



# WSS NEWS

WASHINGTON  
STATISTICAL  
SOCIETY

June 2004

## MESSAGE FROM THE PRESIDENT

I want to point out two important events that will occur during June. On Friday June 4<sup>th</sup>, the Presidential Invited Session will be a talk by Andrew Kohut, Director of the Pew Research Center for The People and The Press. You may recognize him from being a regular commentator on All Things Considered, The News Hour with Jim Lehrer, or in the New York Times. Andy Kohut is also past President of AAPOR and of the Gallup Organization. His talk should be very enjoyable, and will be followed by a reception at the Union Station Grill to which all attendees are invited. The session is at a special time, 3:00 on Friday afternoon, so come and enjoy the talk and the company of your fellow WSS members. More details on the session can be found inside.

Tuesday evening, June 15<sup>th</sup>, will be the WSS Annual Dinner at Maggiano's Little Italy restaurant in Friendship Heights. Our guest speaker, and recipient of the second annual Gertrude M. Cox award, will be Prof. Alan Zaslavsky of Harvard University. Alan is an excellent speaker who regularly advised the Federal government on statistical methods. His talk will be "Tracking health care quality across space and time: Why we like really big surveys". The annual dinner is always a lot of fun, with time to share a relaxed drink and food with your friends. The winners of our annual elections and other awards will also be announced. I look forward to seeing you at both events.

Also, don't forget that the June meeting of the WSS Board of Directors is always open to any member who would like to attend. It will be 12:30-2:00 on Tuesday June 29<sup>th</sup>, in the BLS Conference Center.

Thank you,  
David Marker

<b>WSS and Other Seminars</b> (All events are open to any interested persons)	
<b>June 4 Fri.</b>	<b>Presidential Invited Address Some Observations on Response Rate Experiments</b>
<b>8 Tues.</b>	<b>Statistics of Tectonic Plate Reconstructions</b>
<b>18 Fri.</b>	<b>Household Survey Nonresponse - What Do We Know? What Can We Do?</b>
<b>21 Mon.</b>	<b>Third Annual Seminar of the Funding Opportunity In Survey and Statistical Research</b>
<b>24 . Thurs.</b>	<b>Quantifying What a Representative Sample Is</b>

Also available on the World Wide Web at the following URL: <http://www.science.gmu.edu/~wss>

## Announcements

### 2004 Annual Dinner

The WSS Annual Dinner will be held Tuesday, June 15, at Maggiano's Little Italy Restaurant located on Wisconsin Avenue in Washington, DC across the street from the Mazza Gallerie. Please see the enclosed flyer for details and a reservation form .

This is a great opportunity to join with friends, meet colleagues, and make new acquaintances! All are invited. We look forward to seeing you there!

### SIGSTAT Topics for Spring 2004

June 9, 2004: PROC MIXED - Part 6: Generalized Linear Models & Generalized Linear Mixed Models (<http://www.sas.com>)

Continuing the topic begun in October 2003, the difference between general linear models and models using generalized estimating equations (GEE's) is covered. The available correlation structures in PROC GENMOD are discussed and GENMOD is used to fit a longitudinal data model. Finally, the concepts behind generalized linear mixed models are discussed and a longitudinal data model is fit using the GLIMMIX macro.

**SIGSTAT** is the Special Interest Group in Statistics for the **CPCUG**, the Capital PC User Group, and **WINFORMS**, the Washington Institute for Operations Research Service and Management Science.

All meetings are in Room S3031, 1800 M St, NW from 12:30 to 1:30. Enter the South Tower & take the elevator to the 3<sup>rd</sup> floor to check in at the guard's desk.

First-time attendees should contact Charlie Hallahan, 202-694-5051, [hallahan@ers.usda.gov](mailto:hallahan@ers.usda.gov), and leave their name. Directions to the building & many links of statistical interest can be found at the **SIGSTAT** website, <http://www.cpcug.org/user/sigstat/>.

