



WSS NEWS

WASHINGTON
STATISTICAL
SOCIETY

March 2006

NEW MASTERS PROGRAM AT GEORGETOWN UNIVERSITY

MASTERS OF SCIENCE IN BIOSTATISTICS WITH TRACKS IN BIOINFORMATICS OR EPIDEMIOLOGY

The Department of Biostatistics, Bioinformatics and Biomathematics has launched a Master's degree program in Biostatistics with tracks in Epidemiology and Bioinformatics. This program provides integrated training in computational, quantitative, and biomedical sciences to support health-related research performed in academia, government and industry. Students will not only acquire the quantitative and computational tools that underpin epidemiology and bioinformatics, but also gain substantive exposure to applications of these tools to biological and health sciences.

A commitment to cross-exposure in developing the new breed of scientists underlies the structure of the curriculum. Individuals so educated will be invaluable members of the kinds of interdisciplinary teams required to solve many current and future problems in health sciences. They will also be well-equipped to enter medical school or a Ph.D. program either in biostatistics or bioinformatics or epidemiology.

Students are required to complete a minimum of 32 credits. The main components of the proposed program are: fundamental courses in biostatistics, track-related courses, a consulting course, a practicum, an internship and attendance at seminars.

Application requirements:

- Bachelor's degree
- TOEFL results (if your most recent academic degree is from a university where English is NOT the primary language of instruction)
- Three letters of recommendation
- Statement of purpose
- Completed application
- Information on applying, including the online application forms, can be found through the following website:
<http://biomedgrad.georgetown.edu/prospective.html>
- All of the above materials should be submitted by the following deadlines for admission in August:
Overseas Applicants – June 1 **Domestic Applicants – June 30**

The program web site (<http://dbbb.georgetown.edu/mastersprogram.html>) should be consulted for full details. The Departmental web site (<http://dbbb.georgetown.edu/>) should be visited to find out about faculty involved in this new program. The program brochure in PDF format is available for downloading from the site.

Contact Us: msbiostat@georgetown.edu
202-687-4114

UPCOMING EVENTS AT GEORGETOWN:

1. **Graduate School Open House** – April 7 (RSVP Requested)
2. **Bi-weekly seminar series**

March 3 Topic: Continuous Toxicity Monitoring in Phase II Trials in Oncology
Speaker: Anastasia Ivanova, Ph.D.

HERRIOT AWARD NOMINATIONS SOUGHT

Nominations are sought for the 2006 Roger Herriot Award for Innovation in Federal Statistics. The award is intended to reflect the special characteristics that marked Roger Herriot's career:

- Dedication to the issues of measurement;
- Improvements in the efficiency of data collection programs; and
- Improvements and use of statistical data for policy analysis.

The award is not limited to senior members of an organization, nor is it to be considered as a culmination of a long period of service. Individuals at all levels within Federal agencies, other government organizations, nonprofits, the private sector, and the academic community may be nominated on the basis of their contributions.

The recipient of the 2006 Roger Herriot Award will be chosen by a committee comprising representatives of the Social Statistics Section and Government Statistics Section of the American Statistical Association and the Washington Statistical Society. Roger Herriot was associated with and strongly supportive of these organizations during his career. The award consists of an honorarium and a framed citation.

Joseph Waksberg (Westat), Monroe Sirken (National Center for Health Statistics), Constance Citro (National Academy of Sciences), Roderick Harrison (U.S. Census Bureau), Clyde Tucker (Bureau of Labor Statistics), Thomas Jabine (SSA, EIA, CNSTAT), Donald Dillman (Washington State University), Jeanne Griffith (OMB, NCEs, NSF), Daniel Weinberg (U. S. Census Bureau), David Banks (FDA, BTS, NIST), Paula Schneider (U.S. Census Bureau), and Robert E. Fay III (U.S. Census Bureau) are previous recipients of the Roger Herriot Award.

For more information, contact Lawrence Cox, Chair, Roger Herriot Award Committee, 301 458-4631 or LCox@CDC.Gov. There are no fixed requirements for the contents or format of nomination packages, but completed packages must be received by May 1, 2006. Electronic submissions to Dr. Cox in MS-Word or PDF format are encouraged.

