



WSS NEWS

WASHINGTON
STATISTICAL
SOCIETY

January 2004

THE JEANNE E. GRIFFITH MENTORING AWARD

The Jeanne E. Griffith Mentoring Award has been established to encourage mentoring of younger staff in the Federal statistical system. It is presented annually, beginning in 2003, to a supervisor who is nominated by co-workers and supervisors, and chosen by the Award Selection Committee.

The award is co-sponsored by the Interagency Council on Statistical Policy, the Council for Excellence in Government, the Washington Statistical Society, the Social Statistics and Government Statistics Sections of the American Statistical Association, and the Council of Professional Associations on Federal Statistics.

Nominations for 2004 will be accepted beginning in November 2003. The last date for submission of nominations is April 1, 2004, and the Award Committee will make its determination of the award winner by May 1, 2004. The award will consist of a \$1000 honorarium and a citation, which will be presented at a ceremony arranged by the co-sponsors in June 2004. The winning mentor will be selected for his or her efforts in supporting the work and developing the careers of younger staff.

For further information on the award, contact Ed Spar, Council of Professional Associations on Federal Statistics (COPAFS) by phone: 703-836-0404; fax: 703-684-3410; or by e-mail at copafs@aol.com. The nomination cover sheet and guidelines—or a photocopy of it—should be attached to a nomination memorandum or letter. Forms can be obtained by contacting Ed Spar, or by downloading from the COPAFS website at <http://www.copafs.org>. All nominations should be returned to the Jeanne E. Griffith Mentoring Award Committee, c/o COPAFS, 1429 Duke Street, Alexandria, VA 22314 no later than April 1, 2004.

WSS and Other Seminars (All events are open to any interested persons)	
January	
14 Wed.	Clive Granger, Cointegration, and the Nobel Prize in Economics
20 Tues.	Calibration with Multiple Constraints
February	
11 Wed.	A New Price Index for Air Travel
17 Tues.	Student-t Based Interval Estimation of Complex Statistics Under Calibration Weighting
18 Wed.	Biosurveillance Geoinformatics of Hotspot Detection and Prioritization for Biosecurity

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

Announcements

JUDGES FOR THE 2004 SCIENCE FAIRS

Volunteers are needed to represent the Washington Statistical Society next spring as judges in five regional science fairs in Northern Virginia, suburban Maryland and the District of Columbia. Since 1986, WSS has provided special awards at these fairs to students whose projects demonstrate excellence in data analysis or the application of statistical methods. Those who have participated in this activity have very much enjoyed the opportunity to interact with the students and to observe the widely diverse projects which are presented. The fairs are held on a Saturday morning in mid-March to mid-April. The only time required is that one Saturday morning, plus one weekday lunchtime meeting to discuss judging strategy.

If you would like to be a science fair judge next spring, please e-mail Lee Abramson at <lxa@nrc.gov> by January 10, and include your work and home phone numbers, your fax number and your mailing address. If you judged last spring, there is no need to contact Lee unless your e-mail address or phone number has changed. If you have any questions, please call Lee at 301-415-6180.

SIGSTAT Topics for Winter 2004

January 21, 2004: PROC MIXED - Part 3: Model Development & Interpretation

Continuing the topic begun in October 2003, we'll fit a parsimonious mean model and create an interaction plot and illustrate how to specify heterogeneity in the residual covariance structure. The estimation method REML will be used to choose the appropriate covariance structure for a complex mean model. Maximum likelihood (ML) is then used to eliminate terms from the complex mean model. The final model is then refit using REML.

February 11, 2004: PROC MIXED - Part 4: Random Coefficient Models

Continuing the topic begun in October 2003, after discussing the concepts behind a random coefficient model, PROC MIXED is used to fit such a model. Empirical best linear unbiased predictors (EBLUP's) are then computed. Some common causes of nonconvergence are discussed. Finally, a model with both repeated and random effects is estimated in PROC MIXED.

