



MAY 1990

WASHINGTON  
STATISTICAL  
SOCIETY

# NEWSLETTER

May 2	Wednesday	Patterns in Chaotic Systems
May 15	Tuesday	Risk Evaluations of Aging at Nuclear Power Plants
May 15	Tuesday	Alternatives in Poverty Measurement
May 16	Wednesday	1987 Census of Agriculture Coverage Evaluation Program
May 17	Thursday	Comparing Non-Nested, Misspecified Models

## ANNOUNCEMENTS

### WSS Elections

Enclosed in this newsletter is the ballot for the Board of Directors 1990-91 election. All members are encouraged to participate in the election by returning your ballot promptly.

### BIOGRAPHICAL SKETCHES

#### PRESIDENT-ELECT:

**Joan R. Rosenblatt** - Deputy Director, Center for Computing and Applied Mathematics, National Institute of Standards and Technology (formerly National Bureau of Standards). Staff member (1955-69) and head (1969-78), NBS Statistical Engineering Lab. Ph.D. from University of North Carolina. District Representative to ASA Board (1979-80); ASA Vice President (1981-83); Member WSS Executive Committee (1962-64). Fellow of ASA and IMS. Research areas: nonparametric statistics,

reliability of complex systems, applications in the physical and engineering sciences.

**Fritz Scheuren** - Director of the IRS Statistics of Income Division. Formerly at the Office of Economic Opportunity and the Social Security Administration. Ph.D. from George Washington University. Program and Section Chair, WSS Methodology Section (1975-77); Program Chair, ASA Survey Research Methods Section (1977-78); Overall Program Chair, ASA (1980); Chair, ASA Committee on Publications (1982-84); Chair, WSS Committee on ASA Fellows (1988-90); Associate Editor of the Journal of the American Statistical Association (1988-90), Journal of Business and Economic Statistics (1983-89), and Survey Methodology (1986-90). Fellow of ASA and AAAS and an elected member of ISI. Research interests: imputation and missing data adjustments, record linkage techniques, and disclosure avoidance approaches.

*(continued on page 4)*

## WASHINGTON STATISTICAL SOCIETY PROGRAM CHAIRS

**Agriculture & Natural Resources**  
Cynthia Clark 763-8558  
Paul Gargiullo 586-1137

**Social & Demographic Statistics**  
Harvey Schwartz 443-6990  
John Czajka 484-9220

**Short Courses**  
Glenn White 763-7524  
Donald Gantz 764-6565  
Brad Pafford 447-3623  
Sid Schwartz 268-3490

**Economics**  
John Ruser 523-1347  
Neil Ericsson 452-3709

**Methodology**  
Myron Katzoff 436-7047  
Andrew White 436-7904

**Public Health & Biostatistics**  
Ed Lakatos 496-5905  
Jai Choi 436-7047

**Physical Sciences & Engineering**  
Patricia Abel 883-6490  
Refik Soyer 994-6794

**Statistical Computing**  
Khalid Aboura 994-6794  
Sylvia Leaver 272-2350

**Quality Assurance**  
Stanley R. Freedman 586-2038  
John Galvin 272-5066

**Newsletter Editor**  
Michael Cohen 454-6193

**Employment**  
Bill Arends 447-6812

## PROGRAM ABSTRACTS

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**TOPIC: PATTERNS IN CHAOTIC SYSTEMS**

**SPEAKER:** James A. Yorke, Institute for Physical Science and Technology, University of Maryland

**CHAIR:** Ed Lakatos

**DATE & TIME:** Wednesday, May 2, 1990; 2:00 to 3:30 p.m. (Note special time.)

**LOCATION:** National Institutes of Health, Bldg. 31, Conference Room 10, C Wing, Bethesda, Maryland

**SPONSORS:** Methodology and Public Health and Biostatistics Sections

**ABSTRACT:** An introduction to some of the ideas of chaotic dynamics with emphasis on "embedding methods" for handling time series data will be presented.