### Beth A. Kilss to Receive the Jeanne E. Griffith Mentoring Award

The Jeanne E. Griffith Award Committee is pleased to announce that this year's award has been given to Beth A. Kilss, Supervisory Statistician and Chief, Statistical Data Section, Special Studies Branch of the Statistics of Income Division of the Internal Revenue Service.

Beth's accomplishments, which are extensive, numerous, deep and thoughtful, include:

- \* Mentoring and developing her immediate staff
- \* Assistance in developing and mentoring other SOI staff
- \* Encouragement and support for training and development
- \* Support for statistical interagency mentoring activities

The award ceremony honoring Beth Kilss will take place on June 16, 2004 at 4:00 in the Conference Center at the Bureau of Labor Statistics (BLS). Refreshments will be served. If you are planning to attend, kindly contact Ed Spar at [copafs@aol.com](mailto:copafs@aol.com) so that your name can be added to the security list. BLS is located just across the street from Union Station in the Postal Square Building.

### 2004 SCIENCE FAIR WINNERS

WSS presented awards to 52 Washington area students at five regional science fairs this spring (District of Columbia, Fairfax County, Montgomery County, Northern Virginia, Prince George's County). Since 1986, WSS has been recognizing students whose projects demonstrate excellence in the application of statistical methods. Since 1996, The Gallup Organization has made an annual donation of \$1000 for prizes. This year, a total of \$550 was divided among 6 first place winners (prizes ranged between \$50 and \$150) and the balance will be used to purchase ASA school memberships for the winners' schools. There were 9 second place winners and each received a copy of Statistics: A Guide to the Unknown, by Tanur, et al. All first and second place winners will also receive a one-year subscription to *STATS* magazine. Others received certificates of honorable mention.

The judging was coordinated by Lee Abramson. Thanks to all WSS members who volunteered as judges. They are: Dwight Brock\*, Gene Burns, Promod Chandhook, Bill Cleveland, Bob Clickner\*, David Des Jardins, Bin Duan, Brenda Edwards, Mike Fay, Gloria Gridley, Gene Heyman, Donsig Jang, Tzu-Cheg Kao, Jurate Landwehr, Lou Mariano, Michael Messner, Stephen Miller, Steve Miller, Arnold Reznak, John Rogers, Fritz Scheuren\*, Sid Schwartz, Stuart Scott\*, Mike Stoto, Glenn White\* and David Whitford.

\* Chief Judge

## Presidential Invited Address

- Title:** Some Observations on Response Rate Experiments
- Speaker:** Andrew Kohut,  
Director of the Pew Research Center for The People and The Press
- Chair:** David Marker, Westat
- Date/Time:** Friday, June 4, 2004, 3:00 - 4:30 p.m. NOTE THE SPECIAL TIME!
- Location:** Bureau of Labor Statistics, Postal Square Building (PSB), Conference Center, Room 9, 2 Massachusetts Ave., N.W., Washington, D.C. Please use the First Street entrance to the PSB. To gain entrance to BLS, please see notice at the end of this announcement.
- Co-Sponsors:** DC-AAPOR
- Abstract:** Surveys have become harder to conduct than just a few years ago. Yet a new survey experiment shows that carefully designed and implemented surveys continue to obtain representative samples of the public and provide accurate data about the opinions and experiences of Americans.

Andrew Kohut has been conducting surveys since the 1960s. He was President of the Gallup Organization from 1979 to 1989; President of the American Association for Public Opinion Research (AAPOR) 1994-95; and currently is the Director of the Pew Research Center. In addition to their many domestic surveys, the Pew Research Center has been conducting surveys in over 40 countries, measuring attitudes about the United States and its policies. He is a regular contributor on NPR's "All Things Considered" and PBS' "The News Hour with Tom Lehrer."

His presentation will examine the impact of falling response rates on surveys. Are we still including representative samples? What types of studies are more likely to be adversely affected by the lower rates? The effect of lower response rates varies by subject matter and intended use of the data. He will report on recent surveys done by the Pew Research Center to examine these issues.

