovenia for ICOTS and have kindly agreed to present a condensed MWM statistics workshop for local Slovenian middle school teachers. MWM Program Chair Katherine Halvorsen is arranging the program, and ASA Director of Education Martha Aliaga is working with her colleague in Slovenia on local workshop logistics. We are excited that the MWM statistics workshop for mathematics and science teachers will go international to both Slovenia and Canada this year to enhance statistics education among Slovenian, Canadian, and U.S. teachers. For more on Slovenia see page 35 in this issue.

expected to do at the most basic level of understanding and what can be expected of them as their skill level develops and their experience broadens," said Katherine Halvorsen, chair of the MWM Program Committee. The workshops give teachers the opportunity to discuss and apply the statistical concepts embodied in their state/province mathematics and science standards in the context of the instructional recommendations of GAISE. We are fortunate to have GAISE Pre-K–12 Report authors and prominent statistics educators presenting the MWM workshop sessions. We appreciate their excellent work in statistics education and service to the profession.

The registration fee is $35, which includes materials and refreshments. U.S. attendees from outside the Vancouver area may receive a set reimbursement for lodging expenses for a two-night stay. Teachers will also receive a complimentary one-day pass to attend statistics education sessions at JSM on Thursday, such as the session "Initiatives to Create Guidelines for Statistics Education to Prepare Future Generations to Function Effectively in a Data-Centric World: A Progress Report," which was organized by the ASA/NCTM Joint Committee on Curriculum in Statistics and Probability.

Do you know any mathematics or science teachers who might be interested in enhancing their understanding and teaching of statistics? If so, encourage them to attend Meeting Within a Meeting this August in Vancouver. More information, including the program and online registration, is available at *www.amstat.org/education/mwm*. Teachers wishing to attend the conference can register online by clicking on the MWM Registration tab at the top of the screen. Registration will continue until the course is filled. Space is limited, so interested teachers are recommended to register as soon as possible.

For questions regarding the MWM workshop, please contact Rebecca Nichols, K–16 education manager, at *rebecca@amstat.org,* or call (703) 684-1221, ext. 1877. ■

Meeting Within a Meeting (MWM)
Statistics Workshop for Mathematics and Science Teachers

(*www.amstat.org/education/mwm*)

Sponsored by the American Statistical Association (ASA) and the Statistical Society of Canada (SSC)
2010 Joint Statistical Meetings (JSM)*

★ ★ ★

Based on the *Guidelines for Assessment and Instruction of Statistics Education (GAISE) Report: A Pre-K–12 Curriculum Framework* (*www.amstat.org/education/gaise*)

Dates:	Wednesday, August 4, 2010, 7:45 a.m. to 5:15 p.m., with JSM activities Thursday, August 5, 2010
Place:	Vancouver Convention Centre, located at 1055 Canada Place, Vancouver, BC, V6C 0C3, Canada, and neighboring hotels (workshop meeting room location to be announced)
Audience:	Middle and high school mathematics and science teachers. Multiple mathematics/science teachers from the same school are especially encouraged to attend.
Objectives:	Enhance understanding and teaching of statistics within the mathematics/science curriculum through conceptual understanding, active learning, real-world data applications, and appropriate technology
Content:	Teachers will explore problems that require them to formulate questions; collect, organize, analyze, and draw conclusions from data; and apply basic concepts of probability. The MWM program will include examining what students can be expected to do at the most basic level of understanding and what can be expected of them as their skills develop and their experience broadens. Content is consistent with *GAISE* recommendations, *NCTM Principles and Standards for School Mathematics*, and Canadian standards.
Presenters:	*GAISE Report* authors and prominent statistics educators
Format:	Wednesday: MWM workshop sessions and pass to the JSM Exhibit Hall
	Thursday: Activities at JSM (statistics education sessions)
	Activity-based sessions, including lesson plan development
Provided:	Refreshments on Wednesday, August 4
	Complimentary pass to attend the Joint Statistical Meetings on Thursday, August 5
	Lodging reimbursement (up to a specified amount) for U.S. teachers from outside the Vancouver area
	Handouts
	Certificate of participation from the ASA certifying professional development hours
	Optional graduate credit available
Cost:	The course fee for the full day is $35. Please note: Course attendees do not have to register for the Joint Statistical Meetings to participate in this workshop.
Follow up:	Follow-up activities and webinars (*www.amstat.org/education/k12webinars*)
	Network with local teachers to organize learning communities
Registration:	Online registration available at *www.amstat.org/education/mwm.* Space is limited. If interested in attending, please register as soon as possible.
Contact:	Rebecca Nichols, *rebecca@amstat.org*; (703) 684-1221, ext. 1877

*The Joint Statistical Meetings are the largest annual gathering of statisticians, where thousands from around the world meet to share advances in statistical knowledge. The JSM activities include statistics education sessions, posters sessions, and the exhibit hall.

Common Core Standards Reviewed

Rebecca Nichols, ASA K–16 Education Manager

The ASA participated in three reviews of draft mathematics standards prepared through the Common Core State Standards Initiative, a state-led initiative. The initiative was coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) to create a common core of rigorous state K–12 standards in mathematics and English-language arts. If adopted by the states, these standards could impact millions of school children in the United States. (At least 48 states, the District of Columbia, and two territories have expressed interest.)

The ASA created a review group consisting of members who are prominent statisticians, statistics educators, authors of the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report: A Pre-K–12 Curriculum Framework*, and members of the ASA/NCTM Joint Committee on Curriculum in Statistics and Probability. The following ASA members participated in at least one of the three review groups: Martha Aliaga, Christine Franklin, Katherine Halvorsen, Patrick Hopfensperger, Tim Jacobbe, Gary Kader, Cliff Konold, Henry Kranendonk, Jim Landwehr, Jerry Moreno, Rebecca Nichols, Chris Olsen, Daren Starnes, and Mary Sullivan. Moreno, of John Carroll University, led the efforts.

The group reviewed first the public draft of the statistics, probability, and modeling strands of the College and Career Readiness Standards for Mathematics last October and submitted reviews and a letter directly to the CCSSO. The Conference Board of the Mathematical Sciences (CBMS) coordinated a review in which various organizations (including the ASA) were asked to respond in a lengthy review of the January draft of the Common Core K–12 Mathematics Standards in the measurement and data strands for grades K–5 and the statistics and probability strands for grades 6–12. Lastly, the ASA team submitted several pages of comments, revisions, and recommendations regarding the March public draft of the K–12 standards. ASA President Sastry Pantula signed letters accompanying the team reviews and suggested revisions of the K–12 standards.

The review team's reaction of the College and Career Readiness Standards for Mathematics was positive. The statistics, probability, and modeling components in the college and career readiness document emphasize the importance of data; variation in data; and the role of randomness in data collection, analysis, and interpretation. The group submitted suggested revisions to correct and improve the document.

However, the group noticed a disconnect between the College and Career Readiness Standards and both reviewed drafts of the Common Core K–12 Mathematics Standards with respect to statistics and probability. Instead of the K–12 standards document clarifying and providing a pathway to the statistics standards in the college and career readiness document, much of the statistics content that should be in elementary school and middle school has been pushed to high school.

To become statistically literate high school graduates, primary-aged children should begin the statistical problemsolving process of formulating questions and collecting, analyzing, and interpreting data—described in the GAISE pre-K–12 report (*www.amstat.org/education/gaise*)—in elementary school and then progress to high school and beyond. GAISE served as a model for Georgia, Colorado, Ohio, and Wisconsin in revising their data analysis standards in the mathematics curriculum from elementary to high school.

The ASA team is concerned with the limited role data analysis, probability, and statistics play in the K–5 strands. High-achieving countries such as Hong Kong, Singapore, England, and Finland include a data category in the earlier grades. The Trends in International Mathematics and Science Study (TIMMS) 2011 Mathematics Framework devotes 15% of the fourth-grade assessment to data display and 20% of the eighth-grade assessment to data and chance. If the Common Core Standards are to be internationally benchmarked, data analysis and probability should extend into grades K–5, with the TIMMS percentages as targets.

The Mathematics Framework for the 2009 National Assessment of Educational Progress (NAEP), which is consistent with TIMMS, explains,

> By grade 4, students should be expected to apply their understanding of number and quantity to pose questions that can be answered by collecting appropriate data. They should be expected to organize data in a table or plot and summarize the essential features of center, spread, and shape both verbally and with simple summary statistics. Simple comparisons can be made between two related data sets, but more formal inference based on randomness should come later.

The grade 4 and grade 8 NAEP exams include probability, which is not introduced in the Common Core Standards until high school. In the

current K–12 draft standards, students will not yet have the necessary skills needed to perform well on these exams. Adding relevant statistics and probability content in the K–8 grades would emphasize the pivotal role of statistics in a 21st-century education and prepare students for the data analysis, statistics, and probability content on the grade 4 and grade 8 TIMMS and NAEP exams.

Many prominent ASA members are involved in the Common Core State Standards Initiative. Former ASA president Richard Scheaffer has been serving on the Common Core work group, and Roxy Peck is serving on the feedback group. There are other ASA members involved in reviews at the state level, including Henry Kranendonk in Wisconsin and Jerry Moreno in Ohio, as was Mike Shaughnessy, NCTM president-elect.

Shaughnessy was in dialog with the ASA team and involved in NCTM's review. In a letter signed by current NCTM President Henry Kepner accompanying NCTM's review of the public draft of the K–12 standards, NCTM argued for the need to include more statistics at the elementary level. In part, the letter stated, "Learning about statistics and data analysis is an important part of students' mathematical preparation, and statistics learning should begin in the elementary grades to prepare students to deal with information in their world." Kepner's letter and NCTM's comments on the K–12 standards are available at the NCTM web site, *www.nctm.org*.

Several ASA members also participated in the CBMS Forum on the Content and Assessment of School Mathematics last October in Reston, Virginia. The CBMS recommendations from this forum, titled "Common Standards and New Assessments for K–12: Recommendations from the National Forum convened by the Conference Board of the Mathematical Sciences," is available from the CBMS web site, *www.cbmsweb.org*.

We appreciate the dedicated work of the ASA review team. The review timelines were short, and the group put in an extraordinary amount of time reviewing these documents. We hope their reviews and comments will have a positive impact on the nation's schoolchildren and enhance statistical literacy across the United States. The final draft of the Common Core Standards should be released sometime in May.

Copies of the ASA letters sent to the CCSSO and Common Core Standards writers accompanying the ASA reviews of the Common Core Standards can be found on the ASA web site, *www.amstat.org/outreach/scipolicyletters.cfm*. For more information regarding the ASA reviews of the Common Core State Standards, contact Jerry Moreno at *moreno@jcu.edu* or Rebecca Nichols at *rebecca@amstat.org*. ■

Undergraduate Statistics Project Competition Announced

Jean A. Scott, CAUSE Program Coordinator

The Consortium for the Advancement of Undergraduate Statistics (CAUSE) has announced the third biennial Undergraduate Statistics Project Competition (USPROC). The purpose of the competition is to encourage the development of data analysis skills, to enhance presentation skills, and to recognize outstanding work by undergraduate statistics students.

The competition is open to undergraduate students globally. The project topics must involve statistical applications using data. The criteria for project evaluation include appropriateness of data collection, data analysis and conclusion, clarity of presentation, and originality and importance of the topics. Student teams can submit projects as long as the team members are undergraduates at the time of conducting the research, even though they might not be undergraduate students in spring 2011, when the projects are judged.

Cash prizes and a plaque will be provided to the top three winners, who will be invited with their project advisors to present their winning project at the 2011 United States Conference on Teaching Statistics to be held May 19–21, 2011.

Guidelines and details for the competition are available at the USPROC web site, *www.causeweb.org/usproc*. The USPROC Committee, chaired by Carl Lee of Central Michigan University, welcomes submissions for the 2011 competition as early as May 2010, with a final deadline of February 2011.

Hold the Date!

The fourth biennial U.S. Conference on Teaching Statistics (USCOTS), hosted by CAUSE, will take place May 19–21, 2011, at the Embassy Suites Hotel in Cary, North Carolina.

Free Pre–JSM Workshop

Going to Joint Statistical Meetings in Vancouver? An exceptional professional development opportunity is being offered on Saturday, July 31, and the morning of Sunday, August 1, preceding the opening of the JSM. The workshop, "Computationally Intensive Methods in Teaching Introductory Statistics," will be presented by Webster West of Texas A&M University and Roger Woodard of North Carolina State University.