Alternately, nominations may be mailed to:

Lawrence H. Cox
National Center for Health Statistics
3311 Toledo Road, Room 3211
Hyattsville, MD 20782

WSS and Other Seminars (All events are open to any interested persons)		
March		
1	Wed.	The Proportional Odds Model for Assessing Rater Agreement with Multiple Modalities
9	Thurs.	Small Area Estimation using Multiple Surveys
15	Wed.	The State of Record Linkage
22	Wed.	Applying the Capability Maturity Model® in a Statistical Organization
28	Tues.	Estimating Drug Use Prevalence Using Latent Class Models with Item Count Response as One of the Indicators
April		
4	Tues.	An Analysis of a Two-Way Categorical Table Incorporating Intra-Class Correlation
26	Wed.	A Generation of Data: The General Social Surveys, 1972-2006 and Beyond

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

Announcements

THE JEANNE E. GRIFFITH MENTORING AWARD

On receiving the Roger Herriot Award in June 2001, Jeanne E. Griffith said:

One of the most rewarding aspects (of Federal statistics) for me was the opportunity to promote creative activities and energies among my staff...When I have had the blessing to mentor young people in their careers, I have tried to emphasize.....(that) only they, themselves, can make the most of the)...chances that life presents.

Dr. Griffith died in August 2001 after working for more than 25 years in the Federal statistical system. Throughout her career, and especially in her latter senior management positions at the National Center for Education Statistics and the National Science Foundation, one of Jeanne's highest priorities was to mentor and encourage younger staff at all levels to learn, to grow, and to recognize and seize career opportunities as they came along.

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 2006 will be accepted beginning in February 2006. The last date for submission of nominations is March 31, 2006, and the Award Committee will make its determination of the award winner by May 1, 2006. 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 2006.

The winning mentor will be selected for his or her efforts in supporting the work and developing the careers of younger staff. Examples of typical mentoring activities include:

- Advising junior staff to help them create career opportunities, networking skills, and contacts for growth and development;
- Counseling junior staff and providing resources to help develop their technical writing, analysis, presentation and organizational skills and knowledge;
- Encouraging junior staff growth and career development through attendance and oral presentations at meetings with higher level officials, staffs of other agencies, professional associations, training courses, and conferences;
- Motivating junior staff and building self confidence through feedback on their efforts, being a listener when that is needed, and creating a caring and supportive environment;
- Serving as a role model for junior staff through professional expertise, information and insights, balancing collegial and personal roles, and including everyone across rank, race, ethnicity, and seniority.

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 form-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 March 31, 2006.

SIGSTAT Topics for March 2006 – May 2006

March 8, 2006: SAS PROC GLIMMIX (<http://www.sas.com>)

The GLIMMIX procedure fits statistical models to data with correlations or nonconstant variability and where the response is not necessarily normally distributed. These models are known as generalized linear mixed models (GLMM). The GLMMs, like linear mixed models, assume normal (Gaussian) random effects. Conditional on these random effects, data can have any distribution in the exponential family. In the absence of random effects, the GLIMMIX procedure fits generalized linear models (fit by the GENMOD procedure). Charlie Hallahan will be the speaker.

April 19, 2006: Introduction to Enterprise Guide 4.1 for Statistical Analysis (<http://www.sas.com>)

The demo begins with a quick tour through the layout of Enterprise Guide (EG) as a menu-based interface to SAS procedures. Emphasis in this workshop will be on the statistical capabilities of EG. In particular, a set of data (put together using enhanced features of the query builder task) will serve as a case study for a forecasting exercise. The demo will show how code generated by EG can be customized, stored, and rerun, and custom reports saved with new Report Controls

Integration. Linda Atkinson and Charlie Hallahan will be the speakers.

May 17, 2006: Univariate Detrending Using SAS: Some Examples and Applications
(<http://www.sas.com>)

Detrending or filtering is an important tool for the macroeconomist studying business cycle fluctuations. Business cycles can be thought of as deviations of output from its trend. As such, detrending or filtering allows us to focus on the 'cyclical' properties of output. Four methods of detrending using SAS will be presented: Beveridge-Nelson decomposition, Hodrick-Prescott filter, Baxter-King filter, and Unobserved Components. Two applications of univariate detrending are also presented. The first is to use SAS to generate 'stylized facts' of the business cycle and the second is to examine the consequences of detrending on the effects of monetary policy on output. Ban Cheah, Westat, will be the speaker.