A reception with a cash bar will follow at Union Station from 4:30 to 5:30. Mr. Kohut will be happy to answer questions concerning this topic or the other surveys conducted by Pew.

### NOTICE

To attend seminars at BLS, you need to email your name, affiliation, and title of the seminar to [wss\\_seminar@bls.gov](mailto:wss_seminar@bls.gov) (underscore between "wss" and "seminar") by noon at least two days in advance, or call 202-691-7524 and leave a message. Bring a photo id to the seminar. A new list begins April 1, 2004. Once you are on the list you need not contact BLS for seminars through June 30, 2004. BLS is located at 2 Massachusetts Ave NE. Take the Red Line to Union Station.

## Program Announcement

**Title:** **Statistics of Tectonic Plate Reconstructions**

**Speaker:** Ted Chang, Department of Statistics, University of Virginia, and National Agricultural Statistical Service

**Chair:** Amrut Champaneri, Bureau of Transportation Statistics

**Date/Time:** Tuesday, June 8, 2004, 12:30-2:00 PM

**Location:** Bureau of Labor Statistics, Postal Square Building (PSB), Conference Center, Conference Room 10, 2 Massachusetts Ave., N.W., Washington, D.C. Please use the First Street entrance to the PSB. To gain entrance to BLS, please see Notice at the end of this announcement.

**Sponsor:** WSS Quality Assurance and Physical Sciences Section

**Abstract:** In 1960, Hess proposed the theory of sea floor spreading: that new ocean crust is formed by magma welling up from the interior of the earth and cooling as it reached the surface at mid-ocean ridges. This crust is carried across the bottom of the ocean floor until it is subducted in trenches. Thus the surface of the earth is, to first approximation, composed of tectonic plates which move rigidly away from the mid-ocean ridges. The molten magma acquires a magnetization whose direction depends upon the Earth's magnetic field at the time that it reaches the surface. Periodically in the past the North magnetic pole has flipped to close to the South geographic pole, resulting in the so called marine magnetic anomaly lineations. These marine magnetic anomaly lineations provide the best information to reconstruct the past position of tectonic plates. We will discuss the statistical errors in these reconstructions.

The relative position of two tectonic plates at a fixed time in the past is given by a 3-dimensional rotation matrix. Similar statistical issues arise in the estimation of an unknown 3 dimensional coordinate system, a problem which has arisen in other engineering contexts and in image analysis. We will focus on some general statistical principles that would apply in these other problems.

In estimating these reconstructions, the shapes of the lineations become a nuisance parameter and hence a parsimonious model for their shapes becomes necessary.

Previous models assumed a piecewise great circular shape, however, as the data density has increased, these models become untenable. We will discuss some recent results on the use of an Ornstein-Uhlenbeck process to model these shapes.

No geophysical background will be needed. If time allows, we will show that statisticians can also have fun with some slides of a geophysical data collection cruise in the Indian Ocean.

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NOTICE  
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To attend this seminar, you will need to do one of the following:

e-mail name, affiliation, and name of seminar to  
wss\_seminar@bls.gov (underscore after 'wss') by noon 1 day ahead

OR

call 202-691-7524 at least 2 days ahead and leave a message.  
Finally, bring a photo ID.

## Program Announcement

Committee on National Statistics  
Seminar Announcement:  
Survey Nonresponse  
and Related OMB Guidance