This free workshop provides an overview of methods such as randomization tests and bootstrap confidence intervals that can be used in introductory courses. West and Woodard will explain the motivations and pedagogical advantages of teaching these modern methods. This workshop will showcase materials developed by the presenters under funding from National Science Foundation that allow instructors to quickly implement them in their own classroom. The workshop will help participants develop their own teaching materials.

Participants will be further supported after the workshop by an online community hosted by the presenters. Details and registration are available on the CAUSE web site at *www.causeweb.org/workshop*. ■

Tom Gerig

Tom Gerig received the Paul Minton Service Award in recognition of his leadership as a graduate director and head of the department of statistics at North Carolina State University. The award was presented by Mike Kutner, past president of the Southern Regional Council on Statistics (SRCOS).

The citation said that Gerig earned the award for "building a very successful graduate industrial traineeship program for training future problemsolvers, his continuous dedicated promotion of SRCOS for many years, and his national leadership in promoting vertical integration of research and education in mathematical sciences."

The Minton Award was established in honor of Paul Minton, who served the statistics profession nationally and was instrumental in the continued development of statistical education in the region represented by SRCOS.

North Carolina State University

The mathematics department at **North Carolina State University** has received the 2010 AMS Award for an Exemplary Program or Achievement in a Mathematics Department. Presented annually by the American Mathematical Society, the award recognizes a mathematics department that has distinguished itself by undertaking an unusual or particularly effective program of value to the mathematics community, internally or in relation to the rest of society.

"This year's pool of nominations for the award was very strong, with many deserving departments, and it was a challenging decision to come down to a single awardee," said Steven Bleiler of Portland State University, who served as chair of the selection committee. "However, in the end the committee came to a full consensus that North Carolina State was 'first among equals.'

"NC State's particular combination of a strong commitment to outreach, well-thought-out programs for students, and a long-standing dedication to diversity in the mathematics work force is singularly worthy of recognition and emulation by the broader mathematical community in these difficult times," Bleiler added.

The math department cultivates a student-centered, open-door approach among its faculty so that students feel included and welcomed. They are treated like young colleagues being guided into the profession. The department inculcates dedication to students through tangible rewards to faculty, such as salary increases, as well as through leadership by key faculty members. In addition, the department has secured several large grants from the federal government that support its many programs.

The department has had special success in mentoring students traditionally underrepresented in mathematics. The percentage of female graduate students has steadily increased from its historic average of around 33% to its current level of 49%. In the last 10 years, more than 10 African-American students earned PhDs in the department. The department has also awarded PhDs to several students of Hispanic origin as well as to two students of Native American origin.

From left: ASA President, Sastry Pantula, **Tom Gerig** holding his Paul Minton Service Award, and Mike Kutner past president of the Southern Regional Council on Statistics

At the undergraduate level, approximately one-quarter of the graduates come from underrepresented minorities. The department is also stepping into the national arena to increase diversity in the mathematical sciences: It recently led the formation of a national program of mathematical postdocs for underrepresented minority mathematicians.

The official announcement of the award, including the selection committee's citation, is available from the AMS Public Awareness Office and will appear in the May issue of *Notices of the AMS*, at *www.ams.org/notices.*

Richard L. Smith

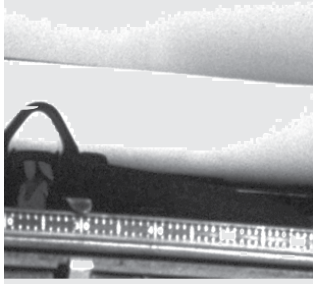
Richard L. Smith is joining the Statistical and Applied Mathematical Sciences Institute (SAMSI) as its new director starting in July. The announcement was made by Dan Solomon, chair of the governing board for SAMSI. Smith will be the second director of the institute, replacing Jim Berger.

Smith

Smith is also professor of statistics at the University of North Carolina, Chapel Hill, and has held this position since 1991. He became Mark L. Reed III Distinguished Professor in July 2004. Since 2008, he has also held the position of professor of biostatistics in the UNC Gillings School of Global Public Health.

Smith earned his PhD from Cornell University in 1979 and has previously held academic positions at Imperial College (London), the University of Surrey

STATISTICIANS IN THE NEWS



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

The Specialists

Is the "bundled" model of higher education outdated? Statistics.com creator Peter Bruce says his company is looking to grow its introductory offerings in a way that could compete with "any university, whether online or brick-and-mortar, that is going after the nontraditional student market."

New principal vows to make university world leader

Neil Stewart of the publication *The Press and Journal* from the United Kingdom interviews the new man at the helm of Aberdeen University, social statistician Ian Diamond.

(Guildford, England), and Cambridge University. His principal areas of research are spatial statistics, time-series analysis, extreme value theory, and Bayesian statistics. Specific areas of expertise include spatial and time-series modeling of environmental pollutants, the health effects of atmospheric pollution, the statistics of global climate change, and extreme values in insurance and finance.

He is a Fellow of the ASA and the Institute of Mathematical Statistics and an elected member of the International Statistical Institute. In addition, he has won the Guy Medal in Silver of the Royal Statistical Society and the Distinguished Achievement Medal of the ASA Section on Statistics and the Environment.

In 2004 he was the J. Stuart Hunter Lecturer of the International Environmetrics Society.

He is also a chartered statistician of the Royal Statistical Society.

"Richard brings a wealth of experience to the role of the director of SAMSI. We are eager to have him in this new capacity at SAMSI. He has some excellent ideas for education and outreach efforts and will bring a great amount of technical expertise to the table," notes Solomon, who also is dean of the College of Physical and Mathematical Sciences at North Carolina State University.

Smith is expected to develop innovative program ideas for future SAMSI programs. He will effectively coordinate with SAMSI's partner universities and departments and with the National Institute of Statistical Sciences and with other statistics and mathematical sciences institutes. He will work with the staff to prepare a new grant proposal to the National Science Foundation. The current grant will expire in 2012.

Obituary
Samuel Kotz

Samuel Kotz, world-renowned statistician and scholar, passed away March 16.

Kotz was born in Harbin, China, on August 28, 1930. In 1949 he emigrated to Israel, where he attended Hebrew University in Jerusalem and earned his master's with honors in mathematics in 1956. In 1960 he earned his PhD in mathematics from Cornell University.

He moved to Temple University, Philadelphia, in 1967 as professor of mathematics and then to the University of Maryland, College Park, in 1979 as professor in the College of Business and Management. He took early retirement and moved to George Washington University in 1997.

Kotz , who made numerous contributions in several areas of statistics, was the senior co-editor-in-chief of the 13-volume *Encyclopedia of Statistical Sciences.*

He was awarded membership in the Washington Academy of Sciences in 1998. In addition, he was a Fellow of the Royal Statistical Society, the ASA, and the Institute of Mathematical Statistics; and he was an elected member of the International Statistical Institute.

For more information on the life and work of Samuel Kotz, visit the Project Euclid web site and read "A conversation with Samuel Kotz," by Saralees Nadarajah, in the journal *Statistical Science: http://projecteuclid.org/DPubS?service=UI&version=1.0&verb=Display&handle=euclid.ss/1030550863.*

Obituary
William Yancey

William Fredrick "Will" Yancey passed away February 11 at home in Dallas.

Yancey was born August 30, 1956, in Boston.

He earned a bachelor's from Dartmouth College in 1978; a master's of forestry from Duke University in1980; a bachelor's of accounting from the University of Minnesota, Duluth, in 1983; a master's of business taxation from the University of Minnesota, Twin Cities, in 1987; and a PhD in accounting from the University of Texas, Austin, in 1993.

He married Carol Gabriel on July 5, 1986. A former TCU professor, Yancey was self-employed in accounting, specializing in statistical sampling. He received many awards, including having his web site, *www.willyancey.com*, listed as "Best of the Web" in its category by *Forbes Magazine.*

Yancey, an Eagle Scout, actively volunteered as an assistant scout leader, mentoring many boys as they strived for the Eagle Scout rank, including his son, Michael. He is survived by his wife, Carol; son, Michael; sister, Julie (Kevin); sister, Margaret (Gordon); and many nieces and nephews. ■

ASQ Scholarships

The Statistics Division of the American Society for Quality offers up to five grants to cover the cost of registration, meals (up to $50), and lodging for students who wish to attend the Fall Technical Conference (FTC). July 1 is the deadline to apply. The FTC is sponsored jointly with the ASQ's Chemical and Process Industries Division and the ASA Section on Physical and Engineering Sciences. This year's FTC will be held October 7–8 at the Wynfrey Hotel in Birmingham, Alabama.

Grants are available for currently enrolled undergraduate and graduate students of statistics and quality management. Travel costs are not covered. Recipients may be asked to serve as room monitors for a session at the conference and will be required to write a brief article about their conference experience for the Statistics Division newsletter.

Conference details can be found at *http://cba.ua.edu/ftc2010.*

Applicants should send a letter of interest and a letter of recommendation from a major professor by July 1 to: FTC Student Grant Awards Chair, Timothy Robinson, University of Wyoming, Department of Statistics, Laramie, WY 82071-3332. Email: *tjrobin@uwyo.edu.*

Notifications will be mailed by September 1.

NAG Student Awards Program

The Numerical Algorithms Group (NAG) announces that it will mark its 40th anniversary this year by expanding its student prize program. The new awards are intended to cultivate the next generation of numerical software talent worldwide.

"I have fond memories of visiting NAG early in my career, having fascinating discussions about software and numerical and scientific programming," says Stuart Feldman, Google vice president of engineering. "The quality and passion of NAG's people, and their drive both to make the life of scientists better and to take advantage of the newest and best results in the math software field was as clear then as it is now."

The new NAG 40th Anniversary Awards are intended to help nurture the next generation of leaders in science and computing. In the spirit of NAG's four decades of collaboration with leaders in computing, academia, and industry, NAG invites departments from institutions across the world to become involved with the student prizes. Awards will be offered for the best performances in a master's of science program, best projects, and/or best numerical solutions.

Other NAG-funded prizes include the Wilkinson Prize for Numerical Software, the NAG Prize in Applied Numerical Computing, and the NAG Prize in Mathematical Finance. For more information on NAG's student awards program visit *www.nag.co.uk/about/student_awards.asp.* ■

Janet Norwood Award

Nominations are due June 25 for the ninth annual Janet L. Norwood Award for Outstanding Achievement by a Woman in the Statistical Sciences. The award is sponsored by the Section on Statistical Genetics and the department of biostatistics in the School of Public Health, University of Alabama at Birmingham (UAB). The award recipient will be invited to deliver a lecture at the UAB award ceremony and will receive the award, a $5,000 prize, and coverage of all expenses.

Janet Norwood in 1978

Eligible individuals are women who have completed their terminal degree, have made outstanding contributions to the statistical sciences, and, if selected, are willing to deliver a lecture at the award ceremony. For additional details about the award, visit the web site at *www.soph.uab.edu/ssg/norwoodaward/aboutaward.*

Nominations must include a full curriculum vitae accompanied by a letter of not more than two pages in length describing the nature of the candidate's contributions. Contributions may be in the area of 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.

Please send nominations to: David B. Allison, PhD, Professor & Head Section on Statistical Genetics, University of Alabama at Birmingham, Department of Biostatistics, 1665 University Blvd., RPHB 327, Birmingham, AL 35294-0022. Email: *dallison@uab.edu.* The winner will be announced by July 2.

Biometrics

Meetings, Courses Keep Biometrics Section Busy

Edited by Page Moore, Biometrics Section Publications Officer

All JSM attendees are invited to join us at the Biometrics Section mixer and business meeting at the 2010 JSM. It will be held on Monday, August 2, from 5:30–7 p.m. It's a great networking opportunity and an excellent way to meet other section members. In addition, Jim Cochran will take a few minutes to share information about Statistics Without Borders (SWB)—some of its current projects and how members can become involved.

Continuing Education Courses at JSM 2010

Jerry Heatley, Continuing Education Chair

The section is proud to cosponsor one short course during the 2010 JSM: "Regression Modeling Strategies," Sunday, August 1, 8:30 a.m.–5 p.m.