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**TOPIC: RISK EVALUATIONS OF AGING AT NUCLEAR POWER PLANTS**

**SPEAKER:** Dr. William Vesely, Science Applications International Corporation

**DATE & TIME:** Tuesday, May 15, 1990; 12:00 to 1:00 p.m. (Note special time.)

**LOCATION:** Room 301, Staughton Hall, George Washington University, 707 22nd Street, N.W., Washington, D.C.

**SPONSORS:** WSS Physical Sciences and Engineering and The Department of Operations Research, George Washington University

**ABSTRACT:** Risk methods will be presented for quantifying the effects of component aging on core damage frequency and other risk characteristics at nuclear power plants. The methods were developed as part of the U.S. Nuclear Regulatory Commission's aging research program and are being considered for regulatory applications. Associated statistical considerations in the risk methods will be discussed.

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**TOPIC: ALTERNATIVES IN POVERTY MEASUREMENT**

**SPEAKER:** Patricia Ruggles, Joint Economic Committee

**CHAIR:** Bruce Klein, BLS

**DISCUSSANT:** Gordon Green, Bureau of the Census

**DATE & TIME:** Tuesday, May 15, 1990; 12:30 to 2:00 p.m.

**LOCATION:** Room 2437, BLS, 441 G Street, N.W., Washington, D.C.  
(Sign in at guard desk and state purpose and room of visit.)

**SPONSOR:** Social and Demographic Statistics Section

**ABSTRACT:** How—and why—should we measure poverty? This talk will explore the conceptual and practical issues that arise in trying to answer those two questions, and will propose some very basic criteria for assessing a poverty measure. It will then argue that judged by these standards the official U.S. poverty measure is deficient. While this measure may have reflected "minimally adequate" living standards in the early 1960s when it was first estimated, the consumption data underlying the official measure are now more than 30 years old and are no longer reasonably reliable indicators of minimum family needs. This speaker advocates a complete updating of our poverty definition to reflect new consumption data. Other aspects of our official poverty measure—for example, the family size and type adjustments and the measure of economic resources—will also be discussed, and possible revisions will be proposed.

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## PROGRAM ABSTRACTS (continued)

**TOPIC:** 1987 CENSUS OF AGRICULTURE COVERAGE EVALUATION PROGRAM

**SPEAKERS:** Cynthia Clark, Jane Sandusky, Karen Wright, Bruce Hughes; Bureau of the Census

**CHAIR:** Charles P. Pautler, Jr., Bureau of the Census

**DISCUSSANTS:** Howard Hogan, Bureau of the Census  
Rich Allen, National Agricultural Statistics Service

**DATE & TIME:** Wednesday, May 16, 1990; 12:30 to 2:00 p.m.

**LOCATION:** Room 5066, Agriculture South Building, 14th & Independence, S.W., Washington, D.C.

**SPONSOR:** Agriculture and Natural Resources Section

**ABSTRACT:** A coverage evaluation program for a census is an important means of measuring census completeness. The census of agriculture coverage evaluation program is designed to provide measures of errors in the census mail list and in farm classification. The program also helps in identifying problem areas for future improvements in developing the census mail list and in collecting and processing census data. The panel of speakers will present information on the census of agriculture coverage evaluation program focusing on the history, objectives, design of the coverage samples, processing of the coverage sample data, coverage model and estimation, and results of the 1987 study. The discussants will contrast the census of agriculture coverage program with the decennial census coverage measurement and the list and area frame sample estimation program of the National Agricultural Statistics Service, respectively.

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**TOPIC:** COMPARING NON-NESTED, MISSPECIFIED MODELS

**SPEAKER:** David Findley, Bureau of the Census

**CHAIR:** Neil R. Ericsson, Federal Reserve Board

**DATE & TIME:** Thursday, May 17, 1990; 12:30 to 1:30 p.m.

**LOCATION:** Room B-4001, Federal Reserve Board, 20th and C Streets, N.W. (entrance on the South side of C Street between 20th and 21st).

Please call Margaret Gray at 452-3726 by 2:00 p.m. May 16. On arrival sign at the guard desk and state purpose and room number of visit.

