JANUARY 1989

WASHINGTON STATISTICAL SOCIETY NEWSLETTER

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ANNOUNCEMENTS

Shiskin Award for Economic Statistics

Nominations are invited for the tenth annual Julius Shiskin Award in recognition of outstanding achievement in the field of economic statistics.

The Award is designed to honor an unusually original and important contribution in the development of economic statistics or in the use of economic statistics in interpreting the economy. The contribution could be in statistical research, in the development of statistical tools, in the application of computer techniques, in the use of economic statistical programs, or in developing public understanding of measurement issues, to all of which Mr. Shiskin contributed. Either individuals or groups can be nominated.

The Award will be presented with an honorarium of $500 at the Washington Statistical Society Annual Dinner in June 1989. A nomination form may be obtained by writing to the Julius Shiskin Award

Committee, c/o American Statistical Association, 1429 Duke Street, Alexandria, VA 22314-3402. Completed nomination forms must be received by April 1, 1989.

Previous winners of the Award have been Estella Dagum of Statistics Canada for her work in seasonal adjustment, James Bonnen for his performance chairing the President's Reorganization Project for the Federal Statistical System, Edward Denison for his work at the Bureau of Economic Analysis and the Brookings Institution, Beatrice Vaccara for her contributions at the Bureau of Industrial Economics, Geoffrey Moore for his research in measurement and analysis of business cycles, David Pierce for his use of modern statistical techniques at the Federal Reserve Board, Janet Norwood for her direction of the statistical program of the Bureau of Labor Statistics, Irving Kravis for his work in comparative studies of national income and prices, Roger Herriot for his work in improving income statistics in the United States, and Charles Waite for his contributions to the Bureau of Economic Analysis and the Census Bureau.

WASHINGTON STATISTICAL SOCIETY PROGRAM CHAIRS

Agriculture & Natural Resources
Ron Bosecker	447-3895
W. Barnes Johnson	249-7388

Social & Demographic Statistics
Harvey Schwartz	535-0634
John Czajka	484-9220

Short Courses
Glenn White	763-4138
Donald Gantz	425-3931
Brad Pafford	447-2129
Sid Schwartz	268-3490
Virginia deWolf	366-5372

Economics
Francis X. Diebold	452-2461
Gerald Schluter	786-1785

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

Methodology
David Marker	251-4398
Myron Katzoff	436-7047

Employment
Evelyn R. Kay	337-8418

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

Statistical Computing
Khalid Aboura	994-7534
Sylvia Leaver	272-2311

Quality Assurance
Stanley R. Freedman	586-2038
John M. Galvin	272-2385

Newsletter Editor
Michael Cohen	454-6193

PROGRAM ABSTRACTS

TOPIC:	**STATISTICS AND THE MEDIA: WHAT THE PUBLIC SHOULD KNOW AND CAN UNDERSTAND** `ASA-150`
SPEAKERS:	Warren Mitofsky, CBS News Jack Rosenthal, The New York Times Michael Traugott, University of Michigan Philip Meyer, School of Journalism, University of North Carolina
CHAIR:	Clyde Tucker, Bureau of Labor Statistics
DATE & TIME:	Thursday, January 12, 1989, 2:00 to 4:30 p.m. (Note special time.) A wine and cheese reception will follow the seminar.
LOCATION:	U.S. Department of Labor, Frances Perkins Building, Room N3437 A-D, 200 Constitutive Avenue, N.W., Washington, D.C. 20210 (Please call 523-1760 no later than January 10 to assure building entrance.)

ABSTRACT: Statistics have become a part of daily life in our information-oriented society. The reporting of statistical results in the news media is one of the major forces in this development. This seminar will address some of the most important issues and/or controversies surrounding the media's use of statistical information.