Frank Harrell Jr., professor and chair, department of biostatistics, Vanderbilt University School of Medicine, Nashville, Tennessee, will present a one day short course on regression modeling strategies. Regression models are frequently used to develop diagnostic, prognostic, and health resource utilization models in clinical, health services, outcomes, pharmacoeconomic, and epidemiologic research, and in a multitude of nonhealth-related areas. Regression models are also used to adjust for patient heterogeneity in randomized clinical trials, to obtain tests that are more powerful and valid than unadjusted treatment comparisons. Models must be flexible enough to fit nonlinear and nonadditive relationships, but unless the sample size is enormous, the approach to modeling must avoid common problems with data mining or data dredging that result in overfitting and a failure of the predictive model to validate on new subjects.

All standard regression models have assumptions that must be verified for the model to have power to test hypotheses and to be able to make accurate predictions. Of the principal assumptions (linearity, additivity, distributional), this short course will emphasize methods for assessing the first two. Practical but powerful tools are presented for validating model assumptions and presenting model results. This course provides methods for estimating the shape of the relationship between predictors and response.

The first part of the course presents the following elements of multivariable

Business and Economics

Google's Varian to Speak at JSM Luncheon

Varian

Hal Varian, chief economist at Google, will be the Economic Outlook Luncheon speaker on August 3, from 12:30–1:50 p.m. during the 2010 Joint Statistical Meetings. Google has been at the forefront of applying a wide range of economic and statistical methods to improve businesses, including using auction markets to price advertising as well as using search results for prediction. The roundtable luncheon is $40, which is not included with registration.

The section is also sponsoring four invited sessions at the meetings, including a timely session on central bank forecasting, with speakers from the Federal Reserve System and the Bank of England. A session on Bayesian time-series methods includes Sid Chib and John Geweke as speakers; another session on time-series analysis focuses on official statistics; and a session on financial statistics focuses on volatility estimation.

Topic-contributed sessions, organized by Tucker McElroy, include issues in seasonality, benchmarking, and temporal disaggregation of time series, real-time trend estimation, and the statistical analysis of education issues. The 17 contributed sessions feature topics ranging from forecasting and binary prediction to long-memory modeling and extreme values.

The section also will participate in this year's roundtable discussion program at JSM. Mary Batcher, an executive director in the Washington, DC, offices of the national tax quantitative economics and statistics group of Ernst and Young, LLP, will lead a discussion on "Statisticians in Business – Keys to Success." Batcher leads the statistics and sampling practice and is well suited to facilitate what hopes to be a lively and practical discussion on what it really takes to succeed as a statistician in today's business environment. ■

predictive modeling for a single response variable: using regression splines to relax linearity assumptions, perils of variable selection and overfitting, where to spend degrees of freedom, shrinkage, imputation of missing data, data reduction, and interaction surfaces. Then a default overall modeling strategy will be described, with an eye toward "safe data mining." This is followed by methods for graphically understanding models (e.g., using nomograms) and using resampling to estimate a model's likely performance on new data.

Participants should have a good working knowledge of multiple regression. The following articles might be read in advance:

Harrell, Lee, Mark: *Stat in Med 15*: 361-387, 1996.

Spanos, Harrell, Durack: *JAMA* 262: 2700-2707, 1989.

Some participants may want to read Chapters 1–5 and 10 of the instructor's book *Regression Modeling Strategies* (NY: Springer, 2001).

For details, see *http://biostat.mc.vanderbilt.edu/rms.*

ENAR 2011

It is time to think about invited sessions for ENAR 2011, which will be held March 20–23, 2011, in Miami Beach, Florida. Anyone who is interested in organizing an invited session or who has ideas for one may contact our 2011 program chair, Jason Fine, at *jfine@bios.unc.edu.*

A typical session consists of three 30-minute talks followed by a 30-minute discussion or four 30-minute talks. June 11 is the deadline for proposals, so submitters should have a well-defined topic and have commitments from participants by then. The more detailed the proposal, the better the chances that it will be selected, as this is a highly competitive process.

Vote for Officers of the Biometrics Section

There are two open positions for officers of the Biometrics Section: chair-elect and secretary/treasurer. Cast your ballot online at the ASA web site. The candidates for chair-elect are Dianne M. Finkelstein, Harvard Medical School and Harvard School of Public Health, Massachusetts General Hospital; and Mike Daniels, University of Florida. The two candidates for secretary/treasurer are Mimi Y. Kim, Albert Einstein College of Medicine, and Debashis Ghosh, Penn State University. Section members can vote on these positions as well as other positions in the ASA.

JSM 2011

It's time to start thinking about invited sessions for next year's Joint Statistical Meetings, which will be held July 30–August 4 in Miami Beach, Florida. Anyone who is interested in organizing an invited session or who has ideas for one should contact our 2011 program chair, Tianxi Cai, at *tcai@hsph.harvard.edu.*

A typical invited session consists of three 30-minute talks followed by a 10-minute invited discussion and 10 minutes of floor discussion. However, other formats are possible. The 2010 program is a good source for examples.

The most mature ideas will have an advantage in competing for the limited number of slots, so session ideas should be in final form by the middle of this June. The section will have at least four invited sessions, but if we generate enough good ideas we will be able to compete for additional slots as well.

Please also submit ideas for short courses to our 20112–2012 continuing education chair, Annie Qu, at *anniequ@illinois.edu.* ■

Biopharmaceutical

Award Winners and Conference Announced

Congratulations to the winners of the Biopharmaceutical Section Best Contributed Papers and Posters from the 2009 JSM in Washington, DC. Paper winners were chosen based on presentation scores from audience attendees. Best contributed poster winners were chosen by a panel of judges. Congratulations to all winners for their outstanding presentations, as shown below.

Presentations

1st Place

"Effects of Sources of Variability on Sample Sizes Required for RCTs, Applied to Trials of Lipid-Altering Therapies on Carotid Artery Intima-Media Thickness (cIMT)," by A. Lawrence Gould, Joerg Koglin, Ray Bain, Cathy-Anne Pinto, Yale B. Mitchel, and Richard C. Pasternak, from Session 377, Application of Innovative Design and Analysis in Clinical Trials

2nd Place

"Reporting the Proportion of Subjects with an Adverse Event from Multiple Studies," by Christy Chuang-Stein and Mohan Beltangady, from Session 256, Design and Analysis of Stratified Clinical Trials

3rd Place

"Detecting Fraudulent Data in Clinical Trials," by Bret Musser, from Session 476, Interrater Agreement, Quality of Life, and Observational Studies

Honorable Mention

"Providing Evidence of Disease Modification," by Suzanne Hendrix, from Session 505, Statistical and Regulatory Challenges in Alzheimer's Disease Clinical Trials

Posters

1st Place

"Beta Regression for Changes of Ordinal-Rating Measures on Likert Scales: A Comparison Among Multiple Treatment Groups," by Kelly Zou and Martin O. Carlsson

2nd Place

"Making Decisions in Bioequivalence Studies: A Statistical Contribution," by Arminda Lucia Siqueira, Daniela Monteiro Braga, and Paula Rocha Chellini

3rd Place

"Estimation of Treatment Retention: The Peak-Trough Ratio," by William Coar, Darrin Despain, and Brian L. Wiens

Deming Conference on Applied Statistics

The 66th Annual Deming Conference on Applied Statistics will take place December 5–10 in Atlantic City, New Jersey, and will be a learning experience on recent developments in statistical methodologies. The three-day conference is composed of 12 three-hour tutorials on current statistical topics of interest. Recognized experts in the field of applied statistics are invited to give the lectures and short courses based on their recently published books, and these books will be available for sale to attendees at an appreciable discount. Attendees receive bound proceedings of all conference presentations.

The full program will be available on the conference web site on May 1. The conference will be held in the state-of-the-art Havana Tower of the Tropicana Casino Resort, whose shops and dining experiences mimic the atmosphere of Old Havana. Walter Young, chair of this conference for 41 consecutive years, has more information at *demingchair@gmail.com,* or visit the conference site, *www.demingconference.com.* ■

Statistical Consulting

Section-Sponsored Roundtables Featured at JSM 2010

Cynthia R. Long, Publications Officer

As you are registering for this year's Joint Statistical Meetings, don't overlook our section-sponsored roundtables. We have three A.M. and four P.M. roundtables to choose from. The A.M. roundtables are as follows:

Monday, August 2, "Cross Pharma Statistical Innovations," led by Herbert Thijs, I-Biostat

Tuesday, August 3, "How Do Statisticians Become Members of the Development Team from the Beginning of the Life Cycle?" led by Jeffrey Alan Davidson, Octagon Research Solutions Inc.

Wednesday, August 4, "Investigator Evaluation and the Collaborative/Consulting Experience," led by Rhonda VanDyke, Cincinnati Children's Hospital

At the urging of the ASA, we are offering one of our P.M. roundtables on all three days with different leaders. "Preparation of Statisticians for the Needs of Industry" will be led by Guowen (Gordon) Sun, Sanofi-Aventis, on Monday; by Amarjot Kaur, Merck & Co., on Tuesday; and by Eileen King, Cincinnati Children's Hospital, on Wednesday.

On Wednesday, we are also offering "How Can ASA Support the Applied Statistician?" led by Jack S. Nyberg, Covance. ■

Statistics and Environment

Section Sponsors Awards and Workshop

The Statistics and the Environment Section annual open business meeting and mixer is tentatively scheduled for the evening of Monday, August 2, at JSM 2010. Please join us for appetizers, drinks, and mingling. This is a great networking opportunity and way to meet other members of our section. In addition, several awards will be presented, and you will be able to voice your opinions about the section's activities.

Competition Winners

The section congratulates the Student Paper Competition winners, David Dail and Ying Sun. Dail, a PhD student in statistics at Oregon State University, won first place for his paper titled "Models for Estimating Population Size from Repeated Counts of an Open Population," coauthored by Lisa Madsen, also of Oregon State.

Sun, a PhD student in statistics at Texas A&M University, was runner-up for her paper, "Functional Boxplots for Complex Space-Time Data Visualization," coauthored by Marc Genton, also of Texas A&M.

ENVR-Sponsored Sessions

Roundtables

"Comparing Climate Models to Weather Data"
Organizer: Peter Guttorp, University of Washington/ Norwegian Computing Center

Invited and Topic–Contributed Sessions

"Environmental Statistics in the Real World: Research from Scientists at Government Agencies"
Organizer/chair: Veronica J Berrocal, SAMSI

"Spatial Statistical Methods for Environmental Extremes"
Organizer/chair: Catherine Calder, Ohio State University

"Statistics and Public Policy: Some Case Studies"
Organizer/chair: James R. Thompson, Rice University

"Advances in the Theory and Methodology of Spatial Point Processes"
Organizer/chair: Jun Zhu, Colorado State University

"Environmental Statistics"
Organizer/chair: Yasmin H. Said, George Mason University

"Statistical Methods for Multivariate Spatial and Spatial-Temporal Processes"
Organizer/chair: Mikyoung Jun, Texas A&M University

"Statistical Complexities Arising from Ecological Simplifications: Possible Solutions or Further Complications?"
Organizer: Megan Higgs, Montana State University
Chair: Mark Delorey, Centers for Disease Control and Prevention

"Climate Extremes and Paleoclimate"
Organizer/chair: Richard Smith, University of North Carolina

"Geostatistical Modeling for Environmental Data"
Organizer: Brian Reich, Department of Statstics, North Carolina State University
Chair: Michele Guindani, University of New Mexico

"Sampling, Estimation, and Inference for Natural Resource Problems"
Organizer: Ronald E. McRoberts, U.S. Forest Service
Chair: Lance Waller, Emory University

"Distance Sampling: Advances and Applications"
Organizer: Joel Howard Reynolds, U.S. Fish & Wildlife Service
Chair: Daniel Cooley, Colorado State University

"Challenges in Interdisciplinary Spatial and Spatiotemporal Analysis"
Organizer/chair: Alexander Kolovos, SAS Institute Inc.

For more details, please visit the JSM online program at *www.amstat.org/meetings/jsm/2010/index.cfm.*

JSM 2011 in Miami Beach, Florida

If you have ideas about topics for invited sessions for the 2011 JSM, to be held July 30–August 4, 2011, in Miami Beach, Florida, please contact ENVR program chair Devin Johnson, *Devin.Johnson@noaa.gov.*

ENVR Workshop

The workshop "Space-Time Statistics to Evaluate the Impacts of Climate on Health and Renewable Energy" will take place October 14–16 at the National Center for Atmospheric Research in Boulder, Colorado. This workshop covers state-of-the-art applications and statistical methods needed to assess the impacts of climate change on health and renewable energy. Sessions on applications include recent advances in climate change research, impacts on human health, and challenges in development and penetration of renewable energy. The spatiotemporal data collected in health and energy applications present some interesting and challenging statistical problems such as modeling of space-time correlation, synthesis of data from multiple sources, and assessment of uncertainties. Technical sessions will cover recent developments in space-time statistical methods, Bayesian methodology, and extreme value analysis. A one-day short course will be offered October 14, and there will be a poster session.

