



WSS NEWS

WASHINGTON
STATISTICAL
SOCIETY

March 1992

Gertrude M. Cox Scholarships Available

The Gertrude M. Cox Scholarship in Statistics was established three years ago by the American Statistical Association's Committee on Women in Statistics and the Caucus for Women in Statistics to encourage women to enter statistically-oriented professions. The scholarship is available annually.

Women who are citizens or permanent residents of the United States or Canada and who are admitted to full-time study in a graduate statistical program by July 1, 1992, are eligible to compete for this year's three scholarships of \$1,000 each. The deadline for applications is April 30. Contact the ASA office for details: Gertrude M. Cox Scholarship, American Statistical Association, 1429 Duke Street, Alexandria, VA 22314; (703) 684-1221.

Nominations Open for Spiegelman Award

Nominations are being accepted for the 1992 Mortimer Spiegelman Award, established by the American Public Health Association. This award is presented annually to a statistician under 40 years of age (born in 1953 or later) who has made an outstanding contribution to the field of health statistics. This is broadly defined to include accomplishments in methodology, analysis, or training of statisticians and can refer to a specific piece of work or to a continuing record of high accomplishment in any area of health statistics.

Nominations are due by March 31, 1992. Forms are available from Colin B. Begg, Chair, 1992 Spiegelman Award Committee, Department of Epidemiology and Biostatistics, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.

WSS Seminars (All events are open to any interested persons.)		
MARCH		
10	Tues.	Variance Estimation Seminar: Reweighting Replicates in VPLX (6th in series)
17	Tues.	Patterns of Residential Concentrations by Race and Hispanic Origin
18	Wed.	Audio Computer Assisted Self-Interviewing: A New Technology for Data Collection on Sensitive Issues and with Special Populations
19	Thurs.	The Quality First Process in the U.S. Postal Service
31	Tues.	Differences Between Regression Models and Stochastic Laws
APRIL		
2	Thurs.	The Role of the Statistician in Addressing Technical Issues of National Interest

Announcements

New Graduate Programs in Federal Statistics at George Mason

The Federal statistical system is a complex data collection and analysis system that requires a wide variety of multidisciplinary skills for its maintenance. George Mason University is now offering graduate programs in Federal statistics, intended to respond to the need for broad training in statistics; survey research; data analysis -- including graphics and data visualization; data bases and data security; parallel computation and related technology; geographic information systems; economics; social sciences; and issues of statistics and public policy. The programs are extremely flexible and can be tailored to the needs of students within the Federal statistical sector, those in state and local governments and those in the private sector who support and use Federal statistical data.

Two programs are currently being offered:

- **The Federal Statistics Certificate** is a professional program targeted at upgrading the skills of practitioners. Fifteen credit hours are required, selected from the certificate program courses and from elective courses.
- **The Federal Statistics Masters** is a professional degree program. Thirty-three credit hours are required, selected from core courses, track courses and elective courses. Courses taken to satisfy the requirements of the certificate program may be applied to the masters degree.

Candidates from all backgrounds are welcome and should inquire with the program coordinator for details of program planning. Courses are offered in late afternoon and evening and are particularly suitable for part-time students. For additional information contact: Program Coordinator, Federal Statistics, 157 Science-Technology II, George Mason University, Fairfax, VA 22030. (703) 993-1680 or (703) 993-1698 for voice or (703) 993-1700 for FAX.

Seminar on Signal Processing by Zero-Crossings

On Wednesday, March 4, 1992, from 8:30 AM to 4:30 PM, the Mathematics Department, the University of Maryland, will sponsor a one-day seminar on "Signal Processing by Zero-Crossings -- Recent Developments." This course will be held at the University of Maryland, College Park, Mathematics Building, Colloquium Room 3206.

The program will include the following talks:

- "Application of HOC Features to Non-Destructive Evaluation: Discrimination and Classification of Structural Adhesive Joints," by Phineas Dickstein, University of Toronto;
- "The CM Method for Frequency Detection," by Benjamin Kedem, University of Maryland, College Park;
- "Estimation of Multiple Sinusoids in Noise by Contraction Mappings," by Ta-hsin Li, University of Maryland, College Park;
- "Mathematica Movies," by Alfred Gray, University of Maryland, College Park;
- "Zero-Crossing Rates of Functions of Gaussian Processes," by John T. Barnett, Naval Surface Warfare Center; and
- "Ergodic and Central Limit Theorems for Level-crossing-count Functionals," by Eric Slud, University of Maryland, College Park.