**SPONSORS:** Federal Reserve Board and Economics Section, WSS

**ABSTRACT:** Imaginative efforts to find statistical models for data often yield competing models with distinct features, so that no candidate model is a special case of any other. It is therefore important to have broadly applicable, objective statistical procedures for making non-nested model comparisons. We will describe a generalization of Vuong's (1988) test that is applicable to time series model comparisons. We will also present a graphical diagnostic for identifying growth of order  $N$ . A related analysis also suggests a limited role for Akaike's AIC criterion in selecting between the models when the likelihood ratio has order  $N^{1/2}$  and the models are close to correct.

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## ANNOUNCEMENTS (continued)

### **WSS Elections (continued)**

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#### **TREASURER:**

**Virginia de Wolf** - Mathematical Statistician at the Department of Transportation's National Highway Traffic Safety Administration. Ph.D. from the University of Washington (Seattle). Currently a Representative-at-Large on the WSS Board. Previous positions with WSS include Chair of the Short Course Committee, member of the WSS Program Planning Committee for the ASA Sesquicentennial, member of the Arrangements Committee, and member of the Nomination and Elections Committee.

#### **REPRESENTATIVES-AT-LARGE:**

**Mary Batcher** - Mathematical Statistician with the Statistics of Income Division of IRS. Ph.D. in Statistics from the University of Maryland. Member of WSS's Local Arrangements Committee for ASA-150 and currently a member of the Committee on Continuing Education of the ASA Survey Research Methods Section. Will be a speaker at WSS's 1990 Symposium on Quality Assurance in the Government. Present professional assignments involve statistical consulting support to the program that IRS uses to assess the accuracy of information provided by its telephone assistance service.

**Greg Schwemer** - Director, Biostatistics and Information Services, Boehringer Mannheim Pharmaceuticals. Formerly worked for Bristol-Myers and Syntex. Ph.D. in Biostatistics from UCLA. Responsible for computer services in addition to statistical and data processing support for clinical trials. Currently a participant in the ASA quantitative literacy workshop program.

**Michael P. Cohen** - Mathematical Statistician in the Statistical Standards and Methodology Division of the National Center for Education Statistics. Ph.D. in Mathematics (mathematical statistics program) from UCLA. Major areas of experience are estimation and

design for sample surveys, including variances, imputation, and small area estimation. Experience has included applications to surveys in education (particularly postsecondary education) and consumer prices and expenditures.

**Nancy L. Spruill** - Operations Research Analyst, Office of the Assistant Secretary of Defense for Program Analysis and Evaluation. Ph.D. in Mathematical Statistics from the George Washington University. Currently Vice Chair of ASA's Committee on Privacy and Confidentiality and the Chair of the Program Subcommittee of ASA's Ad Hoc Committee on Statistics and National Defense.

#### **METHODOLOGY:**

**Sam Slowinski** - Statistician with the Board of Governors of the Federal Reserve System. Previously statistician at the Federal Deposit Insurance Corporation. Major professional interests are survey research, data analysis and general methodological techniques. Has served on a subcommittee of the Federal Committee on Statistical Methodology. B.S. in Mathematics from University of Dayton and an M.A. in Statistics from Penn State University. Member of ASA for 18 years, and WSS for 16 years.

**Susan Ahmed** - Senior Mathematical Statistician, Statistical Standards and Methodology Division, National Center for Education Statistics. Formerly Associate Professor and Associate Director for the Division of Biostatistics and Epidemiology at Georgetown University. MPH from the University of Michigan and Ph.D. from the University of North Carolina in Biostatistics. Research interests include experimental design, analysis of data from complex surveys, nonsampling error research, statistical models, clinical trials, and links between traditional statistics and survey sampling. This includes applications to various cross sectional and longitudinal surveys carried out by NCES and design and analysis of clinical research studies.

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## ANNOUNCEMENTS (continued)

### **WSS Quantitative Literacy Group**

Activities of the Quantitative Literacy Group are continuing, following additional meetings held at the ASA office on March 26, 1990 and a regular group meeting on March 29, 1990. The visit to ASA served to acquaint members with the various program activities being conducted by the ASA in the area of quantitative literacy under the direction of Katherine Rowe. In addition three members of the group attended the Maryland State Quantitative Literacy Forum in Towson on March 22 and 23, 1990.