For more information, visit *www.stat.purdue.edu/envr2010* or contact Amanda S. Hering (mathematical and computer sciences department, Colorado School of Mines) at *ahering@mines.edu*, or Bo Li (department of statistics, Purdue University) at *boli@purdue.edu.* ■

Health Policy Statistics

Recapping the Conference on Health Policy Statistics

Anirban Basu, James O'Malley, and Thomas Love

The 2010 International Conference on Health Policy Statistics (ICHPS) was held in January at the elegant Fairmont Hotel in Washington, DC. In line with the American Statistical Association's recent initiatives to further its efforts at engaging policymakers and other stakeholders in the health policy arena, ICHPS 2010 focused its program entirely on quantitative analysis of data related to pressing health policy issues.

The conference had an array of high-quality workshops, tutorials, and speakers made possible by the generous support of the Agency for Healthcare Research and Quality (AHRQ), Harvard Clinical Research Institute (HCRI), Lilly USA, Pfizer Inc., RTI International, Valence Health, and the Veterans Health Administration of the Department of Veterans Affairs. Another integral component to the success of the conference was the program chair, Anirban Basu, who deserves special thanks for all his hard work in putting together a program that received rave reviews.

After a full day of preconference workshops on Bayesian methods in clinical trials, longitudinal data analysis, propensity score methods, microsimulation modeling, and cluster randomized trial designs, ICHPS kicked off with an engaging combination of reception and poster session, with 34 posters presented by health policy researchers and statisticians at various levels in their careers.

One feature of the poster session was the large number of contributors from industry, an indication that the recent hubbub about comparative effectiveness research (CER) has already spread well beyond academic circles. One of the conference sponsors, Valence Health, used the poster session to showcase projects it is working on involving community-based health interventions and the development of novel techniques for linking patient records across multiple practice management systems.

Plenary speaker Carolyn Clancy, AHRQ, highlighted the second day of the program, speaking on the importance of methodological work in the CER agenda that is sweeping the nation. One of her key messages is: "Doctors routinely publish results without comparing them to what others have already done. We (statisticians and health policy researchers) need to help doctors make better decisions by raising the bar by which they conduct research." Clancy's talk was followed by fanfare with the inaugural Health Policy Statistics Section's midcareer and long-term excellence awards. The midcareer award winner was Marc Elliott, while the long-term excellence awardees were Arlene Ash and Alan Zaslavsky.

The plenary session was supplemented by a range of invited, topic-contributed, and contributed sessions. Details of these sessions can be found at *www.amstat.org/meetings/ichps/2010/index.cfm*. The most popular sessions addressed topics such as statistical issues in drug safety, adaptive treatment strategies, models for healthcare reform, multiple treatment meta-analysis, decision models in priority setting, and missing data methods.

The third day followed with equally interesting sessions on health disparities, estimation of treatment effects, and data confidentiality. The final session was a highly informative and engaging symposium, "Putting the Research Back in Comparative Effectiveness Research," featuring such experts as Jean Slutsky, Sean Tunis, Merrick Zwarenstein, and Constantine Gatsonis. Like any good concert, the conference had an encore: a late-breaking workshop by AHRQ that offered an introduction to the Medical Expenditure Panel Survey (MEPS).

The 2010 program was attended by 229 people (including 23 students) from academia, government, and for-profit and not-for-profit industries and foundations worldwide. As its name indicates, the ICHPS is an international conference and attracts researchers from outside of the United States (15 total, of whom seven were from Canada). In addition to conversing in statistical methods, international attendees make a valuable contribution by presenting and discussing their experiences working on problems in health policy and related areas that might be relatively new to the United States, such as mandated CER. Information gained and lessons learned from these researchers by U.S.-based researchers will be invaluable in the years ahead.

Plenary speaker Carolyn Clancy, AHRQ, highlighted the second day of the program, speaking on the importance of methodological work in the CER agenda.

We look forward to the upcoming ICHPS to be held in Cleveland, Ohio, in October 2011. For information, contact the conference co-chairs, Thomas Love (*thomas.love@case.edu*) and James O'Malley (*omalley@hcp.med.harvard.edu*). Ambitions for the next conference are increasing its international visibility, increasing participation (especially by students), building on the outstanding continuing education program at the 8th ICHPS, and of course conducting the second HPSS awards presentation. We welcome ideas and also international and other partners interested in taking an active role in the conference. ■

Registration is Open for MMDS, June 2010

Online registration for the 2010 Workshop on **Algorithms for Modern Massive Data Sets** (MMDS 2010) is now available at: *http://mmds.stanford.edu*

In addition to the talks, there will be a poster session for one evening.

Send a title and abstract to *mmds-organizers@math.stanford.edu* if you would like to present a poster.

Event: MMDS 2010: Workshop on Algorithms for Modern Massive Data Sets

Dates: June 15-18, 2010

Location: Stanford University, Stanford, California

Web site: *http://mmds.stanford.edu*

Contact: *mmds-organizers@math.stanford.edu*

Synopsis:

The 2010 Workshop on Algorithms for Modern Massive Data Sets (MMDS 2010) will address algorithmic, mathematical, and statistical challenges in modern statistical data analysis. The goals of MMDS 2010 are to explore novel techniques for modeling and analyzing massive, high-dimensional, and nonlinearly-structured scientific and internet data sets, and to bring together computer scientists, statisticians, mathematicians, and data analysis practitioners to promote cross-fertilization of ideas.

Quality and Productivity

Considering JSM Sessions and Roundtables

Theresa Utlaut, Intel Corp.

Do you think Vancouver, British Columbia, will be as exciting this summer as it was for the 2010 Winter Olympics? If you watched some of the Olympic events, such as downhill skiing, snowboarding, speedskating, or figure skating, you may doubt it. However, after you think about it for just a bit and indulge the passion of your profession, you shouldn't be surprised to find that your answer has become "very likely."

The theme of the 2010 JSM is "Statistics: A Key to Innovation in a Data-Centric World." In support of this theme, the Quality and Productivity Section is proud to sponsor two invited sessions and four roundtables. In addition, Q&P is sponsoring or cosponsoring numerous invited and contributed sessions that cover a wide range of topics and represent the interests of our members.

Q&P Invited Sessions

Tuesday, August 3, 2:00 p.m.
"Future Developments in Experimental Design"

Organizers:
Dana C. Krueger, Kansas State University
Douglas C. Montgomery, Arizona State University
Peter Goos, University of Antwerp
Rachel T. Johnson, Naval Postgraduate School

Wednesday, August 4, 8:30 a.m.
"Statistical Engineering: An Idea Whose Time Has Come?" A Discussion in Honor of Gerald Hahn's 80th Birthday

Organizers:
Martha M. Gardner, GE Global Research
Roger Hoerl, GE Global Research
Ronald Snee, Snee Associates, LLC
Bill Parr, China Europe International Business School
Geoffrey Vining, Virginia Tech

Q&P Roundtables

A.M. Roundtables
August 2, 7–8:15 a.m.

"Designing Experiments for Biopharmaceutical Process Development," Julia O'Neill, Merck & Co. Inc.

P.M. Roundtables
(All 12:30–1:50 p.m.)

August 2

"What You Always Wanted to Know About Computer Experiments but Were Afraid to Ask," William Notz, The Ohio State University

August 3

"Communicating with Nonstatisticians," Diane K. Michelson, ISMI

August 4

"Visualizing Data," Hadley Wickham, Rice University ■

Social Statistics and Government Statistics

Sections Showcase Invited Sessions

Joseph Salvo, 2010 Program Chair, Social Statistics Section
Lisa Blumerman, Program Chair, Government Statistics Section

The Social Statistics and Government Statistics sections have together organized sessions covering a range of topics that are bound to whet the statistical appetites of section members. So as you navigate through all that Vancouver, British Columbia, has to offer, consider some of our meeting offerings in the form of invited sessions. We have done our best to schedule these sessions each day from Sunday through Thursday, so plan now to attend. Future columns will highlight contributed sessions and the roundtables.

This is the second year of the GSS-sponsored poster contest, which was initiated to encourage the quantity and quality of poster submissions to the JSM. Winner of the best poster will receive $500 plus two years of free membership in GSS. Honorable mentions will receive $250. Winning posters will be redisplayed at the GSS business meeting and social.

The SSS and GSS are also cosponsoring a myriad of invited panel and paper sessions. Visit the JSM online program at *www.amstat.org/meetings/jsm/2010* to develop your full itinerary. If you have any questions or need additional information, contact Joseph Salvo, 2010 SSS program chair, at *jsalvo@planning.nyc.gov,* or Lisa Blumerman, 2010 GSS program chair, at *lisa.m.blumerman@census.gov.*

Invited Sessions

Global Statistical Capacity and the Role of Statistical Societies (Panel)

This panel discusses the role statistical societies can play in building statistical capacity, both within their geographical region and also globally. The panelists are current leaders in the American Statistical Association, Statistical Society of Canada, International Statistical Institute, Royal Statistical Society, and Statistics Without Borders, with each discussing current and planned capacity building efforts within their society. As a group, the panel will discuss global needs and how capacity building efforts can be more effective and better coordinated.

Organizer: Nilupa S. Gunaratna, International Nutrition Foundation

Chair: Juanita Tamayo Lott, Tamayo Lott Associates

Denise Lievesley, King's College London

Bovas Abraham, University of Waterloo

Sally Morton, RTI International

Neville Davies, Royal Statistical Society Centre for Statistical Education

James J. Cochran, Louisiana Tech University

Can You Maintain Confidentiality and Have Useful Data at the Same Time? (Panel)

One of the biggest issues facing those in the public and private sectors collecting survey and census data is the need to maintain confidentiality and deliver useful information. Clearly public trust has declined substantially in the past few decades. At the same time, the need has increased dramatically to better understand the economy, our social structure, and medical information for health purposes. The panelists will explore how confidentiality is maintained under various scenarios of data collection. These will include the implications of data linking; the need to protect DNA information; analyzing small-area data; federal statistical agency cooperation; and using secure remote access locations.

Organizer/chair: Edward Spar, Council of Professional Associations on Federal Statistics

Michael Link, The Nielsen Co.

Jennifer Madans, National Center for Health Statistics

Elaine Murakami, Federal Highway Administration

Marilyn Seastrom, National Center for Education Statistics

John Thompson, National Opinion Research Center

How Government Statistics Make a Difference (Panel)

Governments typically put a goodly number of resources into producing statistics about the societies under their responsibility. A proportion of the statistics produced are widely disseminated in the media, but others generate little interest from reporters. One can question the role of government statistics and the value of the profession (government statisticians) who put them together. Questions that arise may include the following: Does it really matter that we have been able to measure the various phenomena that affect our society? Is it a government responsibility to do so, or should it be left to the private sector, associations, and the like? Why should a student enroll for a statistics degree and consider governments as an employer of choice? A panel of five heads of statistical organizations will address these questions and others.

Organizer: Robert Lussier, Statistics Canada

Chair: Sally Morton, RTI International

Keith Hall, Bureau of Labor Statistics

Munir Sheikh, Statistics Canada

Jil Matheson, UK Statistics Authority

Brian Pink, Australian Bureau of Statistics

Cynthia Clark, National Agricultural Statistics Service

The U.S. Federal Statistical System 2.0: Future Directions (Panel)

During the spring through fall of 2009, the ICSP, comprised of the heads of 14 statistical agencies and chaired by the U.S. Chief Statistician, began an informal strategic planning process. This session will describe that process but primarily emphasize the outcome of those discussions: the ICSP's vision of directions for the Federal Statistical System. The vision

emerging from that process involves building on the tradition of collaboration to achieve new levels of efficiency, data quality, and utility for data users through innovative efforts, such as a systemwide approach to statistical uses of administrative records and more common data dissemination strategies and tools. Members of the ICSP will discuss these activities and how they hope to implement them in the coming years.