Participation in this event is free of charge, but registration is required. Refreshments will be served; lunch is on your own. For more information or registration and to obtain free parking permits, contact B. Kedem at (301) 405-5067 or by E-mail at bnk@gertrude.umd.edu.

(continued on page 7)

Program Abstracts

Topic: Variance Estimation Seminar: Reweighting Replicates in VPLX (6th in series)

Speaker: Robert E. Fay, Bureau of the Census

Chair: Sue Ahmed, National Center for Education Statistics

Date/Time: Tuesday, March 10, 1992, 12:30-2:00 PM

Location: GAO Building, Room 2437, 441 G Street, NW, Washington, DC (Red Line -- Judiciary Square) Sign in at guard's desk.

Sponsor: Methodology and Statistical Computing

Abstract: VPLX is a general FORTRAN 77 program for the estimation of variances for complex sample surveys through replication. This talk will describe the general capabilities of the program, with a focus on its capacity to reweight the replicates. By applying the same form of ratio or raking procedures to each replicate as the full sample, one can obtain more consistent variance estimates, especially important for estimating totals. VPLX is now able to produce files of reweighted replicate weights or factors, which VPLX or other software may then use to derive valid variance estimates for multiple characteristics. The talk will further describe these enhancements.

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Topic: Patterns of Residential Concentrations by Race and Hispanic Origin

Speakers: David Judkins and Joseph Waksberg, Westat, Inc.
James Massey, National Center for Health Statistics

Discussant: Roderick Harrison, Bureau of the Census

Chair: Jeffrey S. Passel, The Urban Institute

Date/Time: Tuesday, March 17, 1992, 12:30-2:00 PM

Location: GAO Building, Room 2736, 441 G Street, NW, Washington, DC (Red Line -- Judiciary Square) Sign in at guard's desk and state purpose and destination of visit.

Sponsor: Social and Demographic Section

Abstract: This paper describes patterns of residential concentration for Blacks, Hispanics, Asian-Americans, and American Indians based on data from the 1990 Census. Data are shown at both the block and block-group levels, and the latter are compared with concentrations shown in the 1980 Census. In addition to data for the entire United States, comparisons are made

Program Abstracts (cont'd)

Patterns of Residential Concentrations by Race and Hispanic Origin (cont'd)

among state groupings, e.g., patterns for Hispanics in the southwest versus the balance of the country. The report also traces changes in concentrations from 1980 to 1990 for block groups that were predominantly minority in 1980. Inferences are then drawn about the extent to which concentrations remain in the same areas over the decade or are in newly-created, predominantly-minority areas.

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- Topic:** Audio Computer Assisted Self-Interviewing: A New Technology for Data Collection on Sensitive Issues and with Special Populations
- Speakers:** James M. O'Reilly, Judith Lessler, Charles Turner, and Paul Biemer, Research Triangle Institute
- Chair:** Robert J. Casady, Bureau of Labor Statistics
- Date/Time:** Wednesday, March 18, 1992, 12:30-2:00 PM
- Location:** GAO Building, Room 2437, 441 G Street, NW, Washington, DC (Red Line -- Judiciary Square) Sign in at guard's desk and state purpose and destination of visit.
- Sponsor:** Methodology Section
- Abstract:** The written self-administered questionnaire (SAQ) is used for in-person surveys to present questions to respondents on drug use, sexual behaviors, and other sensitive matters. The major shortcomings of the written SAQ are: 1) that it requires literacy of the respondent and 2) the questions and skip patterns must be simple and limited.

Research Triangle Institute has developed an audio computer assisted self-interviewing system (Audio CASI), in which a computer plays a recorded version of question and answer choices to the respondent over headphones and the subject responds through a data input device (keyboard, external keypad, etc.). This approach offers the prospect of eliminating the major shortcomings of the written SAQ and, at the same time, providing a number of significant side benefits, including greater respondent privacy, exactly standardized administration of the questions, more complex question ordering and convenient multilingual administration.

The presentation will discuss RTI's research and development efforts in this area and demonstrate RTI's Audio CASI system. RTI is intensively exploring methodological issues related to Audio CASI in laboratory and field tests. Discussion will focus on the effectiveness and reliability of the new system, as compared to the standard SAQ.