**WE STILL NEED MORE VOLUNTEERS** to help initiate a WSS program of activities—especially persons from the District of Columbia and Prince George's County. We urge interested persons, regardless of geographic location, to get involved! You may start by attending the next meeting of the group at the USDA South Building (adjacent to the Smithsonian Metro station). Please contact Ron Fecso at (202) 475-3486 or Dwight Brock at (301) 496-9795 for the time and date. We look forward to seeing you there.

### **40th Meeting of the NBER-NSF Seminar on Bayesian Inference in Econometrics and Statistics (SBIES)**

The 40th Meeting of the SBIES will be held on Friday and Saturday, May 4-5, 1990 at The George Washington University, Cloyd Heck Marvin Center, Dorothy Betts Marvin Theatre, 800 21st Street. The meeting is dedicated to the memory of Morris H. DeGroot and is sponsored by the National Bureau of Economic Research, the National Science Foundation, the United States Department of Agriculture, the Bureau of the Census, the Bureau of Economic Analysis, H.G.B. Alexander Research Foundation of University of Chicago, The George Washington University Graduate School of Arts and Sciences, and the Schools of Government and Business Administration and of Engineering and Applied Science.

#### Speakers include:

Stephen Fienberg, Carnegie Mellon University and Sung Ho Kim, ETS  
 Wesley Johnson and G. Kokolakis, University of California, Davis  
 Jim Press, University of California, Riverside  
 John Pratt, Harvard University  
 Ehsan S. Soofi, University of Wisconsin  
 Kathryn B. Laskey, Decision Science Consortium, Inc.  
 Michael Lavine, Duke University  
 Edwin T. Jaynes, Washington University, St. Louis  
 Joseph B. Kadane, Carnegie-Mellon University  
 James O. Berger, Purdue University  
 John Deeley and Frank Lad, University of Canterbury  
 Mark Feldman, University of Illinois  
 Teddy Seidenfeld and Mark Schervish, Carnegie-Mellon University  
 John F. Monahan and Dennis D. Boos  
 Thomas Lutton, CBO and Roger Conway, ERS  
 Giovanni Parmigiani, Carnegie-Mellon University  
 Kathryn Chaloner, University of Minnesota  
 George F. Rhodes, Colorado State University  
 Arnold Zellner and Chung-Ki Min, University of Chicago  
 Mike West, Duke University  
 David N. DeJong, University of Pittsburgh and Charles H. Whiteman, University of Iowa  
 Stephen Mittnik, SUNY at Stony Brook  
 Tony O'Hagan, Warwick University and Purdue University  
 Arthur P. Dempster, Harvard University  
 Panickos N. Palettas, VPI&SU and Prem K. Goel, Ohio State University

If you plan to participate in the Seminar Meeting, please send a check for \$35, made payable to GWU, to cover the costs of dinner on Friday and lunch on Saturday, to: Refik Soyer, Monroe Hall, 402-F, Management Science Department, SGBA, The George Washington University, Washington, D.C. 20052.

We are tentatively planning an informal gathering at a local restaurant, pay your own way. If you would like to participate, please indicate your interest in your response.

## ANNOUNCEMENTS (continued)

**Ninth Annual Workshop in Applied Statistics**

The Southern California Chapter of the American Statistical Association announces that its Ninth Annual Workshop in Applied Statistics will be held on Friday, May 18, 1990, 8:30 a.m. to 4:30 p.m. at the Annenberg School of Communications, University of Southern California. The Workshop is entitled, "Analysis of Follow-Up Data: Poisson, Relative Risk and Conditional Logistic Regression," and will be presented by Norman Breslow, Department of Biostatistics, University of Washington.

**ABSTRACT:** Regression analysis of follow-up data may be viewed as a natural extension of classical epidemiologic analysis based on stratification. This workshop will survey the following topics: (a) Poisson regression analysis of grouped person-years data and SMR's; (b) Relative risk regression analysis of continuous epidemiologic data; and (c) Conditional logistic regression analysis of case-control samples. The common conceptual foundation underlying these three apparently distinct approaches will be emphasized.