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 **12:00 to 1:00 (note new time)**. 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/>.

An Evening Conversation with Hana and Francisco J. Ayala
23 March 2006, 7:30 p.m. – 9:00 p.m.

A Harmonious Commitment to Science and Culture

The story of two lives dedicated to protecting world populations and the environment in different ways.

Hana Ayala is founder, president, and chief executive officer of PANGEA WORLD, a company working to blend tourism with conservation and research. Francisco J. Ayala is University Professor and Donald Bren Professor of biological sciences at the University of California, Irvine and past president of AAAS. His work has revolutionized evolution theory, led to new ways to prevent and treat diseases, and shed light on issues concerning society, ethics, and religion.

Join us to find out how the accomplishments of this couple are changing our world and theirs. For more information, visit <http://www.aaas.org/ayala>.

Seating is limited. Please respond quickly to reserve your seat. RSVP: Phone (800) 215-1969 or e-mail: developmentevents@aaas.org.

Note from the WSS NEWS Editor

Items for publication in the May issue of the WSS NEWS should be submitted no later than March 28, 2006. E-mail items to Michael Feil at michael.feil@usda.gov.

Program Announcement

- Title:** **The Proportional Odds Model for Assessing Rater Agreement with Multiple Modalities**
- Speaker:** Elizabeth Garrett-Mayer, Ph.D.
- Date/Time:** Wednesday, March 1, 2006 / 11:00 am - 12:00 noon
- Location:** Executive Plaza North, Conference Room G. Address: 6130 Executive Blvd, Rockville MD, 20852 (<http://www-dceg.ims.nci.nih.gov/images/localmap.gif>). Contact: the Office of Preventive Oncology, 301-496-8640
- Sponsor:** WSS Biostatistics/Public Health Section
- Abstract:** I develop a model for evaluating an ordinal rating system where I assume that the true underlying disease state is continuous in nature. This approach is motivated by a dataset with 35 microscopic slides with 35 representative duct lesions of the pancreas. Each of the slides was evaluated by eight raters using two novel rating systems (PanIN illustrations and PanIN nomenclature), where each rater used each system to rate the slide with slide identity masked between evaluations. I find that the two methods perform equally well but that differentiation of higher grade lesions is more consistent across raters than differentiation across raters for lower grade lesions.
- A proportional odds model is assumed, which allows us to estimate rater-specific thresholds for comparing agreement. In this situation where there are two methods of rating, it can be determined whether the two methods have the same thresholds and whether or not raters perform equivalently across methods. Unlike some other model-based approaches for measuring agreement, the focus is on the interpretation of model parameters and their scientific relevance. Posterior estimates of rater-specific parameters are compared across raters to see if they are implementing the intended rating system in the same manner. Estimated standard deviation distributions are used to make inferences as to whether raters are consistent and whether there are differences in rating behaviors in the two rating systems under comparison.

Program Announcement

- Title:** Small Area Estimation using Multiple Surveys
- Chair:** Donald Malec, U.S. Bureau of the Census
- Speaker:** William W. Davis, National Cancer Institute, NIH
- Discussant:** Robin Fisher, U.S. Bureau of the Census
- Date/Time:** Thursday, March 9, 2006 / 12:30 to 2 pm
- Location:** Bureau of Labor Statistics, Conference Center in G440. To be placed on the seminar list attendance list at the Bureau of Labor Statistics you need to e-mail your name, affiliation, and seminar name to wss_seminar@bls.gov (underscore after 'wss') by noon at least 2 days in advance of the seminar or call 202-691-7524 and leave a message. Bring a photo ID to the seminar. BLS is located at 2 Massachusetts Avenue, NE. Use the Red Line to Union Station.
- Sponsor:** Methodology Section, WSS
- Abstract:** Cancer surveillance research requires estimates of the prevalence of cancer risk factors and screening for small areas such as counties. We make small area estimates utilizing information from the Behavioral Risk Factor Surveillance System (BRFSS), a telephone survey conducted by state agencies, and the National Health Interview Survey (NHIS), an area probability sample survey conducted through face-to-face interviews. Both data sources have advantages and disadvantages. The BRFSS is a larger survey, but it has lower response rates than the NHIS, and it does not include subjects who live in households with no telephones. On the other hand, the NHIS is a smaller survey, but it includes both telephone and non-telephone households and has higher response rates than the BRFSS.