March 10, 2004: PROC MIXED - Part 5: Model Assessment

Continuing the topic begun in October 2003, we examine residual plots and a histogram of the

residuals. Subjects with residual values in the first or last percentiles are identified. Finally, we examine how the violation of assumptions regarding the random effects influences the inference of the model.

April 14, 2004: PROC MIXED - Part 6: Generalized Linear Models & Generalized Linear Mixed Models

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 3rd floor to check in at the guard's desk.

First-time attendees should contact Charlie Hallahan, 202-694-5051, 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/>.

Note from the WSS NEWS Editor

Items for publication in the March 2004 WSS NEWS should be submitted no later than January 27, 2004. E-mail items to Michael Feil at michael.feil@usda.gov.

Program Announcement

- Topic:** Clive Granger, Cointegration, and the Nobel Prize in Economics
- Speakers:** Neil R. Ericsson, Federal Reserve Board
- Chair:** Anna Jan, Ernst & Young
- Date/Time:** Wednesday, January 14, 2004; 12:30 – 2:00 p.m.
- Location:** Bureau of Labor Statistics, Conference Center Room 9, Postal Square Building (PSB), 2 Massachusetts Ave. NE, Washington, D.C. Please use the First St., NE, entrance to the PSB. To gain entrance to BLS, please see "Notice" at the end of this announcement.
- Sponsor:** Economics Section
- Abstract:** In 2003, the Nobel Prize in Economics was awarded to Clive Granger "for methods of analyzing economic time series with common trends (cointegration)" and to Rob Engle "for methods of analyzing economic time series with time-varying volatility (ARCH)". This WSS seminar examines Clive's contribution of cointegration; a subsequent WSS seminar will focus on Rob's contribution of ARCH.

Cointegration is a statistical property that characterizes a long-run relationship between two or more integrated time series. After examining the analytics and implications of cointegration, we consider testing procedures due to Engle and Granger (1987) and Johansen (1988). The Johansen procedure establishes a natural framework for testing hypotheses about multiple cointegrating vectors and about the adjustment coefficients. Cointegration is also isomorphic to the existence of an error correction mechanism in a set of dynamic behavioral equations, so we discuss error correction models, including tests for cointegration based on those models. The relationships between the Engle-Granger, Johansen, and error correction procedures for testing cointegration provide the basis for discussing their relative advantages and disadvantages. Empirical applications help illustrate these testing procedures.

NOTICE

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

Note: This is the third in a series of WSS seminars on calibration and related types of estimation.

- Title:** Calibration with Multiple Constraints
- Speaker:** Stephen Ash, U.S. Census Bureau
- Chair:** Miriam Rosenthal, U.S. Census Bureau
- Date/Time:** Tuesday, January 20, 2004, 12:30 - 2:00 p.m.
- 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.
- Sponsor:** WSS Methodology Section
- Abstract:** Calibration in survey sampling can be a powerful tool for using auxiliary information to improve design-based estimates. In this seminar we will discuss the calibration of estimates with two constraints. An important example we will consider is using auxiliary information to improve estimates from a two-phase sample design. Three different scenarios for the two-phase sample design will be considered. We will also consider how generalized raking, i.e., raking with known marginal totals, can be considered within the framework of calibration with multiple constraints.

* To attend seminars at BLS, you need to email your name, affiliation, and title of the seminar to 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 January 1, 2004. Once you are on the list you need not contact BLS for seminars through March 31, 2004. BLS is located at 2 Massachusetts Ave NE. Take the Red Line to Union Station.

Survey Statistician

This vacancy is open until Jan 10, 2004

The National Center for Health Statistics/CDC, Division of Health and Nutrition Examination Statistics, Hyattsville MD, (Washington, DC area) is recruiting a statistician/epidemiologist. Responsibilities include participation in the planning of the questionnaire components of future National Health and Nutrition Examination Surveys (NHANES), other special projects, and analysis and publication of data from NHANES surveys. An applicant with expertise in questionnaire design and evaluation is desired. Advanced training in epidemiology, statistics, public health or sociology is also desirable.