**REGISTRATION INFORMATION:** The registration fee is \$65 (\$30 for full-time students). Registration fees postmarked on or before May 4 qualify for an early registration discount of \$5. Each registrant is entitled to admission to the program and exhibits area, one set of handouts, refreshments, and lunch. The fee does not cover the cost of parking. Lunch reservations cannot be guaranteed for walk-in registrants or for registration by mail postmarked after May 4.

**REFUND INFORMATION:** Refund requests should be addressed to Nancy Berman (address below). Refund requests postmarked on or before May 4 will be honored. Refund requests postmarked after that date will not be honored.

For further information, contact either Nancy Berman, Research and Education Institute, Harbor-UCLA Medical Center, 1124 West Carson, Torrance, CA 90502-2064, (213) 212-1874, (213) 476-2488 (home), or Roberta Madison, Department of Health Sciences, California State University, Northridge, CA 91330, (818) 885-4645, (213) 457-4627 (home).

**43rd Annual Summer Institute in Survey Research Techniques at ISR**

The Survey Research Center of the Institute for Social Research, The University of Michigan, will hold its 43rd annual Summer Institute in Survey Research Techniques at ISR during the summer of 1990. Among the courses being offered, the Summer Institute will sponsor a one-week short course focusing on the Panel Study of Income Dynamics (PSID). Concurrently, there will be a short course on event history methods that can be used to analyze data from the PSID and other longitudinal studies. These courses will each be offered during the week of July 23-27 at the Institute for Social Research in Ann Arbor, Michigan. The time schedule of these workshops will be coordinated so that participants can attend both courses. Of course, participation in either course is not conditional upon taking the other. The fees for the courses are \$600 (\$400 for members of institutions in the Inter-University Consortium for Political and Social Research). Participation in both workshops is \$800 (\$600 for ICPSR members).

**Panel Study of Income Dynamics**

The Panel Study of Income Dynamics (PSID) is a long-term, large-scale panel study of families and households, with annual data on an initial sample of 5,000 panel households obtained since 1968 and extending to the present. Data now exist on more than 7,000 households and 35,000 individuals. The PSID now has a diverse set of event-history data, some of which extend over the entire twenty-year PSID interviewing period. The course is offered in conjunction with the short course on event-history analysis; however, application of PSID data in analyses not involving event history methods will also be covered in this short course. This course will be taught by Greg Duncan, Martha Hill, and members of the PSID project staff.

**Event History Analysis**

This short course, taught by Jay Teachman (University of Maryland), focuses on the application of hazard-rate models of analysis to event-history data. The use of event history data, recording the timing and duration of life (*see page 7*)

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## ANNOUNCEMENTS (continued)

### **43rd Annual Summer Institute in Survey Research Techniques at ISR (continued)**

experiences, is becoming increasingly common in the social sciences. The application of conventional analysis tools to event histories can produce severe bias or loss of information. This course shows how these difficulties can be overcome, enabling the analyst to realize the full benefit of event history data. The emphasis is on "regression-like" models, commonly known as proportional hazards models or hazard-rate models, in which the likelihood of an event occurring varies according to a set of explanatory variables. Topics will include: data structure, life tables, censoring, discrete-time methods, parametric models, nonparametric models, time-varying explanatory variables, unobserved heterogeneity, competing risks, and repeatable events. Computer programs useful for the analysis of event history data will be discussed and illustrated using several survey databases, including the PSID.

#### **THE SUMMER INSTITUTE IN SURVEY RESEARCH TECHNIQUES**

In addition to the short courses described above, the annual Summer Institute will offer 18 regular 4-week graduate-level courses in various aspects of survey research design, data collection and analysis. The emphasis in the program is on the sample survey as a basic measuring instrument for the social sciences. Teaching faculty in the Summer Institute are drawn primarily from the Survey Research Center and well-known experts in the field of survey research. The courses are offered through the graduate programs of Departments of Sociology and Psychology of the University of Michigan. Participants in the program gain familiarity with the application of survey research methods, including research design, sampling, measurement, questionnaire design, field methods, data management, and the statistical analysis of data. The following is a list of these courses and the instructors. The 1990

Summer Institute will be held in Ann Arbor from July 2 to August 24.