We combine the information from the two surveys to address both non-response and non-coverage errors using the following two methods:

* A hierarchical Bayesian approach using the Markov Chain Monte Carlo (MCMC) method is used to simulate draws from the posterior distribution. This approach utilizes NHIS county-level identifiers that are not available in the public use file.

* A statistical weight modification approach where propensity scores are used to adjust BRFSS weights so that the propensity score distribution among the BRFSS cases approximates that of the NHIS. This approach is carried out using the NHIS public use file.

Prevalence estimates with standard errors are made for selected geographical areas (counties and states), selected time periods (1997-1999 and 2000-2003), and selected binary outcomes (smoking and cancer screening). Multi-year periods are used to obtain more accurate small area estimates. The estimates made using both surveys are compared with the (single-source) BRFSS direct estimates.

Program Announcement

- Title:** **The State of Record Linkage**
- Chair:** Marianne Winglee, Westat
- Speaker:** William E. Winkler, U.S. Bureau of the Census
- Discussant:** Charles Day, Internal Revenue Service
- Date/Time:** Wednesday, March 15, 2006 / 12:30 to 2 pm
- Location:** Bureau of Labor Statistics, Conference Center in G440. To be placed on the seminar list attendance list at the Bureau of Labor Statistics you need to e-mail your name, affiliation, and seminar name to wss_seminar@bls.gov (underscore after 'wss') by noon at least 2 days in advance of the seminar or call 202-691-7524 and leave a message. Bring a photo ID to the seminar. BLS is located at 2 Massachusetts Avenue, NE. Use the Red Line to Union Station.
- Sponsor:** Methodology Section, WSS
- Abstract:** This talk will provide an overview of record linkage (Fellegi & Sunter JASA 1969) and describe a series of research problems. Although most of the research is in the computer science literature (<http://csaa.byu.edu/kdd03cleaning.html> - using statistical models of machine learning - and <http://iqis.irisa.fr/> - using database methods), some of the most difficult problems are primarily statistical (see Belin & Rubin JASA 1995; Scheuren & Winkler Survey Methodology 1993, 1997; Larsen & Rubin JASA 2001, Lahiri & Larsen JASA 2005 for initial progress). This talk describes methods of string comparison (Yancey 2003, 2005; Cohen et al. 2003 - that sometimes apply Hidden Markov models), various methods of data extraction and standardization (Borkar et al. ACM SIGMOD 2001, Cohen & Sarawagi KDD 2004, Agichtein & Ganti KDD 2004 – again using Hidden Markov models), and various methods of estimating error rates and adjusting statistical analyses for linkage error. It will describe beginning research on Parallel BigMatch (Yancey, Winkler, and Creecy 2006 in progress) that is hoped to be 30+ times as fast as the uniprocessor BigMatch. Current BigMatch (130,000 pairs per second) is designed for matching moderate size files having 300 million records against large administration having upwards of 4 billion records.

Program Announcement

- Title:** Applying the Capability Maturity Model® in a Statistical Organization
- Speaker:** John M. Bushery, U.S. Census Bureau
- Discussant:** Sean Curran, Bureau of Labor Statistics
- Chair:** Eugene Burns, Bureau of Transportation Statistics
- Date/Time:** Wednesday, March 22, 2006, 12:30-2:00 PM
- Location:** Bureau of Labor Statistics Conference Center. To be placed on the seminar attendance list at the Bureau of Labor Statistics you need to e-mail your name, affiliation, and seminar name to wss_seminar@bls.gov (underscore after "wss") by noon at least 2 days in advance of the seminar or call 202-691-7524 and leave a message. Bring a photo ID to the seminar. BLS is located at 2 Massachusetts Avenue, NE. Take the Red Line to Union Station.
- Sponsor:** WSS Quality Assurance and Physical Sciences Section
- Abstract:** Statistical principles and tools play a key role in quality management methodologies, such as Total Quality Management (TQM), Six Sigma, and the like. Many corporations have used these management methods and statistical tools to improve efficiency, lower costs, reduce cycle times, and increase customer satisfaction. Ironically, statistical organizations generally appear reluctant to adopt quality management methods or apply statistical tools to most aspects of their own work.
- About a decade ago, TQM was "all the rage" and several statistical organizations attempted to implement it. However, for the most part, TQM "did not stick."
- This paper introduces yet another model for quality management, Capability Maturity Model Integration®, and explains why the chances for success are higher with this methodology than with TQM.