This position may be filled at the GS-12 or GS-13 levels (\$58,070-\$89,774), commensurate with experience. The National Center for Health Statistics offers competitive benefits, free parking, alternative work schedules, and family-friendly work policies. A nursery school, eating facilities, and mass transit are located within walking distance.

For further information, contact Vicki L. Burt, Chief, Planning Branch, Division of Health and Nutrition Examination Statistics, National Center for Health Statistics/CDC, 301-458-4127, or by E-mail at vburt@cdc.gov.

The Centers for Disease Control and Prevention maintains a smoke-free work environment. All applicants will receive equal consideration without regard to race, religion, color, national origin, gender, sexual orientation, political affiliation, age, disability, status as a parent or any other nonmerit factor.

Visit our website at <http://www.cdc.gov/nchs/nhanes.htm>.

Program Announcement

- Title:** A New Price Index for Air Travel
- Speaker:** Janice Lent, Bureau of Transportation Statistics
- Discussant:** Marshall Reinsdorf, Bureau of Economic Analysis
- Date/Time:** Wednesday, February 11, 2004, 12:30 - 2:00 p.m.
- 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.
- Sponsor:** WSS Methodology Section
- Abstract:** The Bureau of Transportation Statistics (BTS) is preparing to begin scheduled production of a family of price index series for commercial air travel. The new index series will be based on data from the Passenger Origin and Destination (O&D) Survey, through which BTS collects information from the airlines on a 10% sample of air travel itineraries. Since the Survey was not originally designed to collect data for price index estimation, BTS developed new techniques to estimate Fisher indexes from the O&D Survey data. The large sample allows estimation of index series at geographically detailed levels. We will describe the research performed in developing and testing the new estimation techniques and examine some sample index series computed for research purposes. We will also discuss BTS' future plans for index production and continuous improvement of both the source data and the estimation methods.

* To attend seminars at BLS, you need to email your name, affiliation, and title of the seminar to 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 January 1, 2004. Once you are on the list you need not contact BLS for seminars through March 31, 2004. BLS is located at 2 Massachusetts Ave NE. Take the Red Line to Union Station.

Program Announcement

Note: This is the fourth in a series of WSS seminars on calibration and related types of estimation.

Title: **Student-t Based Interval Estimation of Complex Statistics Under Calibration Weighting**

Speaker: Reid A. Rottach, U.S. Census Bureau

Co-author: David W. Hall, U.S. Census Bureau

Chair: David W. Hall, U.S. Census Bureau

Date/Time: Tuesday, February 17, 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.

Sponsor: WSS Methodology Section

Abstract: This seminar gives an overview of recent research for the Survey of Income and Program Participation (SIPP) into developing a linearization variance estimator, including an extension to Satterthwaite-like approximations of degrees of freedom. We provide background about weight calibration, particularly the raking ratio, and the residual technique of estimating variances. Some of the topics covered within this context are nonresponse adjustments, restricted weighting, and weight equalization (such as SIPP's constraint that husbands and wives have the same calibrated weight). A general outline of how to implement the method of constructing confidence intervals is given, along with details for several types of statistics, including totals, ratios, quantiles, and yearly changes. Numerical comparisons with a Balanced Repeated Replication estimator using data from the 1996 panel of SIPP show the two methods of estimating variances to be very close in most cases. Furthermore, we will illustrate circumstances where the degrees of freedom approximation, when compared with the nominal value, substantially affected the confidence interval width.

* To attend seminars at BLS, you need to email your name, affiliation, and title of the seminar to 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 January 1, 2004. Once you are on the list you need not contact BLS for seminars through March 31, 2004. BLS is located at 2 Massachusetts Ave NE. Take the Red Line to Union Station.