Organizer: Rochelle (Shelly) Wilkie Martinez, U.S. Office of Management and Budget

Chair: Katherine K. Wallman, U.S. Office of Management and Budget

Steve Landefeld, Bureau of Economic Analysis

Robert M. Groves, U.S. Census Bureau

Edward J. Sondik, National Center for Health Statistics

What If the 2020 Census Was the First Census: What Would We Do? (Panel)

While we always look to the past as a means of informing present and future strategies in census work, this can be a mixed blessing. Objectives and methods frequently become fixed for no good reason, shutting out creative paths that may lead to much-needed innovation. In this session, an effort is made to start fresh and ask the most basic questions about what the goal of a 2020 census would be and how best to achieve it. Emphasis will be placed on questions as to why the data are needed, the level of precision that is needed, the level of precision that is available, and the methods that may be used to achieve these ends.

Organizer/chair: Hermann Habermann, Former Director, United Nations Statistics Division

John E. Rolph, University of Southern California

Lawrence D. Brown, University of Pennsylvania

Joseph J. Salvo, New York City Department of City Planning

David A. Swanson, University of California, Riverside

Conducting Effective Nonresponse Bias Analysis Studies in Household and Establishment Surveys (Papers)

Organizer/chair: Jenny Thompson, U.S. Census Bureau
Discussant: J. Michael Brick, Westat

"Conducting Nonresponse Bias Analysis for Business Surveys," Joanna Fane Lineback and Katherine Jenny Thompson, U.S. Census Bureau

"Measuring Nonresponse Bias in the National Crime Victimization Survey," Zhiwei Zhang and Louise Woodburn, National Opinion Research Center; Fritz Scheuren, NORC at the University of Chicago

"Conducting Nonresponse Bias Analyses in Federal Surveys," Brian Harris-Kojetin, U.S. Office of Management and Budget

Implementing the Measuring American Poverty Act in States and Local Areas (Papers)

Organizer/chair: Mark Levitan, NYC Center for Economic Opportunity
Discussant: Irwin Garfinkel, Columbia University School of Social Work

"Using the American Community Survey to Implement a National Academy of Sciences-Style Poverty Measure," Trudi Renwick, U.S. Census Bureau; Mark Levitan

"Creating a New Measure of Poverty for the State of Wisconsin," Timothy Smeeding, Institute for Research on Poverty

"The Analysis of the TANF and Food Stamp Programs with Matched Administrative and Survey Data," George Falco, NYS Office of Temporary and Disability Assistance; Bruce D. Meyer, University of Chicago

"Variance Estimation Protocols for the NAS Poverty Measure: The New York City Poverty Measure Experience," Frank Potter, Eric Grau, and John Czajka, Mathematica Policy Research Inc.; Mark Levitan

Measurement of Elusive Populations & Phenomena: Experiences and Challenges from the Human Rights Field (Papers)

Organizer: Megan Price, Benetech
Chair: Lillian Lin, Centers for Disease Control and Prevention
Discussant: Steven Thompson, Simon Fraser University

"Measuring Elusive Populations with Multiple Systems Estimation: A Case Study in Casanare," Kristian Lum, Duke University; Megan Price and Patrick Ball, Benetech

"A New Method to Estimate Mortality in Crisis-Affected and Resource-Poor Settings: Validation Study," Francesco Checchi, London School of Hygiene and Tropical Medicine

"Measuring Lethal Counterinsurgency Violence in Amritsar District, India, Using a Referral-based Sampling Technique," Romesh Silva, Jeff Klingner, and Scott Weikart, Human Rights Data Analysis Group, Benetech

What Can You Do to Help Our Sections?

Attend our sessions in 2010. Each year, the section officers try to strengthen the SSS and GSS portions of the JSM program. You, our members, need to support these efforts and attend our sessions. Even better: Attend our sessions with your colleagues!

Help plan invited sessions for the section to sponsor in 2011. It is time to think about topics for proposed invited sessions for the 2011 JSM. More information will be in a future *Amstat News* article and our monthly e-newsletter. If you have any specific ideas or general suggestions, contact the SSS 2011 program chair, Nancy Clusen, at *NClusen@Mathematica-MPR.com* or the GSS 2011 program chair, Iris Shimizu, at *ims1@cdc.gov.* ■

Mid Michigan

The Mid Michigan Chapter held its semi-annual meeting/presentation on April 12, 2010, on the campus of Michigan State University, East Lansing, Michigan. The guest speaker was Malay Ghosh, Distinguished Professor of Statistics, University of Florida and ASA Fellow. Ghosh spoke on the "Introduction to the basic problems in small area estimation, a few examples and some simple but well-used techniques for solving these problems."

Southern California

The Southern California Chapter of the ASA presented its 29th annual Workshop in Applied Statistics on April 30 at the RAND Corporation, in Santa Monica. Carter Butts, professor of sociology at the University of California, Irvine, spoke on social networks.

Butts is the author of several software packages for the analysis of relational data and currently, his work focuses on the structure of spatially embedded large-scale interpersonal networks; models for informant accuracy, network inference, and graph comparison; representation and modeling of intertemporal relational data; and models for human behavior in disrupted settings. Butts serves as an area editor for the journal *Computational and Mathematical Organization Theory* and sits on the editorial boards of the *Journal of Mathematical Sociology* and *Sociological Methodology.*

Project Competition

The chapter will again hold its annual project competition for AP Statistics students at City of Hope National Medical Center in Duarte on May 15. If the high school AP Statistics teacher in your local school has not planned to enter students, please let him or her know about it. This is a wonderful opportunity for their students to form teams of up to four members each to conduct a statistical data gathering and analysis project of their choice and to present the results to statisticians from universities and industry.

Held in the form of a poster session, the competition has become known as PosterComp. The best entries will receive cash prizes and other awards. There will also be an educational session for teachers attending the event, and there is an awards lunch. The event is free to all participants. Visit the competition web site, *http://postercomp.sc-asa.org,* for additional details including a review of last year's competition. If you know of an AP stat teacher who is unaware of the competition, provide his or her name, the school name, and school mailing address to Rodney Jee at *rodneyjee@yahoo.com.* Corporate donors for this year's competition include Texas Instruments and Minitab. ■

San Antonio Chapter Welcomes ASA President Sastry Pantula

Members of the ASA's San Antonio Chapter listen to the seminar titled "GIVE to the ASA" presented by ASA President, Sastry Pantula.

Sastry Pantula, ASA president, visited the San Antonio Chapter on March 29 and gave a seminar titled "GIVE to ASA." Chapter members benefited from learning about the organization structure and strategic plan of the ASA. He also discussed his focus areas within the strategic plan—**G**rowth, **I**mpact, **V**isibility, and **E**ducation—and presented the excellent progress the four working groups for those focus areas have made so far.

The president talked about providing targeted benefits, including mentoring, to younger statisticians. He presented some examples where statisticians are having an impact and also emphasized the importance of publicly speaking about how statistics are a key to innovation. He reminded the chapter members to actively participate in the ASA elections and also encouraged everyone to fill out the census form. The visit was very much appreciated by chapter members and the dean of the College of Business at University of Texas, San Antonio.

Seeking a CAREER in STATISTICS?

Vancouver
July 31–Aug. 4

Are you nearing graduation and wondering about entry-level jobs?
Are you an experienced statistics professional interested in career information?

Register for the JSM Career Placement Service

What can the Career Placement Service do for you?

Each year, more than 100 companies, universities, recruiters, and government agencies search for applicants using the JSM Career Placement Service. The JSM Career Placement Service provides the best opportunity for qualified applicants to meet employers, establish valuable contacts, and learn about organizations employing statisticians.

Career Placement Service Benefits

Applicant reading area—for applicants to review complete job descriptions and contact information for all registered employers.

Visibility to employers—applicants who register by July 13, 2010, will have their information and résumés included in the advance applicant online database, available to employers prior to the meeting. Employers often contact applicants in the database prior to JSM to schedule interviews.

Computerized message center—allows applicants and employers to communicate throughout the meeting.

Online access to job postings—included with ALL Career Placement Service registrations.

www.amstat.org/meetings/jsm/2010/placement

Organizations Represented at Recent JSM Career Placement Services

Bank of America • Capital One • FDA • Eli Lilly and Company
Amgen • Travelers • SAS

JSM 2010 CANADA
Vancouver, British Columbia

For more information about these events, visit *www.amstat.org/dateline.* Announcements are accepted from educational and not-for-profit organizations only. Commercial enterprises should contact the ASA Advertising Department at *advertise@amstat.org*.

* Indicates events sponsored by the American Statistical Association or one of its sections, chapters, or committees

›› Indicates events posted since the previous issue

2010

May

24–28 —Bayesian Econometrics – A Short Course, Washington, DC
The Info-Metrics Institute and the Department of Economics of American University announce two summer program courses, "Bayesian Econometrics and Decisionmaking" with John Geweke, University of Iowa and UTS, Australia. The weeklong course consists of morning lectures that develop the basic philosophy as well as their applications to real economic problems and data. Each afternoon, these methods will be applied and practiced in the computer lab. Each course is open to students who have completed at least a year of econometrics at the PhD level, to professional economists, researchers who work in government agencies, nongovernmental organizations, and the private market. The text for each class will be announced prior to the class and will include a textbook and/or a reader consisting of a collection of papers. Classes are from 9 a.m. to 5 p.m. Please direct questions to Amos Golan, professor, Info-Metrics Institute and department of economics, at *econ@american.edu*. For questions about registration contact Aisha Malik, Department of Economics, American University, Roper Hall 105, 4400 Massachusetts Avenue NW, Washington, DC 20016; (202) 885-3770; *malik@american.edu; www.american.edu/cas/economics/info-metrics/econometrics.cfm.*

***24–26—33rd Annual Midwest Biopharmaceutical Statistics Workshop, Muncie, Indiana**
Plenary speakers will address how the role of statistics is adapting to recent changes within the pharmaceutical industry and the impact of these changes. Invited talks will follow a similar theme and be presented in four parallel tracks: clinical, discovery/preclinical, nonclinical, and postapproval. Deadline to submit abstracts for the poster sessions has passed. The workshop will be preceded by a half-day short course. For more information, visit *www.mbswonline.com* or contact Melvin Munsaka, One Takeda Pkwy., Deerfield, IL 60015; (847) 582-3533; *mmunsaka@tgrd.com.*

***25–26—Quantitative Methods in Defense and National Security 2010, Fairfax, Virginia**
This conference will promote collaboration between users who have quantitative defense and national security problems and quantitative professionals such as statisticians, mathematicians, operations researchers, and engineers. Papers are wanted on quantitative methods that can be used to solve problems in defense and national security and that describe defense and national security data analysis problems. The program will consist of invited sessions, contributed presentations, and special poster session. For more information, visit *www.galaxy.gmu.edu/QMDNS2010* or contact Jeffrey Solka, 18444 Frontage Road, Suite 324, Code Q21, Dahlgren, VA 22448; (540) 653-1982; *Jeffrey.Solka@navy.mil.*

25–27—Joint Research Conference on Statistics in Quality, Industry, and Technology, Gaithersburg, Maryland
The Quality and Productivity Research Conference and the Spring Research Conference on Statistics in Industry and Technology will be held jointly at the National Institute of Standards and Technology (NIST). The goal of the conference is to stimulate interdisciplinary research among statisticians, engineers, and physical scientists in quality and productivity, industrial needs, and the physical sciences. The conference will feature presentations on statistical issues and research approaches drawn from collaborative research. For information, contact Will Guthrie, 100 Bureau Drive, Stop 8980, Gaithersburg, MD 20899-8980; (301) 975-2854; *will.guthrie@nist.gov.*

June

3–4—Statistical Science: Making a Difference, Madison, Wisconsin
A series of events are planned to celebrate the 50th anniversary of the founding of the department of statistics and its achievements in making a difference in statistics

CENSUS at SCHOOL

The ASA is looking for champions to expand the Census at School program across the United States. Teachers and users and producers of statistics at all levels are encouraged to get involved, both to promote the good practice of statistics in schools and to encourage more students to eventually join the statistics profession.