- Title:** Household Survey Nonresponse - What Do We Know? What Can We Do?
- Speakers:** Robert Groves, University of Michigan  
Brian Harris-Kojetin, U.S. Office of Management and Budget
- Discussants:** Kenneth Prewitt, Columbia University  
William Kalsbeek, University of North Carolina
- Date/Time:** June 18, 2004, Friday, 3:00 - 4:30 p.m.  
Coffee, Tea, and Cookies available at 2:30 p.m.  
Reception to follow seminar at 4:30 p.m.
- Location:** Keck Center of the National Academies, Lecture Room (Room 100), 500 Fifth Street, NW. The Keck Center is located on the block bounded by Fifth, Sixth, E, and F Streets, NW. It is located diagonally opposite the MCI Center and the National Building Museum. The pedestrian entrance is on the Fifth Street side of the building, near the north end. The garage entrance is on the Sixth Street side; visitor parking is on the first level, and the elevator to the lobby level is marked. The building is conveniently located on Metrorail. From the Gallery Place/Chinatown station (Red/Yellow/Green), use the 7th Street/Arena exit and walk two blocks east. From Judiciary Square (Red), use the Law Enforcement Memorial exit and walk one-half block west.
- Sponsor:** The Committee on National Statistics, the National Academies
- Abstract:** Gaining the public's cooperation with household surveys is becoming more and more difficult, resulting in reduced response rates and higher field costs. Concerns about household survey nonresponse have been the subject of much discussion among federal statistical agencies as well as private and academic survey researchers. The U.S. Office of Management and Budget (OMB) is in the process of revising two statistical policy directives on standards for statistical surveys and publication of statistics that were last issued in 1978. OMB is also preparing guidance for agencies on OMB's review of surveys under the Paperwork Reduction Act. Both of these documents address issues of survey nonresponse. This seminar will first review recent research on survey nonresponse and linkages to error properties of statistics. An overview of the draft OMB documents relevant to the treatment of survey nonresponse will then be presented. Remarks by two discussants will be followed by questions from the floor.

**All are welcome to attend the seminar, but you must RSVP by June 15, 2004, for security purposes.**

To RSVP, or for further information, please contact Christine Covington Chen at (202) 334-3096 or e-mail [cnstat@nas.edu](mailto:cnstat@nas.edu).

## Program Announcement

- Title:** Third Annual Seminar of the Funding Opportunity In Survey and Statistical Research
- Organizers:** Robert Fay (robert.e.fay.iii@census.gov) and Monroe Sirken, Research Subcommittee of the Federal Committee on Statistical Methodology
- Chair:** Katherine Wallman, Chief Statistician OMB
- Date/Time:** Monday, June 21, 2004, 9:00 A.M.- 4:00 P.M. (NOTE SPECIAL TIME)
- Sponsors:** Washington Statistical Society, and Washington DC/Baltimore Chapter AAPOR
- Location:** Bureau of Labor Statistics, Postal Square Building (PSB), Conference Center, Rooms 1,2, and 3,2 Massachusetts Ave. N.W., Washington, D.C. Please use the First Street entrance to the PSB. To gain entrance to PSB, please see the notice at the end of this announcement.
- Abstract:** Since 1998, 12 Federal statistical agencies in collaboration with the National Science Foundation with support of the Federal Committee on Statistical Methodology have been funding and administrating The Funding Opportunity in Survey and Statistical Research, a problem oriented research grants program oriented to the needs of the Federal Statistical System. The Third Annual Seminar of the Funding Opportunity features the reports of the principal investigators of 4 research projects that were funded in 2002.
1. "Identifying Causal Mechanisms Underlying Nonignorable Unit Nonresponse Through Refusals to Surveys" by Robert Groves, Mick Couper, Elinore Singer, and Stanley Presser.
  2. "Testing for Marginal Dependence Between Two or More Multiple-Response Categorical Variables" by Thomas M. Loughin and Christopher R. Bilder.
  3. "Theory and Methods for Nonparametric Survey Regression Estimation" by Jean D. Opsomer and F. Jay Breidt.
  4. "A Comparison of RDD and Cellular Telephone Survey" by Charlotte Steeh.
- Federal agency statisticians and survey methodologists will be discussants of each report

### Notice about Seminars at the Bureau of Labor Statistics

To attend seminars at BLS, you need to email your name, affiliation, and title of the seminar to ["wss\\_seminar@bls.gov"](mailto:wss_seminar@bls.gov) by noon at least two days in advance, or call 202-691-7524 and leave message. Bring photo to the seminar.