Program Announcement

- Title:** **Estimating Drug Use Prevalence Using Latent Class Models with Item Count Response as One of the Indicators**
- Chair:** Dean H. Judson, U.S. Bureau of the Census
- Speaker:** Paul Biemer, RTI International
WebPage: <http://www.rti.org/experts.cfm?objectid=6E703887-343D-4D32-8DDA0F933AA1A886>
- Discussant:** Douglas Wright, Substance Abuse and Mental Health Services Administration
- Date/Time:** Tuesday, March 28, 2006 / 12:30 - 2 p.m.
- Location:** Bureau of Labor Statistics, Conference Center in G440. To be placed on the seminar list attendance list at the Bureau of Labor Statistics you need to e-mail your name, affiliation, and seminar name to wss_seminar@bls.gov (underscore after 'wss') by noon at least 2 days in advance of the seminar or call 202-691-7524 and leave a message. Bring a photo ID to the seminar. BLS is located at 2 Massachusetts Avenue, NE. Use the Red Line to Union Station.
- Sponsor:** Methodology Section, WSS
- Abstract:** The item count (IC) method for estimating the prevalence of sensitive behaviors was applied to the National Survey on Drug Use and Health (NSDUH) to estimate the prevalence of past year cocaine use. Despite considerable effort and research to refine and adapt the IC method to this survey, the method failed to produce estimates that were any larger than the estimates based on self-reports. Further analysis indicated the problem to be measurement error in the IC responses. To address the problem, a new model-based estimator was proposed to correct the IC estimates for measurement error and produce less biased prevalence estimates. The model combines the IC data, replicated measurements of the IC items, and responses to the cocaine use question to obtain estimates of the classification error in the observed data. The data were treated as fallible indicators of (latent) true values and traditional latent class analysis assumptions were made to obtain an identifiable model. The resulting estimates of the cocaine use prevalence were approximately 43 percent larger than the self-report only estimates and the estimated underreporting rates were consistent with those estimated from other studies of drug use underreporting.

Program Announcement

- Title:** **An Analysis of a Two-Way Categorical Table Incorporating Intra-Class Correlation**
- Speaker :** Jai Choi, Mathematical Statistician, NCHS/ORM
- Chair:** Joe Fred Gonzalez, National Center for Health Statistics (NCHS)
- Date/Time:** Tuesday, April 4, 2006 / 10:00 -11:30 a.m.
- Location:** National Center for Health Statistics, Room 1403. To attend seminars at NCHS, you need to email your name and title of the seminar to JGonzalez@cdc.gov by noon of the work day before the seminar. Bring a photo ID to the seminar. Further instructions for admission will be given upon receipt of your email. NCHS is located at 3311 Toledo Road in Hyattsville, MD. Metro: From Prince Georges Plaza on Green line, take footbridge across East-West Hwy and go one block north on Belcrest, go half block east on Toledo.
- Sponsor:** WSS Public Health and Biostatistics Section and NCHS/ORM
- Abstract:** It is straight forward to analyze data from a single multinomial table. Specifically, for the analysis of a two-way categorical table, the common chi-squared test of independence between the two variables and maximum likelihood estimators of the cell probabilities are readily available. When the counts in the two-way categorical table are formed from familial data (clusters of correlated data), the common chi-squared test no longer applies. We note that there are several approximate adjustments to the common chi-squared test. For example, Choi and McHugh (1989, *Biometrics*, 45, 979-996) showed how to adjust the chi-squared statistic for clustered and weighted data. However, our main contribution is the construction and analysis of a Bayesian model which removes all analytical approximations. This is an extension of a standard multinomial-Dirichlet model to include the intra-class correlation associated with the individuals within a cluster. We have used a key formula described by Altham (1976, *Biometrika*, 63, 263-269) to incorporate the intra-class correlation. This intra-class correlation varies with the size of the cluster, but we assume that it is the same for all clusters of the same size for the same variable. We use Markov chain Monte Carlo methods to fit our model, and to make posterior inference about the intra-class correlations and the cell probabilities. Also, using Monte Carlo integration with a binomial importance function, we obtain the Bayes factor for a test of no association. To demonstrate the performance of the alternative test and estimation procedure, we have used data on activity limitation status and age from the National Health Interview Survey and a simulation study.