Program Abstracts (cont'd)

Topic: The Quality First Process in the U.S. Postal Service

Speaker: Paul Basile, U.S. Postal Service

Chair: Sid Schwartz, U.S. Postal Service

Date/Time: Thursday, March 19, 1992, 12:30 - 2:00 PM

Location: USPS Headquarters, Room 1P619 (one floor below street level), 475 L'Enfant Plaza, SW, Washington, DC (Blue/Orange or Yellow/Green Lines -- L'Enfant Plaza) All visitors must register at guard's station.

Sponsor: Quality Assurance Section

Abstract: In 1990, the U.S. Postal Service took aggressive steps to incorporate the concepts and principles of quality. Senior managers at the USPS believe that the cultural change which will gradually occur as the quality processes are integrated will be to the long-term benefit of USPS, by helping to accomplish the three facets of the USPS corporate strategic plan: improved employee commitment, reasonable rates, and increased customer satisfaction. The Quality First process at the USPS will be described, including its goals, successes, and frustrations to date.

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Topic: Differences Between Regression Models and Stochastic Laws

Speaker: P.A.V.B. Swamy, Federal Reserve Board

Chair: Charlie Hallahan, Economic Research Service

Date/Time: Tuesday, March 31, 1992, 1:30 - 3:00 PM

Location: Waugh Auditorium (in basement), 1301 New York Ave., NW, Washington, DC (Blue or Orange Line - between Metro Center and McPherson Square) Call Linda Atkinson (202) 219-0505 to place your name on the guard's list for entry.

Sponsor: Economics Section

Abstract: Just as it is essential to distinguish between causality and correlations, so it is essential to distinguish between regression models and stochastic laws. Pratt and Schlaifer's definition of stochastic laws will be presented, to show how failure to distinguish between regression models and stochastic laws can lead to invalid inferences about the parameters of an econometric model. Circumstances in which a stochastic law applies will also be discussed.

Program Abstracts (cont'd)

- Topic:** The Role of the Statistician in Addressing Technical Issues of National Interest
- Speaker:** Ronald L. Iman, Sandia National Laboratories
- Chair:** Rich Allen, National Agricultural Statistics Service
- Discussant:** Robert Lundegard, National Institute of Standards and Technology
- Date/Time:** Thursday, April 2, 1992, 12:30 - 2:00 PM
- Location:** George Washington University, Building H, Room 105, 2000 G Street, NW, Washington, DC (Blue or Orange Line -- Foggy Bottom)
- Sponsor:** Physical Science and Engineering
- Abstract:** How should risk for nuclear power generating stations be assessed? Can radioactive wastes be effectively isolated geologically? Statisticians should have a very important role in the resolution of such vital national and international technical issues. In some cases, this role is widely acknowledged and the statistician's help is sought. Sometimes, this role is filled by non-statisticians. In other situations, the role of the statistician is ignored or is precluded by political considerations.

In this presentation, the speaker uses his personal experiences to consider the role of the statistician in addressing technical issues such as the ones above. He will also draw on his work in the area of the semiconductor industry, the space program, and the environment.

The discussant, who is the Chief of the Statistical Engineering Division at the National Institute of Standards and Technology, will respond and amplify the role of the statistician based on his experiences with major projects at NIST and at the Naval Research Laboratory.

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*** Note from WSS NEWS Editors ***

Items for publication in the *WSS NEWS* should be submitted no later than the last Tuesday of the month. Fax items to:

Bettye Jamerson or Wendy Alvey
Fax: (202) 874-0922

Announcements (cont'd)

NCHS Building Statistics Library

The National Center for Health Statistics is attempting to assemble a book collection on the history of health statistics. Any assistance in locating books published prior to 1940 would be greatly appreciated. Of particular interest are texts on vital and health statistics, monographs, and collected papers, rather than in journals and official statistical reports. For more information, please contact Manning Feinleib, Director, National Center for Health Statistics, 6525 Belcrest Road, Hyattsville, MD 20782.