### Note from the WSS NEWS Editor

Items for publication in the August 2004 WSS NEWS should be submitted no later than July 27, 2004. E-mail items to

# Agenda

**The Third Annual Funding Opportunity in Survey and Statistical Research Seminar**  
Conference and Training Center, Bureau of Labor Statistics  
Agenda  
June 21, 2004

- 9:00 Registration and Continental Breakfast
- 9:30 Welcoming Remarks  
Katherine K. Wallman, OMB
- 9:35 Session 1. Identifying Causal Mechanisms Underlying Nonignorable Unit Nonresponse Through Refusals to Surveys  
Investigators: Robert Groves, Mick Cooper, Elinore Singer, and Stanley Presser - University of Michigan  
Discussant: to be selected
- 10:30 Break
- 10:45 Session 2. Testing for Marginal Dependence Between Two or More Multiple-Response Categorical Variables  
Investigators: Thomas M. Loughin - Kansas State University ,and Christopher R. Bilder - Oklahoma State University  
Discussant: to be selected
- 11:45 Lunch on your own
- 1:00 Session 3. Theory and Methods for Nonparametric Survey Regression Estimation  
Investigators: Jean D. Oppenheimer - Iowa State University, and E. Jay Breidt - Colorado State University  
Discussant: to be selected
- 2:00 Session 4. A Comparison of RDD and Cellular Telephone Surveys  
Investigator: Charlotte Steeh - Georgia State University  
Discussant: to be selected
- 3:00 Break
- 3:15 Session 5 Seminar's Discussant: Graham Kalton - Westat

## Program Announcement

- Title:** Quantifying What a Representative Sample Is
- Speakers:** Mary Batchler, Ernst and Young LLP  
Susan Hinkins, NORC, University of Chicago  
Chris Moriarity, U.S. General Accounting Office
- Chair:** Fritz Scheuren, NORC, University of Chicago
- Date/Time:** Thursday, June 24, 2004, 12:30 - 2:00 p.m.
- Location:** Bureau of Labor Statistics, Postal Square Building (PSB), Conference Center, Room 10, 2 Massachusetts Ave., N.W., Washington, D.C. Please use the First Street entrance to the PSB. To gain entrance to BLS, please see notice at the end of this announcement.
- Co-Sponsors:** WSS Methodology and Computing Sections
- Abstract:** In this last seminar in the series, we return to Royall's original formulation and attempt to describe what it means to have a "representative balanced sample." Intuitively the extent to which a sample may be said to be "representative" is a function of many factors -- including the size of the sample, the sample's design and the nature of the population. The use of mass imputation is employed to focus on where the sample is "representative." Formally we expand Royall's original idea to quantify the degree to which a given sample is representative. The way we approach this is to massively employ nearest-neighbor imputation to connect the balanced sample drawn with the population elements by matching the two together on the frame variables. The degree to which a close match can be said to exist is then taken to be a measure of the sample's representativeness. This formulation focuses the sampler on the portion of the population not being "covered" or not closely matched, and exposes the need in a very explicit way to engage in model-based inference. In our formulation the blend between conventional sampling inference and modeling is being determined by data, not by theoretical arguments. It is conjectured that conventional sampling inference is best employed only for that part of the population that can be "covered" by the matching.

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## Course Announcement

The Statistics Department at The George Washington University will offer the following Graduate Course in Fall 2004 (September 1 – December 22, 2004). Enhance your statistical analysis skills by taking one or more of these courses. Registering as a non-degree student is easy - please visit [www.gwu.edu/~regweb/](http://www.gwu.edu/~regweb/) and click on 'Non-Degree Registration Information' for all relevant information. For questions or further information please contact Dr. Tapan Nayak, e-mail: [tapan@gwu.edu](mailto:tapan@gwu.edu), ph: 202-994-6888.

**Statistics 201. Mathematical Statistics.** Thursday, 6:10pm-8:40pm., Instructor: Dr. K. Ghosh. This is the first part of a two-part graduate level series in Mathematical Statistics. The objective of the course is to introduce students to the concepts of probability that are useful for understanding statistical theory (the course continues on to Stat 202 in Spring, which deals with the theory of statistical inference). Topics to be covered in Stat 201 include basics of probability theory (including conditional probability, Bayes theorem, random variables, density and mass functions), univariate transformations, expected values, moment generating functions, common probability distributions (including binomial, normal, uniform), multivariate distributions and transformations, covariance, inequalities and sampling distributions. This is roughly chapters 1 through 5 of the text: *Statistical Inference* (2<sup>nd</sup> Ed.) by Casella, G. and Berger, R. L.; Duxbury Press, CA.