This is a wonderful opportunity for ASA chapters to perform outreach in their communities. For more information on how you can get involved, email ASA Director of Education Martha Aliaga at *martha@amstat.org.*

and the sciences through theory/methods and applications/practice. The main event will highlight major advances and emerging topics in statistical science during the last 25 years. For more information, visit *www.stat.wisc.edu* or contact Denise Roder, 1300 University Avenue, MSC 1220, Madison, WI 53706; (608) 262-2937; *50th@stat.wisc.edu.*

5–8—IWMS 2010 –19th International Workshop on Matrices and Statistics, Shanghai, China
This conference will stimulate research and foster the interaction of researchers in the interface between statistics and matrix theory. There will be invited and contributed papers. Potential participants should visit *www1.shfc.edu.cn/iwms/index.asp* for online registration and submission of abstracts. For details, visit the web site or contact Yonghui Liu, Shanghai Finance University, Shanghai, International 201209, China; *IWMS2010@shfc.edu.cn.*

***6–9—Southern Regional Conference on Statistics (SRCOS) 2010, Virginia Beach, Virginia**
This conference—including speakers, a workshop, and student poster presentations—will stimulate research and foster interaction among researchers. There is support available for student travel. The deadline for presentations and proposals was April 10. For more information, visit *http://sci.odu.edu/math/srcos2010* or contact Norou Diawara, Department of Mathematics and Statistics, Old Dominion University, Norfolk, VA 23529; (757) 683-3886; *ndiawara@odu.edu*.

10–12—2010 International Symposium on Financial Engineering and Risk Management (FERM2010), Taipei, Taiwan
FERM2010 will allow academic researchers and industry practitioners to exchange state-of-the-art knowledge and discoveries in financial engineering and risk management as well as discuss the recent financial crisis, research interests, and industry trends. Keynote speakers will include Tim Bollerslev, Jay Dweck, and Harrison Hong. In addition, 15 invited sessions, 15 contributed sessions, and a poster session are planned. For more information, visit *www.fin.ntu.edu.tw/~ferm2010* or contact Program Committee, Center for Research in Econometric Theory and Applications, National Taiwan University, Taipei, International 106, Taiwan; +886-2-33661072; *ferm2010.prog@gmail.com.*

12–19—Statistical and Machine Learning Methods in Computational Biology, Lipari, Italy
Lectures will focus on new statistical challenges posed by deep sequencing techniques to inference and analysis of network structure that take into account the scale of data available. A series of tutorials also will be offered from introductory topics to statistics to probabilistic and machine learning methods. For more information, visit *lipari.cs.unict.it/LipariSchool/Bio* or contact Raffaele Giancarlo, Dipartimento di Matematica, Via Archirafi 34, Palermo, International 90123, Italy; +39 091 238 91067; *raffaele@math.unipa.it.*

››14–16—First Annual Pacific Coast Statisticians and Pharmacometricians Innovation Conference (PaSiPHIC), San Luis Obispo, California
The theme for this conference is "Narrowing the distribution between stochastic scientists by bringing statisticians and pharmacometricians together." It will be held on the campus of Cal Poly San Luis Obispo and sponsored by the department of statistics. The joint keynote speakers are Joga Gobburu and Stephen Senn. The program for the conference will include some short courses geared toward pharmacometricians and some for statisticians (day 1) as well as presentations that either will be concurrent or joint on days 2 and 3. Contact Brian Smith, One Amgen Center Drive, MS 38-3-B, Thousand Oaks, CA 91360; (805) 447-1378; *brismith@amgen.com.*

››14–17—23rd Nordic Conference on Mathematical Statistics (NORDSTAT), Voss, Norway
NORDSTAT is a meeting for statisticians and probabilists in Northern Europe but also welcomes participants from countries outside the Nordic and Baltic States. Voss is a village in the heart of Fjord Norway; it is situated on the main road and railway line from Oslo to Bergen, about 100 kilometers east of Bergen. There will be scientific sessions and social programs for participants. Contact Inger Lise Ravnanger, Torgalmenning 1a, Bergen, International N-5808, Norway; +47 55553655; *mail@kongress.no; www.nordstat2010.org/index.php.*

16–18—45th Scientific Meeting of the Italian Statistical Society, Padua, Italy
The 2010 conference will include plenary, specialized, contributed, and poster sessions. These can be in any area of interest relevant to theoretical and applied statistics. For details, visit *www.sis-statistica.it/meetings/index.php/sis2010/sis2010* or contact Patrizia Piacentini, Department of Statistical Sciences, via C. Battisti 241, Padova, International I-35121, Italy; *segrorg@stat.unipd.it.*

16-19— Interface 2010: The 41st Symposium on the Interface of Computing Science and Statistics, Theme: Computational Statistics and Human Behavior; Seattle, Washington,
The Interface Foundation of North America sponsors this conference on Computational Statistics and Human Behavior. The keynote address will be presented by Adrian E. Raftery, University of Washington titled "Probabilistic Projections of HIV Prevalence Using Bayesian Melding with Incremental Mixture Importance Sampling (IMIS)" Short courses by Tim Gulden, and Edward J. Wegman will also be presented. For more information visit the conference web site at *http://www.interfacesymposia.org/Interface2010/*

17–19—Classification Society Annual Meeting, St. Louis, Missouri
This conference aims to bring together researchers from many disciplines (statistics, math, computer science, astronomy, medicine, business, library science, text clustering) working in classification and cluster analysis on methods development and applications. This is an informal meeting on the best use of cluster/classification tools. Contact Bill Shannon, 660 S. Euclid Avenue, Box 8005, St. Louis, MO 63110; (314) 454-8356; *wshannon@wustl.edu; www.classification-society.org/csna/csna.html.*

››20–23— ICSA 2010 Applied Statistics Symposium, Indianapolis, Indiana
Short courses will be offered on June 20, and approximately 50 scientific sessions will take place from June 21–23. Keynote speakers include Donald Rubin (Harvard University), Ji Zhang (Sanofi-Aventis), Xihong Lin (Harvard University), ShaAvhrée Buckman (FDA), and Gregory Campbell (FDA). For more information, visit *www.icsa.org/2010* or contact Wei Shen at *shen@lilly.com* or Yongming Qu by email at *quyo@lilly.com* or by mail: Yongming Qu, Lilly Corporation Center, Indianapolis, IN 46285; (317) 571-0764; *www.icsa.org/2010.*

20–23—ISF2010 –30th International Symposium on Forecasting, San Diego, California
This conference—attracting the world's leading forecasting researchers, practitioners, and students—will include keynote speaker presentations, academic sessions, workshops, and social programs. For details, visit *www.forecasters.org* or contact Pam Stroud, 53 Tesla Avenue, Medford, MA 02155; (509) 357-5530; *isf@forecasters.org.*

28–1—Statistical Modeling and Inference for Networks (Statworks), Bristol, United Kingdom
The workshop will gather together statisticians, mathematical modelers, and application-oriented researchers. Invited speakers include David Barber (UCL), Sanjeev Goyal (Cambridge), Eric Kolaczyk (Boston), Sean Meyn (Illinois), Brendan Murphy (University College Dublin), Stephane Robin (AgroParisTech), Michael Stumpf (Imperial), Stanley Wasserman Indiana), Geoffrey West (Santa Fe), and Eddie Wilson (Bristol). The number of participants is limited. Abstracts must be submitted for both talks (approximately one page) and posters (one paragraph). Noncontributing attendees are also welcome, although space may be limited. All applications for attending the workshop and contributing a talk or a poster must be made via the (web form at *www.sustain.bris.ac.uk/ws-statworks/participation.html.* Contact Azita Ghassemi, Department of Mathematics, University Walk, Bristol, International BS8 1TW, UK; +441173317188, *stat-works@bristol.ac.uk; www.sustain.bris.ac.uk/ws-statworks.*

28–7/2—ICORS 2010, Prague, Czech Republic
The International Conference on Robust Statistics is an opportunity to meet, exchange knowledge, and build scientific contacts with others interested in the subject. For more information, visit *icors2010.karlin.mff.cuni.cz* or contact Jana Jureckova, Department of Statistics, Sokolovska 83, Prague 8, International CZ-186 75, Czech Republic; *icors2010@karlin.mff.cuni.cz.*

29–7/1—International Conference on Probability Distributions and Related Topics in Conjunction with NZSA Conference, Palmerston North, New Zealand
This international conference is devoted to all aspects of distribution theory and its applications, including discrete, univariate, and multivariate continuous distributions; copulas; extreme values; skewed distributions; conditionally specified distributions; and life distributions in engineering and survival analysis. For more information, visit *http://nzsa_cdl_2010.massey.ac.nz* or contact Narayanaswamy Balakrishnan, Department of Mathematics and Statistics, Hamilton, International L8S 4K1, Ontario, Canada; (905) 525-9140, ext. 23420; *bala@mcmaster.ca.*

29–7/9—International Statistical Ecology Conference 2010, Canterbury, United Kingdom
In addition to invited and contributed speaker sessions, this conference will include a series of workshops. Visit *www.ncse.org.uk/isec2010* or contact Alexa Laurence, University of Kent, Canterbury, International CT2 7NZ, UK; +01227 827253; *a.f.laurence@kent.ac.uk.*

30–7/2—2010 International Conference of Computational Statistics and Data Engineering, London, United Kingdom
For details, visit *www.iaeng.org/WCE2010/ICCSDE2010.html* or contact IAENG Secretariat, Unit 1, 1/F, 37-39 Hung To Road, Hong Kong, International, China; (852) 3169-3427; *wce@iaeng.org.*

July

4–9—IWSM 2010, Glasgow, United Kingdom
The 25th International Workshop on Statistical Modeling (IWSM 2010) will be hosted by the University of Glasgow in Scotland. For more information, contact Claire Ferguson, Department of Statistics, 15 University Gardens, Glasgow, International G12 8QW, Scotland; +0141 330 5023; *c.ferguson@stats.gla.ac.uk.*

5–9—ISBIS-2010 (International Symposium on Business and Industrial Statistics), Slovenia
The key themes of this conference are industrial applications of statistical image analysis, future directions for handling large and complex data sets, financial services, health services, and decisionmaking in business and industry. For more information, visit *www.action-m.com/isbis2010* or contact Milena Zeithamlova, Vrsovicka 68 101 00, Prague, International 10, Czech Republic; +420 267 312 333; *milena@action-m.com.*

5–8—International Workshop in Applied Probability 2010 – IWAP 2010, Madrid, Spain
This workshop will bring together scientists to discuss the applications of probability in any field. Participants are encouraged to submit their contributions to the *Journal of Methodology and Computing in Applied Probability.* A book of abstracts of presented articles will be available. Plenary speakers include Paul Embrechts, Ricardo Fraiman, Montse Fuentes, Robin Pemantle, Víctor de la Peña, Michael Steele, and Mihail Zervos. The program committee includes leading scientists worldwide in diverse areas of research in probability. Young scientists, women, and minorities are encouraged to participate. Workshop will be held at Universidad Carlos III de Madrid, Colmenarejo Campus, Spain. Contact Joseph Glaz, Department of Statistics, U-4120, 215 Glenbrook Road, Storrs, CT 06269-4120; (860)874-1677; *joseph.glaz@uconn.edu, www.fundacion.uc3m.es/IWAP2010/Index.html.*

6–8—LASR 2010: High-Throughput Sequencing, Proteins, and Statistics, Leeds, United Kingdom
This workshop will focus on developments at the interface of statistical methodology and bioinformatics. For more information, visit *www.maths.leeds.ac.uk/lasr2010* or contact Jochen Voss, Department of Statistics, University of Leeds, Leeds, International LS2 9JT, UK; *workshop@maths.leeds.ac.uk.*

11–13—Ninth International Conference on Ordered Statistical Data and Their Applications, Zagazig, Egypt
OSDA 2010 will provide an international forum for presentation and discussion of new results on ordered statistical data and reviews of existing literature. It will be dedicated to all aspects of ordered statistical data. The conference language will be English. For more information, visit *www.stat.osu.edu/~hnn/osda2010.html* or contact Haikady Nagaraja, 402 Cockins Hall, 1958 Neil Avenue, Statistics Department, The Ohio State University, Columbus, OH 43210; (614) 292-6072; *hnn@stat.osu.edu.*

12–16—11th International Meeting on Statistical Climatology, Edinburgh, Scotland
This meeting is designed to promote good statistical practice in the atmospheric and climate sciences and enhance the lines of communication between the atmospheric and statistical science communities. The themes include analysis techniques for multimodel ensembles of climate simulations, understanding recent climate change and predicting the near-term future, extreme events, predictions of climate change relevant for impacts, reconstructing and understanding climate change over the Holocene, and statistical methods for the analysis of climate data. For information, visit *http://cccma.seos.uvic.ca/imsc/11imsc.shtml* or contact Gabi Hegerl, Room 353, Grant Institute, The King's Buildings, Edinburgh, International EH8 9TA, Scotland; *Gabi.Hegerl@ed.ac.uk.*

12–23—SAMSI: 2010 Summer Program on Semiparametric Bayesian Inference: Applications in Pharmacokinetics and Pharmacodynamics, Research Triangle Park, North Carolina
The aims of the program and workshop are to identify the critical new developments of inference methods for pharmacokinetics (PK) and pharmacodynamics (PD) data, determine open challenges, and establish inference for PK and PD as an important motivating application area of nonparametric Bayes. For more information, visit *www.samsi.info/programs/2010bayes-summer-program.shtml* or contact Jamie Nunnelly, P.O. Box 14006, Research Triangle Park, NC 27709; (919) 685-9350; *nunnelly@niss.org.*

20–23—The R User Conference, useR! 2010, Gaithersburg, Maryland
useR! 2010 will take place at the National Institute of Standards and Technology (NIST). Following the successful previous conferences, this conference is focused on: (1) R as the `lingua franca' of data analysis and statistical computing, (2) providing a platform for R users to discuss and exchange ideas on how R can be used to do statistical computations, data analysis, visualization and exciting applications in various fields, and (3) giving an overview of the new features of the rapidly evolving R project. Like predecessor conferences, the program will consist of two parts: invited lectures and user-contributed sessions. Prior to the conference, there will be tutorials on R, descriptions of which are available at *www.R-project.org/useR-2010/tutorials*. Contact Katharine Mullen, 503 Palmtree Drive, Unit 2, Gaithersburg, MD 20878; (301) 975-6890; *katharine.mullen@nist.gov, www.r-project.org/useR-2010*.