#### **First Session — July 2 through July 27**

- Introduction to Survey Research, Jason Lee (Northern Illinois University)
- Introduction to Statistical Research Design, Karl Landis (University of Michigan)
- Analysis of Survey Data, Willard Rodgers (University of Michigan)
- Questionnaire Design, Nora Cate Schaeffer (University of Wisconsin)
- Design of Evaluation Research, Bill Yeaton and Paul Wortman (University of Michigan)
- Mail and Telephone Survey Methods, Don Dillman (Washington State University) and Paul Biemer (New Mexico State University)
- Methods of Survey Sampling, Graham Kalton (University of Michigan)
- Improving the Quality of Survey Data, Lars Lyberg (Statistics Sweden)

#### **Second Session — July 30 through August 24**

- Introduction to Survey Research, Jason Lee (Northern Illinois University)
- Advanced Methods of Survey Sampling, Jim Lepkowski (University of Michigan)
- Computer Analysis of Survey Data, Laura Klem (University of Michigan)
- Regression Analysis of Survey Data, Willard Rodgers (University of Michigan)
- Longitudinal Analysis of Survey Data, Duane Alwin (University of Michigan)
- Event History Analysis, Jay Teachman (University of Maryland)
- Cognitive Psychology and Survey Methods, McKee McClendon (University of Akron)
- Research on Survey Quality, Duane Alwin (University of Michigan)

For a detailed brochure for the Summer Institute, contact Dr. Duane F. Alwin, Director of the Summer Institute, Survey Research Center, The Institute for Social Research, The University of Michigan, P.O. Box 1248, Ann Arbor, MI 48106-1248. Telephone (313) 764-6595.



## ANNOUNCEMENTS (continued)

### **COPAFS to Host Seminar on Quality of Federal Data**

In 1975, the Office of Management and Budget [OMB] organized the Federal Committee on Statistical Methodology. Comprised of individuals selected by OMB for their expertise and interest in statistical methods, the committee has during the past fifteen years determined areas that merit investigation and discussion, and overseen the work of subcommittees organized to study particular issues. Since 1978, fifteen Statistical Policy Working Papers have been published under the auspices of the Committee.

On May 23-24, 1990, the Council of Professional Associations on Federal Statistics will host a "Seminar on the Quality of Federal Data." Developed to capitalize on work undertaken during the past dozen years by the Federal Committee on Statistical Methodology and its subcommittees, the seminar will focus on a variety of topics that have been explored in the Statistical Policy Working Paper series. The subjects to be covered will include:

- Survey Quality Profiles
- Statistical Uses of Administrative Records
- Federal Longitudinal Surveys
- Disclosure-Avoidance Techniques
- Approaches to Developing Questionnaires
- Survey Coverage Evaluation
- Data Editing
- Telephone Data Collection
- Computer Assisted Statistical Surveys
- Cognitive Labs
- Quality in Business Surveys
- The Employer Reporting Unit Match Study

Each of these topics will be considered in a two-hour session that will feature formal papers and discussion, followed by informal dialogue among all speakers and attendees.

Seminar participants will include federal statisticians, economists, and managers, as well as others in the broader statistical community who share an interest in the quality of federal data. Users and producers of federal statistics who participate in the seminar will have the opportunity

to share experiences and ideas, discuss technical issues, and consider future policy initiatives.

The cost for the two-day seminar will be \$90 per person. Registration will be limited to 200 participants. For further information, contact Katherine Wallman in the COPAFS' office [703/836-0404].