**Statistics 215. Applied Multivariate Analysis.** Tuesday, 6:10pm-8:40pm., Instructor: Dr. R. Modarres. This course is intended for students interested in statistical analysis of several variables, most likely dependent, following a joint normal distribution. It covers inferential and descriptive multivariate techniques, including the multivariate normal distribution, assessing the assumption of normality, transformations to near normality, Hotelling test for the mean vector, confidence regions and simultaneous comparisons of component means, missing observations and the EM algorithm, comparisons of several multivariate means, one and two-way MANOVA, profile and principal components analysis

**Statistics 217. Design of Experiments.** Wednesday, 6:10pm-8:40pm., Instructor: Dr. E. Bura. This course is a graduate level introduction to Design of Experiments, an area of statistics concerned with the planning of scientific investigation. The main components of an experimental design are the selection of the independent and dependent variables to be studied, determination of sample size, and allocation of experimental units to experimental treatments.

**Statistics 225. Fundamentals of Biostatistics.** Thursday, 6:10pm-8:40pm., Instructor: Dr. Y. Lai. This course provides a review of the core biostatistical methods for asymptotically efficient tests and estimates of relative risks and odds ratios from prospective and retrospective, matched and unmatched studies.

**Stat 227. Survival Analysis.** Wednesday, 6:10pm-8:40pm., Instructor: Dr. Ping Hu. This course will discuss parametric and nonparametric methods for the analyses of events observed in time (survival data). Topics include: survival distributions, Kaplan-Meier estimate of survival functions, Greenwood's formula, Mantel-Haenszel test, logrank and generalized logrank tests, Cox proportional hazards model, parametric regression models, and power and sample size calculations for survival analysis.

**Stat 257. Probability.** Wednesday, 6:10pm-8:40pm., Instructor: Dr. S. Balaji. This course will discuss rigorous modern measure-theoretic probability. No prior knowledge of measure theory is assumed; the necessary concepts will be developed as necessary. Topics to be covered include: Sigma fields and Probability measures, Probability Axioms, Lebesgue integration and expectation, Measure-theoretic independence, Borel-Cantelli Lemmas, Modes of probabilistic convergence, Weak and strong laws of large numbers, and Central limit theorems.

**Stat 262. Nonparametric Inference.** Thursday, 6:10pm-8:40pm., Instructor: Dr. S. Kundu. This course will discuss inferential methods when the form of the underlying distribution is not specified or is only partially specified. Topics to be covered in this course include: U-statistics, rank tests, locally most powerful rank tests, one and two-sample tests, asymptotic distribution theory, asymptotic relative efficiency, nonparametric point estimates and confidence intervals, goodness of fit tests.

**Stat 263. Advanced Statistical Theory I.** Tuesday, 6:10pm-8:40pm., Instructor: Dr. T. Nayak. This is an advanced course on principles and theory of statistical inference. Topics include: sufficiency, ancillarity, completeness, unbiased estimation, Cramer-Rao inequality, Bayesian estimation, admissibility, hypotheses testing.

**Stat 287. Modern Theory of Survey Sampling.** Monday, 6:10pm-8:40pm., Instructor: Dr. P. Chandhok. The main objectives of the course are to provide a rigorous treatment of sampling theory and its applications. This course will introduce the following topics: simple random sampling with and without replacement, systematic sampling, unequal probability sampling with and without replacement, ratio estimation, difference estimation and regression estimation.

**Stat 289. Statistical Method for Genetics.** Monday, 6:10pm-8:40pm., Instructor: Dr. Z. Li. There are three objectives of this course: 1) to provide an introduction of quantitative genetics for students without any genetics background; 2) to give a rigorous statistical treatment of some genetic problems; 3) to introduce current research topics in the area of statistical methods for genetic analysis.