››22–24—AERA Statistics Institute for Faculty, Stanford, California
The AERA Statistics Institute for Faculty is geared to faculty members at U.S. post-secondary institutions who teach quantitative research methods courses at the graduate level and who seek to integrate the analysis of large-scale federal education data sets into the curriculum. The training will focus on how to incorporate secondary data analysis into the curriculum of quantitative research methods courses. Publicly available education data, such as the Education Longitudinal Study of 2002 (ELS:2002) and the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), will be used in this training. Those selected for participation will receive support covering the institute's fees, housing, transportation to Stanford, and per diem for the institute dates. Underrepresented minority researchers are strongly encouraged to apply. Contact Jeanie Murdock, 5662 Calle Real, #254, Goleta, CA 93117; (805) 964-5264; *jmurdock@aera.net; www.aera.net/grantsprogram/res_training/stat_institute/SIFacFly.html.*

27–31—LinStat 2010, Tomar, Portugal
The aim of this conference is to bring together researchers sharing an interest in a variety of aspects of statistics and its applications to discuss current developments. There will be plenary talks and sessions with contributed talks, as well as a special session with talks by graduate students. For more information, visit *www.linstat2010.ipt.pt* or contact Francisco Carvalho, Estrada da Serra - Quinta do Contador, Tomar, International 2300-313, Portugal; +351249328100; *fpcarvalho@ipt.pt*.

***31–8/5—2010 Joint Statistical Meetings, Vancouver, British Columbia, Canada**
JSM (Joint Statistical Meetings) is the largest gathering of statisticians held in North America. It is held jointly with the American Statistical Association, International Biometric Society (ENAR and WNAR), Institute of Mathematical Statistics, Statistical Society of Canada, International Indian Statistical Association, and International Chinese Statistical Association. Attended by more than 5,500 people, activities include oral presentations, panel sessions, poster presentations, continuing education courses, exhibit hall, placement service, society and section business meetings, committee meetings, social activities, and networking opportunities. For more information, visit *www.amstat.org/meetings* or contact ASA Meetings Department, 732 North Washington Street, Alexandria, VA 22314; (888) 231-3473; *jsm@amstat.org*.

August

5–7—16th ISSAT International Conference on Reliability and Quality in Design, Washington, DC
For more information, visit *www.issat-conferences.org* or contact Conference Secretary, P.O. Box 1504, Piscataway, NJ 08855; *rqd@issatconferences.org.*

22–27—COMPSTAT 2010, Paris, France
This conference will cover the development and implementation of new statistical ideas, user experiences, and software evaluation. The program should appeal to software developers and anyone working in statistics who uses computers at a university, company, government agency, or research institute. For more information, visit *www.compstat2010*.fr or contact Gilbert Saporta, 292 rue Saint Martin, Paris, International 75003, France; +33140272268; *gilbert.saporta@cnam.fr.*

29–9/1—SAMSI: 2010–11 Program on Complex Networks, Research Triangle Park, North Carolina
This program is built around network modeling and interference, flows on networks, network models for disease transmission, and dynamics of networks. For more information, visit *www.samsi.info/workshops/index.shtml* or contact Terri Nida, 19 TW Alexander Drive, Research Triangle Park, NC 27709; (919) 685-9350; *info@samsi.info.*

30–9/3—Prague Stochastics 2010, Prague, Czech Republic
Prague Stochastics 2010 is next in a series of international conferences on stochastics organized in Prague since 1956. The scientific program will cover a wide range of stochastics, with special emphasis on the topics of this lively field that have been pursued in Prague. For more information, visit *www.utia.cas.cz/pragstoch2010* or contact Lucie Fajfrova, Pod Vodarenskou vezi 4, Prague 8, International 18208, Czech Republic; *pragstoch@utia.cas.cz.*

September

12–15—SAMSI: 2010–11 Program on Analysis of Object Oriented Data Opening Workshop, Research Triangle Park, North Carolina
Modern science is generating a need to understand and statistically analyze populations of increasingly complex types. Analysis of object oriented data (AOOD) is aimed at encompassing an array of such methods. For more information, visit *www.samsi.info/programs/2010aoodprogram.shtml* or contact Terri Nida, 19 TW Alexander Drive, Research Triangle Park, NC 27709; (919) 685-9350; *info@samsi.info.*

13–15—ENBIS 2010 – 10th Annual Conference of the European Network for Business and Industrial Statistics,

Antwerp, Belgium
This conference will include keynote lectures, invited and contributed sessions, workshops and pre- and post-conference courses. The social program will include a reception at Antwerp City Hall and dinners in the medieval cellars in downtown Antwerp and Marble Hall of the Antwerp Zoo. For more information, visit *www.enbis.org* or contact Peter Goos, Prinsstraat 13, Antwerp, International 2000, Belgium; +3232654059; *peter.goos@ua.ac.be*.

13–17—RSS 2010 International Conference, Brighton & Hove, United Kingdom
The annual conference of the Royal Statistical Society will feature leading international speakers on highly topical subjects. The main conference will open on September 14, with preconference courses, and workshops on September 13, at the Brighton Centre. Contact Paul Gentry, 12 Errol Street, London EC1Y 8LX, London, International EC1Y 8LX, UK; +020 7614 3918, *conference@rss.org.uk; www.rss.org.uk/rss2010.*

19–22 —Applied Statistics 2010 (AS2010), Ribno (Bled), Ljubljana, Slovenia
The conference, organized in the vicinity of the beautiful Lake Bled, will provide an opportunity for researchers, data analysts, and other professionals to exchange their knowledge. Cross-discipline and applied paper submissions are welcome. Contact Andrej Blejec, Vecna pot 111, Ljubljana, International SI-1000, Slovenia; +386 59 232 789; *info.as@nib.si; conferences.nib.si/AS2010*.

24–26—Info-Metrics: Theory and Application, Washington, DC
Discuss and study the latest developments of Info-Metrics across the sciences. Generally speaking, info-metrics promotes the study of information processing and optimal decision rules based on efficient use of information. Conference topics include theory and methods and applications across the sciences. Examples include economics/econometrics (theory and applications), finance and risk management, philosophy of science, predictive games, natural sciences, and social sciences. Contact Amos Golan, 4400 Massachusetts Avenue NW, Washington, DC 20016; (202) 885-3783; *info-metrics@american.edu; www.american.edu/cas/economics/info-metrics/conference/index.cfm*.

October

20–22—International Conference on Modeling, Simulation, and Control 2010, San Francisco, California
This conference is held under the World Congress on Engineering and Computer Science, organized by the International Association of Engineers. For more information, visit *www.iaeng.org/WCECS2010/ICMSC2010.html* or contact IAENG Secretariat, Unit 1, 1/F, 37-39 Hung To Road, Hong Kong, International HK, Hong Kong; +852 3169 3427; *wcecs@iaeng.org*.

November

8–12—17th Annual Biopharmaceutical Applied Statistics Symposium, Hilton Head Island, South Carolina
This symposium provides a forum for pharmaceutical, medical, and regulatory science professionals to share timely and pertinent information concerning the application of biostatistics in biopharmaceutical environments. Contact Ruth Whitworth, P.O. Box 8015, Statesboro, GA 30460; (912) 478-7904; *bass@georgiasouthern.edu*.

10–13—2010 American Evaluation Association (AEA) Annual Conference, San Antonio, Texas
The American Evaluation Association invites evaluators to its annual conference November 13 at the Grand Hyatt San Antonio. The conference is broken down into 44 topical strands that examine the field from the vantage point of a particular methodology, context, or issue of interest to the field. Presentations may explore the conference theme or any aspect of the full breadth and depth of evaluation theory and practice. Contact Heidi Nye, 16 Sconticut Neck Road #290, Fairhaven, MA 02719; (888) 232-2275; *info@eval.org; www.eval.org/eval2010/default.asp.*

December

5–10—International Biometric Conference, Florianopolis, Brazil
This conference will bring together approximately 800 statisticians and others interested in the development and application of statistical and mathematical theory and methods to the biosciences. The meeting program includes oral and poster presentations of methodological advances, applications to specific subject-matter challenges, and educational offerings. Special celebratory events are planned. For more information, visit *www.rbras.org.br/~ibcfloripa2010* or contact Dee Ann Walker, 1444 I Street NW, Washington, DC 20005; (202) 712-9049; *info@tibs.org.*

6–10—Australian Statistical Conference 2010, Fremantle, West Australia
Delegates from all areas of work in statistics will be encouraged to communicate their knowledge and expertise and join world-class Australian and international statisticians to discuss new work. The theme for the 2010 conference, "Statistics in the West: Understanding Our World," provides opportunities for presentations on a range of topics. For more information, visit *www.statsoc.org.au* or contact Promaco Conventions, Unit 10, 22 Parry Avenue, Bateman, International 6150, Australia; +61 8 9332 2900; *promaco@promaco.com.au.*

2011

January

***5–7—2011 Living to 100 Symposium, Orlando, Florida**
This conference, held by the Society of Actuaries, will include thought leaders from around the world who will share ideas and knowledge about aging, changes in survival rates and their impact on society, and observed and projected increases in aging populations. For more information, visit *http://livingto100.soa.org* or contact Jan Schuh, 475 N. Martingale Road, Suite 600, Schaumburg, FL 60173; *jschuh@soa.org.*

5–7—Fourth International IMS/ISBA Joint Meeting, Park City, Utah
A central theme of this conference is Markov chain Monte Carlo and related methods and applications. The conference also will feature plenary speakers Jeff Rosenthal, Nicky Best, and Michael Newton and six invited sessions. Nightly poster sessions will be offered. Limited financial support for junior investigators is anticipated. The meeting will be accompanied by a satellite workshop on adaptive MCMC methods, intended to provide a snapshot of the methodological, practical, and theoretical aspects of an emerging group of methods that attempt to automatically optimize their performance for a given task. For details, visit *madison.byu.edu/mcmski/index.html* or contact Brad Carlin, MMC 303, Division of Biostatistics, School of Public Health, 420 Delaware Street SE, Minneapolis, MN 55455; (612) 624-6646; *brad@biostat.umn.edu.*

May

10–13—International Conference on Design of Experiments (ICODOE-2011), Memphis, Tennessee
The goal of this conference is to bring together leading researchers in design and analysis of experiments, including combinatorial design, and practitioners in the pharmaceutical, chemometrics, physical, biological, medical, social, psychological, economic, engineering, and manufacturing sciences. The conference will focus on emerging areas of research in experimental design and novel innovations in traditional areas. For more information, visit *www.msci.memphis.edu* or contact Manohar Aggarwal, 373 Dunn Hall, University of Memphis, Memphis, TN 38152; (901) 678-3756; *maggarwl@memphis.edu.*