### **Reports Available in the Statistical Policy Working Paper Series:**

- Report on Statistics for Allocation of Funds
- Report on Statistical Disclosure and Disclosure-Avoidance Techniques
- An Error Profile: Employment as Measured by the Current Population Survey
- Glossary of Nonsampling Error Terms: An Illustration of a Semantic Problem in Statistics
- Report on Exact and Statistical Matching Techniques
- Report on Statistical Uses of Administrative Records
- An Interagency Review of Time-Series Revision Policies
- Statistical Interagency Agreements
- Contracting for Surveys
- Approaches to Developing Questionnaires
- A Review of Industry Coding Systems
- The Role of Telephone Data Collection in Federal Statistics
- Federal Longitudinal Surveys
- Workshop on Statistical Uses of Microcomputers in Federal Agencies
- Quality in Establishment Surveys

Copies of these working papers may be ordered from NTIS Document Sales, 5285 Port Royal Road, Springfield, VA 22161 [703/487-4650].

### **Notification of Open Board Meeting**

Every year the Board of Directors of the Washington Statistical Society invites all members to a monthly meeting of the Board. This year the open meeting will be Tuesday, May 29th. The meeting will be held in the GAO Building, Room 2437, at 441 G Street, N.W. from 12:30 to 2:00 p.m. This meeting is an opportunity for those members who are interested in learning more about the WSS and for those interested in becoming more involved in the activities it sponsors.



## ANNOUNCEMENTS (continued)

### **New M.S. Program in Statistical Science at George Mason**

A new degree program, a M.S. in Statistical Science, has begun at George Mason University. The program is offered by the Department of Operations Research and Applied Statistics and the Center for Computer Statistics in the Engineering School. The program is intended to train students in the theory and practice of statistical methodology especially as related to modern high technology applications. The degree can be taken with a non-thesis or a thesis option. There are four (4) core courses including: Probability, Statistical Inference, Applied Statistics, and Regression. The student may elect to concentrate in one of four pre-defined tracks: Computational Statistics, Statistical Signal Processing, Engineering, Statistics or Applied Statistics, or may with approval of the advisor design a program to suit his or her own needs. The thesis option requires 27 credit hours plus 6 hours of thesis. The non-thesis option requires 30 credit hours plus a master's essay. Further information

and admission forms are available from the Center for Computational Statistics at (703) 764-6170. The closing date for application for the Fall Semester is May 1.

### **Tentative Schedule of SIGSTAT Meetings**

SIGSTAT is the Special Interest Group in Statistics in the Capital PC User Group. The tentative schedule of events through May is as follows:

5/9/90     Demo of BASS - BASS programs "look like" SAS programs. A comparison with the much more comprehensive SAS system will be made.

All meetings are scheduled for Wednesdays from 12:30 to 1:30 p.m. in Room B-14, 1301 New York Avenue, N.W. The building is located midway between the Metro Center and McPherson Square Metro stops. If this is your first SIGSTAT meeting, call Charlie Hallahan, 786-1507, and leave your name in order to gain entry into the building.

## EMPLOYMENT COLUMN

The Washington Statistical Society Newsletter provides a service of notification of employment opportunities and descriptions of those seeking employment here in Washington. Readers are encouraged to take advantage of this feature of the newsletter. Deadline for inserting notices is 5 (five) weeks before the publication date. Those interested should write to: Bill Arends, USDA-NASS, Room 4133 South Building, Washington, D.C. 20250-2000, Phone 447-6812.

## JOB OPENINGS

### **Part-Time Position to Become Available Soon**

### **Wanted: Statistician to serve as Director of Information Services**

at the  
American Association of Colleges of Osteopathic Medicine  
Rockville, Maryland

- Permanent position, approximately 20 to 25 hours per week
- Requires statistical training and experience, computer literacy, and ability to prepare analytic reports with photos and tables.
- Experience with Public Health Service is desired.

Contact: Don Zobel, 301-468-0990

## **JOB OPENINGS (continued)**

### **STATISTICIAN (Service Fellow-equivalent to GS 11/12/13)**

The Agency for Health Care Policy and Research (AHCPR) is seeking a statistician to join the statistical staff of the National Medical Expenditure Study. The position is available for a Ph.D. in statistics/biostatistics or a M.S. with experience in sample design, survey research, sampling, weights development, data analysis for complex surveys, imputation procedures and matching techniques. Familiarity with statistical software packages (SAS, SPSS) is required. Send SF-171 application forms and resume to: **Dr. Steven B. Cohen, Senior Research Manager, Agency for Health Care Policy and Research, Room 18A-55, 5600 Fishers Lane, Rockville, MD 20857,** or call him at (301) 443-4836 for additional information.