## Employment

As a service to local statisticians, WSS News provides notification of employment opportunities and description of those seeking employment here in the Washington, DC, area. Readers are encouraged to take advantage of this feature of the newsletter. The deadline for inserting notices is five (5) weeks before the publication date. Those interested should email or call Anne Peterson, at [apeterson@insightpolicy.com](mailto:apeterson@insightpolicy.com) or (703) 387-3032.

### **CLINICAL TRIAL BIOSTATISTICIANS M.S. and Ph.D. Level Positions**

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

The Biostatistics Center of The George Washington University, founded in 1972, is a leader in the statistical coordination of clinical trials conducted by the National Institutes of Health. We enjoy over \$45 million per year of NIH research funding for major studies in cardiovascular disease, diabetes, maternal/fetal medicine, osteoporosis, urology, and the genetic basis for various diseases. The center has a staff of 124 with 26 biostatisticians/epidemiologists, including 9 faculty. We are recruiting MS and Ph.D. level staff to participate in these and future studies. Please visit our web site (below).

We are seeking individuals who want to join a highly competent team of academic biostatisticians and epidemiologists; who desire to contribute to the design and analysis of major medical studies, seek substantive scientific and statistical responsibility, enjoy interacting with medical investigators; take pride contributing to the publication of major papers in leading medical journals, and desire to make an impact on the public health. Our faculty also participate in graduate programs in biostatistics, epidemiology and statistics which afford opportunities for teaching at the graduate level. The research projects also provide an environment rich in methodological problems, with opportunities for collaboration with research active Center faculty and graduate students.

Assistant to Full Research Professorial Positions: (3 or more openings): Ph.D. level positions available immediately to serve as Associate Project Director (Co-Investigator) or future Project Director (Principal Investigator). Minimum Requirements: Doctorate in Biostatistics, Statistics or Epidemiology, 1-5 years' experience with clinical trials, especially study design and statistical analysis of study results using SAS, excellent oral and written English communication skills, and supervisory

experience. Review of applications has been ongoing since June 2002 and will continue until all positions are filled.

Master's Level Research Position: (1 or more)  
Minimum Requirements: Master's in Biostatistics or Statistics and 1-5 years experience in analysis, supervision of data management and study design for biomedical applications. Good written and oral communication skills, and detailed knowledge of SAS required.

Rank/position title and salary commensurate with experience and qualifications. Tuition benefits for employee (including Ph.D. in Statistics, Biostatistics and Epidemiology) and for spouse and dependent children. Letter and CV to: Colleen Foster, HR Manger, The George Washington University Biostatistics Center, 6110 Executive Blvd., Suite 750, Rockville, MD 20852. No phone calls please. [HTTP://WWW.BSC.GWU.EDU](http://www.bsc.gwu.edu)

The George Washington University is an Equal Opportunity/Affirmative Action employer

### **Senior Scientist**

Delmarva Foundation is searching for a Sr. Scientist, who will be responsible for using advanced statistical techniques to identify aberrant patterns of care and reimbursement using Medicare claims data. The Sr. Scientist will serve as a mentor to Scientists and Analysts within the organization and must have the ability to communicate complex verbal and written messages to technical and non-technical individuals.

The ideal candidate must possess extensive technical and analytical skills with fluency in SAS programming as well as strong attention to detail. Hands on experience doing data mining and analysis of large claims databases. Additionally, they must be able to work well as a part of a collaborative group and have the ability to also work independently. Strong presentation and training skills are a must since this person will be presenting on a National level and representing the organization at hearings. PhD required. Delmarva requests all applicants submit non-returnable writing and SAS samples for review.