June

20–24—Seventh International Conference on Mathematical Methods in Reliability, Beijing, China
This international conference will focus on theory, methods, and applications of reliability models and associated inferential issues. For more information, visit *www.mmr2011.cn* or contact Lirong Cui, Beijing Institute of Technology, School of Management and Economics, Beijing, International PRC, China; +1 905 525 9140; *Lirongcui@bit.edu.cn.*

26–29—ICSA 2011 Applied Statistics Symposium, New York, New York
For more information, contact Wei Zhang, 900 Ridgebury Road, Ridgefield, CT 06877; (203) 791-6684; *wei.zhang@boehringer-ingelheim.com.*

30–7/3—Statistics 2011 Canada/IMST-2011-FIM XX, Montréal, Quebec
This conference is dedicated to all areas of mathematical and statistical sciences. In addition to traditional theoretical/applied areas, interdisciplinary research is encouraged. Historically, this conference has concentrated on applied and theoretical statistics, Bayesian statistics, bioinformatics, biostatistics, combinatorics, computer and information sciences, design and analysis of experiments, ergodic theory, functional analysis, graph theory, multivariate analysis, number theory, partial differential equations, and topology. For more information, contact Yogendra Chaubey, 1455 de Maisonneuve Blvd. W., Montréal, Quebec H3G 1M8, Canada; +1 514 848 2424, ext. 3258; *stat2011@mathstat.concordia.ca.*

July

3–6—2nd IMS Asia Pacific Rim Meetings, Tokyo, Japan
This meeting series provides a forum for scientific communication and collaboration among researchers in Asia and the Pacific Rim. The program will cover a range of topics in statistics and probability, as well as recent developments and the state of the art in a variety of modern research topics and applications. For more information, contact Runze Li, Department of Statistics, The Penn State University, University Park, PA 16802-2111; (814) 865-1555; *ril4@psu.edu.*

***30–8/4—2011 Joint Statistical Meetings, Miami Beach, Florida**
JSM is the largest gathering of statisticians held in North America, attended by more than 5,000 people. Activities include paper and poster presentations, panel sessions, continuing education courses, exhibit hall, career placement service, society and section business meetings, committee meetings, social activities, and networking opportunities. For more information, visit *www.amstat.org/meetings* or contact ASA Meetings, 732 North Washington Street, Alexandria, VA 22314; (888) 231-3473; *meetings@amstat.org*.

September

4–8—11th European Network for Business and Industrial Statistics (ENBIS) Conference, Coimbra, Portugal
Theoretical and practical papers covering all areas of business and industrial statistics are invited. For more information, visit *www.enbis.org* or contact Marco P. Seabra dos Reis, Department of Chemical Engineering, University of Coimbra, Polo II, Rua Sílvio Lima, Coimbra, International 3030-790, Portugal; +351 239 798 700/727; *marco@eq.uc.pt.*

December

››28–31—International Conference on Advances in Probability and Statistics – Theory and Applications: A Celebration of N. Balakrishnan's 30 Years of Contributions to Statistics, Hong Kong, China
This conference will be held as a tribute to the statistician and global collaborative researcher N. Balakrishnan, for his 30 years of contribution to statistics. The conference will feature research topics inspired by his substantial contributions in such areas as distribution theory, reliability and lifetime data analysis, censoring methodology, and ordered data analysis. The conference aims to bring together researchers interested in theory as well as applications of probability and statistics to discuss recent developments and to suggest future research directions. For more information contact Hon Keung Tony Ng at *ngh@mail.smu.edu* or *http://faculty.smu.edu/ngh/icaps2011.html.* ■

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Employers are expected to acknowledge all responses resulting from publication of their ads. Personnel advertising is accepted only 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 web site at *www.amstat.org/jobweb.*

Arkansas

■ Experienced research assistant/associate to participate in expanding collaborative research activities. Qualifications: MS degree in biostatistics/statistics, 3+ years' experience, strong computing skills including extensive SAS experience, excellent oral/written communication skills; previous clinical trials experience desirable. Send application including CV/reference information to: RA Search, UAMS Department of Biostatistics, 4301 W. Markham, Slot 781, Little Rock, AR 72205. (501) 296-1556, *BiostatSearch@uams.edu*. UAMS is an Equal Opportunity Employer.

Illinois

■ Asst. professor. Responsibilities include collaboration w/multidisciplinary clinical research groups and some teaching. Doctorate in statistics/biostatistics required. Experience with longitudinal

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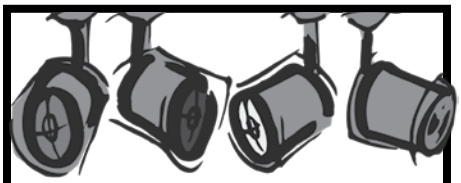
data analysis; strong communication and computer skills required; missing data and clinical trials experience a plus. Cover letter and CV to Elizabeth Avery, Dept. of Preventive Medicine, Rush University Medical Center, 1700 W. Van Buren, Suite 470, Chicago, IL 60612; *Elizabeth_F_Avery@rush.edu.* Rush University Medical Center is an EOE.

Massachusetts

■ MS biostatistician. Collaborate with medical and scientific researchers in design, analysis, and publication of cancer clinical trials and related research. Requirements: strong background in statistical principles, data analysis, computing (especially SAS and R), communication skills, and 1-2 years of experience. Send CV, names of three references to: MS Biostatistician Job Search, Biostatistics & Computational Biology, Dana-Farber Cancer Institute, 44 Binney



Member Spotlights

WANTED

The managing editor of *Amstat News* is searching for ASA members who are willing to put themselves in the spotlight and write a brief article about their life, to be published in an upcoming issue.

The article should be 1,000 or fewer words and contain professional and personal information. Please include a photo or two of yourself and email it to *Amstat News* Managing Editor Megan Murphy at *megan@amstat.org*.

Street, Boston, MA 02115; *biostatistics.job-search@jimmy.harvard.edu.* Dana-Farber Cancer Institute is an AA/EOE.

Ohio

■ Lubrizol's R&D Statistical Sciences Department is seeking applications for a statistician with interest and skills in predictive analytics. Requirements include a master's degree in statistics or closely related field, strong interest and skills in modeling, statistical programming, and problemsolving, and good oral and written communication skills. For further information, and to apply, please visit *www.lubrizol.jobs* and apply for the Statistician position. Lubrizol is an AA/EOE.

Pennsylvania

■ Postdoctoral fellow in statistical genetics within biostatistics division at

Internship Position

The Biostatistics department in Millennium Pharmaceuticals, Inc., the Takeda Oncology Company has an internship position open for the summer of 2010. Internship will begin in May/June with 12 weeks in duration. The successful candidate will be assigned a computational intensive project for an oncology clinical research project. Applicants must be a current PhD student with ≥2 years of PhD work in (bio) statistics. Proficiency in statistical modeling using SAS or R/S-plus is highly preferred. If interested, please email your resume to *Pamela.Whitehouse@MPI.com*

UNIVERSITY OF MIAMI

Faculty Position in Applied Statistics

The Department of Management Science invites applications for a tenure track position starting August 15, 2010. Applicants should possess a doctoral degree in statistics or related field. Applicants with a research focus in applied statistics, applied probability, or stochastic models are particularly encouraged to apply.

The Department of Management Science supports the operations research and applied statistics courses within the graduate and undergraduate programs of the School of Business. The School has superior physical facilities that include state-of-the-art computing and library resources and offers extremely competitive salaries. Additional information may be found at *www.miami.edu/jobs*.

To apply, send a detailed vita, three letters of reference, a statement of research and teaching interests, and copies of transcripts of graduate work to Chair of Search Committee, Department of Management Science, P.O. Box 248237, Coral Gables, FL 33124-6544. Review of applications will start immediately and will continue until the position is filled.

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University of Pennsylvania. The candidate will develop and implement statistical and computational methods for genetic studies. PhD degree in statistics, biostatistics, bioinformatics, computer sciences or other quantitative fields, and programming skills in C/C++/Perl and at least one statistical package are required. To apply, send CV, publication reprints, 3 references to *ruifeng@upenn.edu. www.med.upenn.edu/apps/my/bpp_postings/index.php?pid=12031.* University of Pennsylvania is an AA/EOE.

Washington

■ Chief scientific officer. Outstanding opportunity to guide the scientific direction while helping expand current and future collaborations of Cancer Research and Biostatistics (CRAB), an internationally recognized biostatistical oncology research organization. CRAB provides a complete suite of clinical trial services with over 80 employees including 10 PhD and MS biostatisticians. Learn more about this new, exciting position at CRAB by visiting *www.crab.org.* Cancer Research and Biostatistics is an AA/EOE.

■ Biostatistican II. Excellent opportunity to join Cancer Research and Biostatistics (CRAB), an internationally recognized biostatistical oncology research organization located in Seattle. Join our group of PhD and MS biostatisticians to work on cutting edge, multiple-centered clinical trial research. You will collaborate with staff and PIs to design, evaluate, and interpret clinical studies. MS in biostatistics, statistics or related field required. For more information visit *www.crab.org.* Cancer Research and Biostatistics is an AA/EOE. ■

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Chapters are the grass roots of the ASA, which is why we are challenging our chapters to help increase membership with the Chapter-Get-A-Member campaign. Visit *www.amstat.org/membership/cgm.*

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Back issues of ASA publications may be ordered by sending an email to *asainfo@amstat.org.*

Books

■ ***Making Sense of Statistical Studies*** provides hands-on investigations to help students design and analyze statistical studies. Visit *www.amstat.org/education/msss.*

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■ ***Teaching Statistics: Resources for Undergraduate Instructors*** is a publication of the ASA and the Mathematical Association of America. For more information, visit *www.amstat.org/publications/booksandcds.cfm.*

■ ***Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report: A Pre-K–12 Curriculum Framework*** provides a conceptual framework for K–12 statistics education and a coherent picture of the overall curriculum. For more information, visit *www.amstat.org/education/gaise.*

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The ASA publishes brochures on topics of interest to professional statisticians and those who want to explore the field of statistics. Many brochures are available at no charge or for a nominal fee. For more information and to order, visit *www.amstat.org/ASAStore/Brochures_C104.cfm.*

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ASA members can purchase access to the JSTOR database of *JASA, TAS, Technometrics, JBES,* and *JCGS.* JSTOR is a web archive of every issue of these publications, with the exception of the most recent five years. To purchase access, visit *www.amstat.org/publications/pdfs/JSTORSpecialOffer.pdf.*

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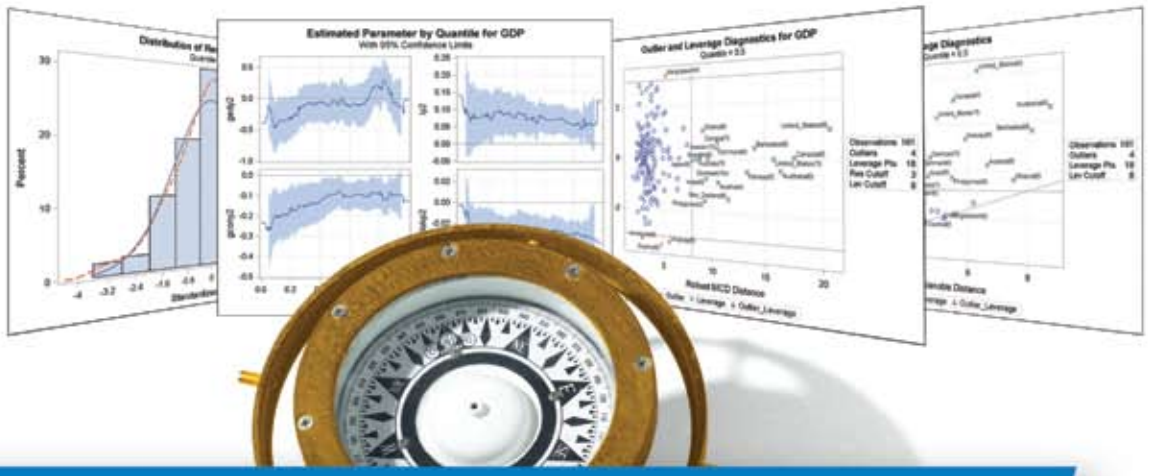

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