Program Announcement

- Title:** **A Generation of Data: The General Social Surveys, 1972-2006 and Beyond**
- Speaker:** Tom Smith, National Opinion Research Center, University of Chicago
- Chair:** Norman Bradburn, NORC, University of Chicago
- Discussant:** Clyde Tucker, Bureau of Labor Statistics
- Date/Time:** Wednesday, April 26, 2006 / 12:30 to 2:00 p.m.
- Location:** Bureau of Labor Statistics Conference Center. To be placed on the seminar attendance list at the Bureau of Labor Statistics you need to e-mail your name, affiliation, and seminar name to wss_seminar@bls.gov (underscore after `wss') by noon at least 2 days in advance of the seminar or call 202-691-7524 and leave a message. Bring a photo ID to the seminar. BLS is located at 2 Massachusetts Avenue, NE. Take the Red Line to Union Station.
- Sponsor:** WSS Social and Demographic Statistics Section
- Abstract:** This presentation will describe the design and structure of the GSS; discuss important findings including major societal trends, cross-national differences, and sub-group analyses of ethno-racial and religious groups; and detail several methodological and substantive innovations that are being introduced in the latest round of GSSs.

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@insightpolicyresearch.com or (703) 373-6645.

WESTAT

AN EMPLOYEE-OWNED RESEARCH CORPORATION

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

Our company was founded in 1961 by three statisticians. The current staff of more than 1,800 includes over 60 statisticians, as well as research, technical, and administrative staff. In addition, our professional staff is supported by data collection and processing personnel situated locally and in field sites around the country. The work atmosphere is open, progressive, and highly conducive to professional growth.

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

We are currently recruiting for the following statistical position:

Survey Sampling Statistician (Job Code WSS/DRM/6001)

Three or more years of relevant experience in sample design and selection, frames development, weighting, imputation, and variance estimation. Must have a master's or doctoral degree in statistics and have excellent writing skills. Coursework in sample survey design is highly desirable.

Westat offers excellent growth opportunities and an outstanding benefits package including life and health insurance, an Employee Stock Ownership Plan (ESOP), a 401(k) plan, flexible spending accounts, professional development, and tuition assistance. For immediate consideration, please send your cover letter, indicating the Westat Job Code, and resume by one of the following methods to:

Job Code is **REQUIRED** to apply.

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Email: resume@westat.com • FAX: (888) 201-1452

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**The George Washington University
School of Public Health & Health Services**

Faculty Member in Biostatistics

The Department of Epidemiology & Biostatistics is recruiting for a full time faculty member at the Assistant or Associate Professor level with expertise in biostatistics.

The successful candidate will have the opportunity to join a growing Department of Epidemiology and Biostatistics in the nation's capital that has a highly respected and energetic teaching and research faculty and the opportunity to conduct clinical trials research at The Biostatistics Center.

Under the leadership of its new Chairman, Alan E. Greenberg, MD, MPH, the Department has expertise in HIV/AIDS, cancer, behavioral, and aging epidemiology, geographical health information systems, and biostatistical methods. In addition, the Department has established collaborative opportunities with other Departments in the GWU School of Public Health and Health Services, the GWU Medical Center, the Veterans Administration Hospital, Children's National Medical Center, the National Cancer Institute, the Department of Defense, and the DC Department of Health.

The Biostatistics Center is a leader in the statistical coordination of clinical trials conducted by the National Institute of Health. The center is renowned for its leadership in multi-center trials in diabetes, cardiovascular disease, maternal/fetal clinical medicine, osteoporosis, and urology, and the genetic basis for a series of diseases.