Delmarva Foundation for Medical Care, Inc., is a highly successful and rapidly growing not-for-profit company with a passion for excellence and over 30 years of experience in health care. We are headquartered in Easton, a town consistently rated as one of the top ten best places to live in America for quality of life. The Eastern shore has long been a popular

destination for vacation and weekend getaways. Working with Delmarva you can have access to this lifestyle year-round. Here, on the Chesapeake Bay, in addition to the beaches you'll find endless recreational opportunities - like boating, swimming, bicycling, golf, tennis, hunting, fishing, crabbing and ice skating. The area has a rich history, wonderful dining, diverse cultural opportunities, outstanding schools and affordable housing.

We offer an attractive compensation package with the opportunity for professional growth. To learn more about Delmarva or to view our generous benefits package, visit our website at [www.delmarvafoundation.org](http://www.delmarvafoundation.org). For immediate consideration, please visit website for our on line application or submit resume, writing samples and your salary requirements to: Delmarva Foundation, 7240 Parkway Drive, ste 400, Hanover MD 21076; Fax 410-712-4357; [resume@dfmc.org](mailto:resume@dfmc.org) Affirming equal opportunity in principle and practice, Delmarva is an equal opportunity employer, committed to developing a diverse workforce.

#### **DISCLOSURE AVOIDANCE RESEARCH POSITION**

Applications and nominations are invited for one permanent position in the Statistical Research Division at the U.S. Census Bureau in the Washington, D.C. area. This position is an integral part of a research program aimed at identifying, testing, and implementing statistical disclosure control strategies, in order to effectively protect the confidentiality of survey and census participants. The principal duties include the development of statistical approaches and computational algorithms to identify disclosure risk. The development of data retrieval and data integration approaches will be a key component of the work. These approaches must be incorporated in easy-to-use software. Other responsibilities include data analysis, documentation, and the presentation of results in scientific journals and at meetings.

Requirements: At least a masters degree in a relevant field such as Statistics, Mathematics, or Computer Science. Experience in computer programming including knowledge of Java, C++, or C is required. Must be able to create and design user-friendly software. Excellent communication and interpersonal skills are necessary. The salary range is \$46,175 to \$73,546 depending on qualifications and experience. U.S. citizenship is required.

For further information or to start the application process for this position in Disclosure Avoidance, apply on-line at <http://www.census.gov/hrd/www/vacancy/nmathst2.html>. Follow the instructions for electronic applications, and submit your resume and transcripts to 1-800-601-8952. If you have

questions, please contact the Census Bureau's Recruitment Branch at 1-800-638-6719.

The Census Bureau Is an Equal Opportunity Employer.

#### **PSYCHOMETRICIANS/STATISTICIANS - EDUCATION ASSESSMENT**

The Education Assessment Program of the American Institutes for Research provides assessment-related services that assist states and school districts in implementing standards-based education and improving student learning. We seek experienced sychometricians, statisticians, and quantitative psychologists to work on student assessment projects. These positions will be focused on applying quantitative research methods and statistical and psychometric analyses to the project data. The successful candidates will have professional experience in test development, scaling, equating, validity research, and classical and modern test theory, methods and applications.

Ph.D. required in Education Measurement, Psychometrics, Statistics, Psychological Measurement, or related field with an emphasis on quantitative analysis or psychometrics. The ideal candidate will bring a solid understanding of the statistical foundations of the procedures they use, and be prepared to improve on existing methods. Training or background in sampling theory is a plus. Successful candidates should possess strong computer skills and experience with statistical packages such as SAS, SPSS and/or IRT scaling packages, such as WINSTEPS, BILOG, PARSCALE, and/or other test scaling and analysis programs. Excellent writing skills and strong oral and interpersonal skills required.

Position require an ability to work collaboratively with other experts as part of a test development team. AIR offers excellent compensation package and benefits. Some travel required. Central location in Georgetown, Washington, DC. Please e-mail resume with cover letter, availability, and independently written and edited writing sample to [resumes@air.org](mailto:resumes@air.org), subject line: "Psychometrician" or forward to: Human Resources AST04115, American Institutes for Research, 1000 Thomas Jefferson Street, N.W., Washington, DC 0007; email: [resumes@air.org](mailto:resumes@air.org); website: [www.air.org](http://www.air.org). EEO



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