Upcoming NIST Seminars

The National Institute of Standards and Technology's Statistical Engineering Division announces the following upcoming seminars in their regular series:

- B.K. Ghosh, of Lehigh University, will present a tutorial on Sequential Methods on Tuesday, March 17, 1992, from 11:00 AM - 12 Noon. Ghosh recently published a book on the history of sequential analysis. For more information, contact Raghu Kacker at (301) 975-2109.
- Eduardo Engel, from Massachusetts Institute of Technology, will present a talk On Randomness on Monday, March 30, 1992, from 11:00 AM - 12 Noon, in Lecture Room A, Bldg. 101, NIST. Engel was a student of Persi Diaconis. For more information, contact Kevin Coakley at (301) 975-3567.

Off campus guests are welcome to attend all sessions and join the participants for lunch. NIST is located on Clopper Road in Gaithersburg, MD, and is a short ride from the Shady Grove Metro Station. Please call Kaye Wade on (301) 975-2838 for directions and to confirm date and time.

Tentative Schedule of SIGSTAT Meetings

SIGSTAT is the Joint Special Interest Group in Statistics for the Capital PC User Group and WORMSC

(Washington Operations Research/Management Science Council). The tentative schedule of events for the next two months is as follows:

- Mar. 11 S-Plus 2.0 Statistical Analysis.**-- A look at the many new statistical features of Version 2.0 (ACE, projection pursuit, M-estimation, tree-based regression, generalized linear models ...)
- Apr. 8 Using SAS/IML for Statistical Programming.**-- Examples using the Interactive Matrix Language in SAS (bootstrapping, smoothing ...)

All meetings are scheduled for Wednesdays from 12:30 - 1:30 PM in Room B-14, 1301 New York Ave., NW, Washington, DC. (The building is located midway between the Metro Center and McPherson Square Metro stops.) If this is your first SIGSTAT meeting, call Charlie Hallahan, (202) 219-0507, to gain entry into the building.

Call for Papers for Simulation Conference

The 1992 Winter Simulation Conference will be held December 13-16, 1992, at the Crystal Gateway Marriott, in Arlington, VA. It will feature introductory tutorials on the fundamentals of system simulation, state-of-the-art reviews of current practice and research, contributed papers on applications and methodologies for simulation, panel discussions on current issues and exhibits by software and hardware vendors.

Submissions are now being accepted in all of the above mentioned areas. Proposals for tutorials and sessions are due by March 2, 1992; contributed papers must be submitted by April 1, 1992. All submissions will be reviewed and accepted papers will be published in the conference **Proceedings**. For further information about the conference, contact James R. Wilson, WSC'92 Program Chair, Department of Industrial Engineering, North Carolina State University, Box 7906, Raleigh, NC 27695-7906; telephone: (919) 515-6415 or FAX: (919) 515-5281 or E-mail: jwilson@eos.ncsu.edu.

Announcements (cont'd)

Census Bureau's 1992 Annual Research Conference

The Census Bureau's 1992 Annual Research Conference (ARC 1992) will be held March 22-25, 1992, at the Holiday Inn Crowne Plaza in Arlington, VA. To inquire if space is still available, contact Maxine Anderson-Brown, ARC Conference Coordinator, Office of the Director, Bureau of the Census, Washington, DC 20233; (301) 763-1150.

Employment Column

As a service to local statisticians, the **Washington Statistical Society News** provides notification of employment opportunities and descriptions 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 write to: Bill Arends, USDA-NASS, Room 4133 South Building, Washington, DC 20250-2000. Contact Mr. Arends at (202) 720-6812.

Vacancies

Statistician/Economist/Social Scientist

The National Science Foundation, Division of Science Resources Studies, 1800 G Street, NW, Room L-609, Washington, DC 20550, has one opening for a statistician, economist, or social scientist. Strong sampling and estimation skills are required for conduct of surveys and analyses of research and development and related activities in American industry, universities, and government. Also required is the ability to write clearly. Initial salary will be at the GS-11/12/13 levels (\$32,423 - \$67,770), depending on education and experience. Contact Jennifer Gray at (202) 634-4673 to request information about the position. EOE.

Mathematical Statistician

The U.S. Department of Labor, Unemployment Insurance Service, Benefits Quality Control Program, is seeking a GS-12 mathematical statistician for part-time (16-20 hours per week) employment. The person in this position will:

- o apply quality management and statistical process control tools to analyze program data;
- o evaluate proposed research studies to ensure that the designs and methodologies are technically sound, and provide technical assistance in developing and conducting research projects; and
- o test statistical software developed by the program's contractor to ensure that it meets program requirements and technical specifications.