### **Statistical Programmers**

Westat, Inc., an employee-owned survey research and computer applications company, has several openings at its headquarters in Rockville, Maryland and on site in Research Triangle Park, North Carolina.

All positions require a BS degree or the equivalent and a minimum of 3 years of programming experience with a statistical package (SAS or SPSS) in a research related environment. An advanced degree in Epidemiology, Biostatistics or Statistics, programming in a higher level language (C, PL/I, PASCAL, etc.), and microcomputer experience are desirable but not necessary.

Westat is a leading research company with \$60 million in annual revenue and thirty years of steady growth. Westat offers advanced computing facilities in a highly professional atmosphere and provides excellent opportunities for advancement.

Please send your resume and salary history to: **Westat, Inc., Department WSSN, 1650 Research Blvd., Rockville, MD 20850.** Westat is an affirmative action/equal opportunity employer.

### **The American University**

Tenure track position available at the rank of Assistant Professor beginning Fall, 1990 in the Department of Mathematics and Statistics.

Qualifications: A Ph.D. in Statistics; evidence of teaching and scholarship and interest in applied statistics required.

Responsibilities: Graduate and undergraduate teaching, advising, scholarship and university service.

Salary competitive, commensurate with qualifications and experience. Position subject to final budgetary approval. Send curriculum vitae and three letters of recommendation to **Basil P. Korin, Chair, Dept. of Mathematics and Statistics, The American University, Washington, D.C. 20016.**

An EEO/AA University; minority and women candidates encouraged to apply.

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**JOB OPENINGS (continued)****Statistician**

The U.S. Postal Service Headquarters, Washington, D.C., has a position for a Senior level professional; opportunity to participate in the evaluation and development of statistical systems for postal volumetric measures. Activities include the design of sampling plans, estimation procedures and measures of precision. Graduate level training in mathematical statistics and experience in sampling, experimental design, and methods of statistical estimation required. Working knowledge of SAS/Lotus 1-2-3 and experience with an IBM operating system environment are advantageous.

Salary \$36,120 to \$48,252 plus \$1,290 cost of living adjustment depending on individual qualifications.

Apply with complete background history, including compensation requirements, to: **U.S. Postal Service, Headquarters Personnel, VA 11470, Attn: Team D, 475 L'Enfant Plaza, S.W., Washington, D.C. 20260-4264. AN EQUAL OPPORTUNITY EMPLOYER.**

**MATHEMATICAL STATISTICIANS (GS11/12/13)**

The Biometrics Branch of the Center for Veterinary Medicine, Food and Drug Administration, is seeking two Ph.D. mathematical statisticians to provide mathematical and statistical support to the research and regulatory activities of the Center. The positions involve reviewing and evaluating mathematical and statistical methods, procedures and concepts involved with new animal drug applications along with supporting tests, research, and clinical data. Oral and written communication skills are important. Proficiency in the use of personal computers and knowledge of SAS is helpful. Send SF-171 application forms and resume to: **Dr. Anna Nevius, Biometrics Branch, Center for Veterinary Medicine, Food & Drug Administration, Room 6B-21, 5600 Fishers Lane, Rockville, MD 20857** or call 301/443-1580 for additional information.

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## JOB APPLICANTS

### CODE #90-04

**Objective:** Position as Applied Mathematician, specializing in Statistical Analysis  
Preference: Private Industry in Northern Virginia or D.C. Metropolitan area

**Professional Experience:** Seasonal Adjustment of Time Series data (2 years)  
Econometric Forecasting (2 years)  
Mathematical Optimization Techniques (3 years)  
Reliability of Computer Systems (1 year)

**Computer Skills:** TSO, JCL, and WYLBUR on IBM mainframe  
Micro computer communication packages Crosstalk and PcLink  
SAS (5 years) on mainframe and micro computer

**Education:** B.A. in Mathematics With Specialization In Statistics  
Connecticut State University



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