Program Announcement

- Topic:** Biosurveillance Geoinformatics of Hotspot Detection and Prioritization for Biosecurity
- Speaker:** G. P. Patil, Distinguished Professor and Director,
Penn State Center for Statistical Ecology and Environmental Statistics
- Chair:** Mel Kollander, Director, Washington Office, Institute for Survey Research of Temple University
- Date/Time:** Wednesday, February 18, 2004, 12:30 - 2:00 p.m.
- Location:** Bureau of Labor Statistics, Conference Center Room 9 and 10, Postal Square Building (PSB), 2 Massachusetts Ave. NE, Washington, D.C. Please use the First St., NE, entrance to the PSB. To gain entrance to BLS, please see "Notice" at the end of this announcement.
- Abstract:** Geoinformatic surveillance for spatial and temporal hotspot detection and prioritization is a critical need for the 21st century. A hotspot can mean an unusual phenomenon, anomaly, aberration, outbreak, elevated cluster, or critical area. The declared need may be for monitoring, etiology, management, or early warning. The responsible factors may be natural, accidental or intentional, with relevance to both infrastructure and homeland security.

This presentation describes a multi-disciplinary research project based on novel methods and tools for hotspot detection and prioritization, driven by a wide variety of case studies of potential interest to several agencies. These case studies deal with critical societal issues, such as carbon budgets, water resources, ecosystem health, public health, drinking water distribution system, persistent poverty, environmental justice, crop pathogens, invasive species, biosecurity, biosurveillance, remote sensor networks, early warning and homeland security.

Our methodology involves an innovation of the popular circle-based spatial scan statistic methodology. In particular, it employs the notion of an upper level set and is accordingly called the *upper level set scan statistic system*, pointing to the next generation of a sophisticated analytical and computational system, effective for the detection of arbitrarily shaped hotspots along spatio-temporal dimensions. We also propose a novel prioritization scheme based on multiple indicator and stakeholder criteria without having to integrate indicators into an index, using Hasse diagrams and partially ordered sets. It is accordingly called *poset prioritization and ranking system*.

We propose a cross-disciplinary collaboration to design and build the prototype system for surveillance infrastructure of hotspot detection and prioritization. The methodological toolbox and the software toolkit developed will support and leverage core missions of several agencies as well as their interactive counterparts in the society. The research advances in the allied sciences and technologies necessary to make such a system work are the thrust of this five year project.

The project will have a dual disciplinary and cross-disciplinary thrust. Dialogues and discussions will be particularly welcome, leading potentially to well considered synergistic case studies. The collaborative case studies are expected to be conceptual, structural, methodological, computational, applicational, developmental, refinements, validation, and/or visualization in their individual thrust.

A panel discussion will follow the speaker presentation. The panel invitees include the following: (1) Larry Brandt (NSF); (2) Larry Cox (NCHS); (3) Chuck Dull (USDA); (4) Jeff Frithsen (EPA); (5) John Kelmelis (USGS); (6) Martin Kulldorff (Harvard); (7) Rick Linthurst (EPA); (8) Betsy Middleton (NASA); (9) Linda Pickle (NIH); (10) Phil Ross (EPA); (11) Ashbindu Singh (UNEP); and (12) Lance Waller (Emory). Floor discussion will follow.

NOTE

To be placed on the seminar list at the Bureau of Labor Statistics, e-mail your name, affiliation, and seminar name to wss_seminar@bls.gov (underscore after 'wss') at least 2 days in advance of the seminar or call 202-691-7524. Bring a photo ID to the seminar. BLS is located at 2 Massachusetts Ave., NE. Use the Red Line to Union Station.

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.ipr@verizon.net or (703) 979-1191.

Samuel W. Greenhouse Memorial Post-Doctoral Scientist The Biostatistics Center The George Washington University

Family and friends have established a post-doctoral scientist position in memory of the late Sam Greenhouse, pioneering biostatistician at the National Institutes of Health, and Professor of Statistics and Associate Director of The Biostatistics Center at The George Washington University. This 12-month, full-salary research position at The GWU Biostatistics Center located in Rockville, MD will provide the opportunities for methodological research and participation in the design and analysis of multi-center clinical trials and epidemiologic studies. A discretionary fund is provided for computers, travel, etc. Complete information is available from www.bsc.gwu.edu. Requirements: Doctorate in Statistics or Biostatistics awarded since January 1, 2002, methodological research with application to clinical trials or epidemiologic studies, some collaborative medical research experience, US citizenship or permanent residency. Tuition benefits for employee (including Ph.D. in Statistics, Biostatistics and Epidemiology) and for spouse and dependent children. Salary commensurate with experience and qualifications. Inquiries to John M. Lachin, Professor of Biostatistics and Epidemiology, and of Statistics, The Biostatistics Center, 6110 Executive Blvd., Rockville, MD 20852 (jml@biostat.bsc.gwu.edu).