The Department of Epidemiology and Biostatistics is involved in the MS and PhD degree programs in biostatistics and in epidemiology, among other graduate degree programs. The MS and PhD degree programs in biostatistics and in epidemiology admitted its first class in 1995. There are currently 15 doctoral students matriculated in the PhD degree in biostatistics and 10 students matriculated in the MS degree in biostatistics. More than half of the doctoral students in biostatistics are working on their dissertation research.

Responsibilities of the position will include teaching upper level courses in theoretical and applied biostatistics, mentoring masters and doctoral students in biostatistics, participating in clinical trials research at the GWU Biostatistics Center (<http://biostat.bsc.gwu.edu>), and developing an externally-funded research program.

Faculty rank and compensation will be commensurate with experience. Review of applications will begin on March 1, 2006, and will continue until the position is filled. Send letter of application, CV, and a list of 3 references, preferably electronically, to:

Dr. Dante A. Verme

Chair, Search Committee, Biostatistics

E-mail: sphdav@gwumc.edu (electronic submissions strongly preferred)

Vice Chair for Educational Activities

Department of Epidemiology and Biostatistics

The George Washington University

School of Public Health & Health Services

2300 Eye St., NW, Ross Hall 125

Washington, DC 20037

GWU SPHHS Webpage: <http://www.gwumc.edu/sphhs>

The Biostatistics Center Webpage: <http://biostat.bsc.gwu.edu>

The George Washington University is an Equal Opportunity/Affirmative Action Employer.

The Biostatistics Center

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 over 100 with 27 biostatisticians/epidemiologists, including 10 faculty. We are recruiting M.S. and Ph.D. level staff to participate in these and future studies. Please visit our web site (below).

Master's Level Research Positions: These positions require a 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. Send CV to address below.

Assistant to Full Research Professorial Positions are available immediately to serve as Co-Investigator or Principal Investigator (Project Director) and to provide statistical direction of the design, conduct and analysis of studies and the conduct of methodologic research to meet the projects needs. 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.

Minimum Position Requirements: Doctorate in Biostatistics, Statistics or Epidemiology, or alternatively an M.D. or Ph.D. in Biological Science, Physical Science or Computer Science with a Masters in Biostatistics or Statistics, 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.

Application Procedures: Applicants must send a Curriculum Vitae and three letters of reference; a letter to include a synopsis of their role in collaborative medical research that has led to medical scientific presentation or publication and a statement of career purpose indicating their career goals and how this position can help you achieve those goals; and applicants for Assistant Research Professor positions must send an Official Transcript of graduate coursework leading to the doctoral degree to: Sarah Fowler, Research Professor and Director, The George Washington University Biostatistics Center, 6110 Executive Blvd., Suite 750, Rockville, MD 20852. [HTTP://WWW.BSC.GWU.EDU](http://www.bsc.gwu.edu)

Review of applications is ongoing until the positions are filled. Rank/position title and salary commensurate with experience and qualifications. Tuition benefits for employees (including Ph.D. in Statistics, Biostatistics and Epidemiology) and for spouse and dependent children.

All research and regular faculty at the rank of Assistant Professor in Biostatistics or Statistics may be apply for the Samuel W. Greenhouse Biostatistics Research Enhancement Award. For

a period of 1 year, the award will provide 20% effort for methodological research and a discretionary fund to support professional activities, travel to professional meetings, supplies and equipment. Applicants for the research faculty position may also apply for the Greenhouse Award while their faculty application is being considered. For complete information including Award Application Materials Requirements, please visit our website at: www.bsc.gwu.edu.

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

Study Director

Synovate is one of the top ten largest research companies globally. We are the market research arm of global communications specialist Aegis Group. Synovate is continuing to grow, bringing together the expertise and talents of over 3,000 researchers across 47 countries worldwide.

JOB DESCRIPTION

The Study Director will manage a variety of survey research studies for clients of the DC office. Project tasks will include proposal writing, budgeting, questionnaire development, field oversight, project management, data analysis, report writing, and presentation preparation and delivery.