Qualified applicants must have experience in sample design and survey estimation procedures; be familiar with statistical process control procedures and quality management tools; be able to present data analysis findings to non-technical audiences; and be capable of working closely with other statisticians, programmers, and data analysts to discuss technical issues and develop program requirements.

The U.S. Department of Labor offers a competitive salary, generous benefits, and a flexible work schedule. Applicants should submit Standard Form 171 or a copy of their resume to: John Sharkey, ETA/UIS/OQC, U.S. Department of Labor, 200 Constitution Avenue, NW, Room S-4015, Washington, DC 20210. EOE

Mathematical Statistician (Biomedical)

The Biometrics Branch of the Center for Veterinary Medicine is seeking a Ph.D. mathematical statistician to provide mathematical and statistical support to the regulatory and research activities of the Center. The position involves reviewing and evaluating mathematical and statistical methods, procedures, and concepts associated with new animal drug applications, along with supporting tests, research, and clinical data. Oral and written communication skills are critical. Proficiency in the use of personal computers and knowledge of SAS is helpful. Salary will be at the GS-11/12/13

Employment Column (cont'd)

Mathematical Statistician (Biomedical) (cont'd)

levels (\$32,423 - \$67,770), depending on education and experience. Send SF-171 application forms and resume to Dr. Anna Nevius, Chief, Biometrics Branch HFV-124, Office of New Animal Drug Evaluation, Center for Veterinary Medicine, 7500 Standish Place, Rockville, MD 20855 or call (301) 295-8605 for additional information. EOE

Job Applicants

Listed below are brief descriptions of the qualifications of applicants seeking employment. Employers interested in interviewing an applicant should contact Bill Arends by mail -- at USDA-NASS, Room 4133 South Building, Washington, DC 20250-2000 -- or by telephone -- at (202) 720-6812. All requests should include the code number from the applicant's ad and employer's name, organization, and telephone number. The applicant will be notified of the employer's interest and initiation of any further contact will be left to the applicant. All contacts will be kept confidential.

Applicant Code #92-02

Objective: Research/Teaching position in statistics.

Education: Ph.D. in Probability and Statistics, Academy of Sciences of Uzbek Republic, Tashkent, USSR.

M.S. in Mathematics, University of Tashkent, USSR.

Experience: Professor of Mathematics (Statistics Program) -- Experience includes teaching undergraduate and graduate courses in calculus, probability, and statistics; advising graduate students; and, conducting research in probability and statistics.

Consultant in applied statistics -- Experience includes working on contracts for factories manufacturing mass production and implementing statistical quality control methods, sampling methodology, and planning and processing data for sample surveys.

Senior researcher -- Experience includes conducting research in limit theorems of probability theory, estimation theory, and analytical statistics.

Publications: 15 articles published in Soviet and international journals.

Languages: Fluent Russian and working knowledge of Uzbek and German.

Applicant Code #92-03

Objective: Entry level position involving statistics. Prefer part-time position so as to continue education. Would consider full-time if it would allow time for one or two courses a semester.

Education: Currently enrolled at George Mason University in the M.S. statistics program.

M.S. in Mathematics, Virginia Polytechnic Institute and State University. B.S. in Math Education, VPI&SU.

Experience: Graduate Teaching Assistant at VPI&SU. Taught algebra, trigonometry, and calculus.

Skills: SAS and Minitab on VAX/VMS.

Obituary

Richard C. Michel, 46, a retired director of the income and benefits policy center of The Urban Institute, in Washington, DC, died Jan. 21 at Fairfax Hospital. He had AIDS.

Michel was an authority on income and wealth trends and had done research on patterns of distribution and equity across income categories and across generations. He joined The Urban Institute in 1979. From then until his resignation last year for reasons of health, he directed its microsimulation modeling studies program, which analyzes the effects of different policy, economic and demographic scenarios on the distribution of income among demographic groups. This information was used to help Federal agencies analyze public benefit programs and to do extensive analyses of Federal and state income taxes.

Michel was co-author of a 1991 book, "The Economic Future of American Families: Income and Wealth Trends," which analyzes trends in income status across generations. He also was the author of a 1985 report to Congress on the effects of recent Federal legislation on the income and characteristics of food stamp recipients.

Prior to joining The Urban Institute, Michel worked as a senior economist in the Office of the Assistant Secretary for Planning and Evaluation at the Department of Health and Human Services and as an analyst with the Congressional Budget Office.

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