The George Washington University is an equal opportunity/affirmative action employer.

Disclosure Limitation 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.

To express interest or obtain more information about the position, call Laura Zayatz at (301) 763-4955. For further information about the application process for this position in Disclosure Limitation, 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.

Social Security Administration, Office of Policy, Office of Research, Evaluation, and Statistics (ORES) Supervisory Position (GS-15, Salary Range \$95,987-\$124,783)

ORES conducts research and provides data to study the effects of Social Security and Supplemental Security Income (SSI), and proposed changes in those programs, on individuals and the economy. This is a supervisory position to direct the Division of SSI Statistics and Analysis located in Baltimore, MD. A staff of 17 economists, program analysts and programmers develop databases for statistics, research, and evaluation of Social Security's Supplemental Security Income and Disability Insurance benefit programs, produce a variety of statistical publications relating to these programs, and develop analyses for internal use by policymakers and for publication and conference presentations. Data are derived from SSA's programmatic data files, special-purpose surveys conducted by SSA, and surveys conducted by other federal agencies that are linked to SSA's program data. The successful candidate will need to have or develop detailed knowledge about SSA's SSI and DI programs and data and be able to manage and give direction to the staff. A job posting is expected in early 2004.

Interested candidates should contact Susan Grad Deputy Associate Commissioner for Research, Evaluation, and Statistics, 500 E Street, S.W. Washington DC 20254 Tel: 202-358-6220 Fax: 202-358-6079 Email: susan.grad@ssa.gov

U.S. citizenship is required. The Social Security Administration is an equal opportunity employer.

Epidemiologist/GIS Scientist

The National Cancer Institute (NCI) anticipates one opening for a position within the Cancer Statistics Branch (CSB) of the Division of Cancer Control and Population Sciences. This is located within the National Institutes of Health (NIH), Department of Health and Human Services (DHHS). CSB oversees the SEER cancer registries and conducts surveillance studies of health and disease outcomes for various population groups. NCI's surveillance activities provide for nationwide program planning, and are of interest to researchers, policy planners and analysts, and the public at large. Recent examples include: studies of

access to cancer care, treatment options and survival, and the role of socioeconomic status in the incidence, mortality, and survival of cancer. Position responsibilities will include: advising on geographic issues related to geographic/spatial data collection, processing and analysis, including efficient geocoding methods, maintaining patient confidentiality in cancer data systems and statistical displays, choice of geographic unit appropriate for statistical analysis, geographic information system (GIS) development, and map design. In addition, opportunities exist for collaboration with SRP staff on studies of small-area population characteristics relevant to cancer screening and health disparities, and statistical, epidemiologic and geovisualization methods useful for the spatio-temporal analysis of cancer data and related demographic and environmental data. Excellent communication skills are necessary to communicate and translate complex information to diverse audiences. Experience with cancer registry data, competing sources of demographic and population data and ESRI software and its extensions is desirable. For more information on the Cancer Statistics Branch see <http://surveillance.cancer.gov/csb>. For more information on GIS activities at NCI see <http://gis.cancer.gov>.