RESPONSIBILITIES

- Managing research projects in the healthcare services industry under the direction of a Vice President.
- Scheduling project activities and coordinating project team
- Writing questionnaires, editing, checking programming of CATI and Internet surveys
- Writing specifications for sampling, data collection, data cleaning, tabulations and sample weighting
- Preparing methodology reports
- Producing tabular and graphic presentations from the data
- Conducting statistical analyses of data using SPSS or SAS
- Independently managing smaller ad hoc projects.

REQUIREMENTS

- Masters or Ph.D. degree as a social scientist, statistician or other quantitative field.
- Interest in healthcare services research involving patient satisfaction and health status measurement.
- Knowledge of survey research methods and experience in SPSS or SAS are important.
- Excellent writing skills and attention to detail are essential.

We are proud to be an EEO/AA employer M/F/D/V.

If interested please apply online at
http://www.resourcehire.com/clients/synovate/publicjobs/controller.cfm?jbaction=JobProfile&Job_Id=10244&esid=az

Associate Study Director

Job Description:

Synovate is the world's most dynamic and passionate global market intelligence company. We need smart, curious and highly qualified people to help us grow. We currently have an Associate Study Director position in our McLean, VA office.

JOB DESCRIPTION:

This position will work closely with senior colleagues to manage survey research tasks and studies for clients of Synovate Public Sector and Healthcare Services Research Group. The position is in Synovate's Washington DC area office located in suburban McLean, VA. Responsibilities will be to provide consultation on sample design, sample size calculation, statistical analysis and data weighting. This person will be expected to program in SAS and possibly SPSS to support on-going research projects. Other tasks may include assisting proposal writing, questionnaire development, field oversight, project management, and report writing. The position will report to a senior statistician in the Washington DC office.

RESPONSIBILITIES:

- Support the management of several large on-going projects.
- Provide support in writing proposals in response to RFP's from the Government Agencies and the healthcare industry
- Select random samples and monitor project completion rates for on-going projects
- Help develop automated reporting in SAS or another application along with error checking algorithms several clients' projects.
- Interact directly with clients.
- Manage all aspects of smaller projects.

QUALIFICATIONS:

- An advanced degree in social science or statistics with emphasis in survey research methodology or equivalent experience in survey or marketing research is desired.
- Skill in SAS is necessary, and skills in SPSS or other statistical and database software is desired.
- Previous experience in survey or marketing research, especially on the supplier side, is a plus.
- Good writing skills and knowledge of research methods are a must.

We are proud to be an EEO/AA employer M/F/D/V.

If Interested please apply on line at

http://www.resourcehire.com/clients/synovate/publicjobs/controller.cfm?jbaction=JobProfile&Job_Id=10329&esid=az

Clinical Statistical Programmer

An innovative pioneer in the pharmaceutical drug development industry has a need for a Clinical Statistical Programmer to provide statistical and SAS programming support for clinical trials. This position will be responsible for production of analysis datasets and specifications, well documented code, summary tables and some statistical analysis of data.

QUALIFICATIONS:

- *Bachelors degree in Statistics, Mathematics or related field; MS preferred
- *3+ years SAS programming experience in a pharmaceutical or biotechnology company; will consider people in Academia with clinical trial experience
- *Must have a solid understanding of statistical concepts, proficiency in producing concise SAS code for the purpose of data analysis and reporting
- *Strong technical problem solving capabilities
- *Experience writing SAS macros and QC review of code preferred
- *Basic knowledge of FDA/ICH guidelines
- *Excellent written/verbal communication and time management skills are required
- *Must be able to work in a fast paced environment and be flexible enough to jump from one project to another if needed

Competitive salary, bonus, stocks, company benefits and full relocation

Qualified candidates should e-mail their resume and 3 professional references as a Word attachment to dgmartin@sanfordrose.com

SEEKING STATISTICIANS

Life Science Recruiters is seeking to fill a number of positions with US pharmaceutical companies for PhD Statisticians/Biostatisticians with some clinical trials experience. They range from "nearly beginners" with 1 – 2 years of experience to Department Directors. All pay in the six figures with big bonus/stock/fringe/relocation packages and are located in Maryland, California and upstate New York.

If you are interested in this field and have any clinical trial experience, please send your CV/resume to:

Nancy Deeg
NDeeg@LifeScienceRecruiters.com
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