A minimum of a Master's degree required in geography, demography, epidemiology, biostatistics or a related field with extensive experience in the application of geospatial techniques to health data. Salary commensurate with experience. The location is Rockville, MD, near Washington, DC. Excellent benefits. DHHS and NIH are equal opportunity employers. Please send a cover letter summarizing your experience and interests along with your CV, and contact information for three references, by March 15, 2004 to: Dr. Benjamin Hankey, Chief, Cancer Statistics Branch, National Cancer Institute, 6116 Executive Blvd., Room 5023, MSC 8316, Bethesda, MD 20892-8316 (US Mail) or Rockville, MD 20852 (Overnight courier); Phone: (301) 496-8510; Fax: (301) 496-9949; Bh43a@nih.gov

Social Security Administration, Office of Policy, Office of Research, Evaluation and Statistics (ORES) Mathematical Statistician (GS-12/13, Salary Range \$58,070-\$89,774)

ORES conducts research and provides data to study the effects of Social Security and Supplemental Security Income (SSI), and proposed changes in those programs, on individuals and the economy. This is a position for a mathematical statistician at Social Security headquarters in Baltimore, Maryland. The individual will provide statistical support to the Office of Research, Evaluation and Statistics and other components in the Social Security Administration under the direction of a senior statistician. Activities include designing statistical studies, designing and selecting statistical samples, processing data using statistical software such as SAS, analyzing data using appropriate multivariate techniques, and writing and reviewing reports. The successful candidate will need to develop a broad knowledge of Social Security programs and be able to discuss statistical issues in lay terms to effectively communicate orally and in writing with non-statisticians. Educational requirements: a Masters Degree or Ph.D in Statistics. A job posting is expected in the near future.

Interested candidates should contact Barbara Lingg, Director, Division of Retirement, Survivors, and Disability Insurance Statistics and Analysis, 6401 Security Boulevard, Room 4C15 Operations, Baltimore, MD 21235; Tel: 410-965-0156 Fax: 410-966-4071 Email: Barbara.a.lingg@ssa.gov

U.S. citizenship is required. The Social Security Administration is an equal opportunity employer.

Tenure Track Assistant Professors

The Department of Mathematics and Statistics in the College of Arts and Sciences at American University has openings for one or more tenure track assistant professors in statistics for Fall 2004.

Qualifications: earned doctorate in statistics or mathematics with a specialty in statistics; evidence of effective teaching and scholarship. Responsibilities: teaching undergraduate and graduate level courses; conducting research; advising and mentoring students, with particular sensitivity to women and minority students; institutional service.

Application review will begin January 15, 2004, and continue until the positions are filled. Application files complete by January 15, 2004 will be assured full consideration. Submit letter of application and vitae to Search Committee, Department of Mathematics and Statistics, American University, 4400 Massachusetts Avenue NW, Washington, DC 20016-8050. Have official transcripts and three letters of reference sent directly to the department. At least one letter should specifically mention teaching experience. Please indicate if you plan to attend the January AMS/MAA meeting in Phoenix.

All applicants are strongly advised to review full application instructions, available at www.mathstat.american.edu/positions, or from the department at (202) 885 3120. American University is an Equal Employment Opportunity / Affirmative Action employer, committed to a diverse faculty, staff, and student body. Women and minority candidates are strongly encouraged to apply.

Survey Estimation/Experimental Design Research Position

Applications and nominations are invited for a research position in survey estimation and data analysis at the U.S. Census Bureau. The position is in the Statistical Research Division, which has the responsibility for extensive statistical, methodological, and behavioral research relevant to censuses and sample surveys. The successful applicant will be responsible for research, consultation and collaboration in mathematical statistics, with special emphasis on survey design and estimation, nonsampling error modeling, data analysis, and design of experiments. Candidates are expected to demonstrate the potential to make strong theoretical and applied contributions to the Census Bureau's statistical research program.

Qualifications for this position include relevant experience and a record of original research in survey estimation, data analysis or design of experiments, and good communication and interpersonal skills. A Ph.D. in statistics is preferred and experience in computer experiments is desirable. The salary range is \$58,070 to \$89,774, depending on qualifications and experience. U.S. citizenship is required.

For further information or to start the application process, please contact Leroy Bailey, Statistical Estimation and Analysis Research Group, Statistical Research Division, U.S. Census Bureau, Washington, DC 20233 or leroy.bailey@census.gov. You may also call (301) 763-4917.

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