Warren Mitofsky and Michael Traugott will focus on the use of statistics in political reporting. Mr. Mitofsky will discuss the use of preelection and exit poll data in reporting presidential campaigns. Mr. Traugott will examine the use of statistical information to measure concepts. For example, different ways of describing the characteristics of the electorate can present problems for readers and viewers unfamiliar with either the underlying concepts or the techniques for measuring them. This problem arises in the case of descriptions based upon past voting behavior as opposed to typologies based upon underlying attitudes and values.

Philip Meyer will discuss the statistical education of journalists, who must understand statistics before presenting them. He will describe the problems encountered by people self-selected into a verbal environment (i.e., journalists) when they must deal with quantitative information. Jack Rosenthal's topic will be "It's Your First Amendment, Too: The Responsibility of Statisticians to Find News in Numbers." Reporters remain distressingly phobic about statistics, but Mr. Rosenthal believes they are amenable to therapy.

TOPIC:	**SUPERCOMPUTERS AND MONTE CARLO EXPERIMENTS**
SPEAKER:	David Grier, The George Washington University
DATE & TIME:	Tuesday, January 17, 1989, 12:00 p.m. (Note special time.)
LOCATION:	Room 301, Staughton Hall, The George Washington University, 707 22nd Street, N.W., Washington, D.C.
SPONSORS:	The Department of Operations Research, The George Washington University, and the WSS Statistical Computing Section

ABSTRACT: Supercomputers offer a high level of power for computationally intensive problems such as Monte Carlo Experiments. For example, the power of a statistical test may be computed to a high degree of accuracy in situations for which traditional mathematical techniques are completely intractable. However, the power of a supercomputer is not automatically available and many programs must be rewritten to exploit the special hardware. This rewriting process has both benefits and drawbacks. The benefits include new insights into the problem being programmed. The major drawback is the time required to rewrite the program. This talk will give an overview of supercomputers and give examples of problems that have been prepared for them.

PROGRAM ABSTRACTS (continued)

TOPIC:	**REGRESSIVE LOGISTIC MODELS FOR FAMILIAL DISEASE**
SPEAKER:	George Bonney,(recent recipient of the Snedecor Award), Division of Biostatistics, Howard University Cancer Center
CHAIR:	Dwight Brock, Biometry Office, National Institute on Aging
DISCUSSANTS:	Deborah Ingram, Division of Analysis, National Center for Health Statistics and Terry Beaty, Department of Epidemiology, Johns Hopkins University
DATE & TIME:	Tuesday, January 17, 1989, 12:00 p.m. (Note special time.)
LOCATION:	Wilson Hall, 3rd floor, Building 1, National Institutes of Health
SPONSOR:	Biometrics

ABSTRACT: Regression by models for dependent linear observations are constructed by successive conditioning. They provide a simple but relatively unknown parameterization of the multivariate distribution. They have the theoretical and practical advantage that they can be analyzed and fitted as in logistic regression for independent outcomes, and with the same computer programs. The paper is largely expository and is intended to motivate the development and usage of the regressive logistic models. The discussion includes serially dependent outcomes, equally predictive outcomes, more specialized patterns of dependence, multidimensional tables, and three examples.

TOPIC:	**THE FEDERAL TAX DEPOSIT (FTD) SYSTEM QUALITY IMPROVEMENT PROJECT**
SPEAKER:	Tony Tullo, Internal Revenue Service
CHAIR:	Stanley Freedman, Energy Information Administration
DISCUSSANT:	William Lockerby, Bureau of Labor Statistics
DATE & TIME:	Wednesday, January 18, 1989, 12:30 to 2:00 p.m.
LOCATION:	Room 2734, GAO Building, Bureau of Labor Statistics, 441 G Street, N.W., Washington, D.C. (Please call 523-1760 at least one day in advance to assure building entrance.)
SPONSOR:	Quality Assurance Section

ABSTRACT: A Quality Improvement Team was formed in June 1986 to reduce problems associated with the Federal Tax Deposit (FTD) system. Deposits to the system from business tax payers amount to 80 percent of the revenue collected by IRS. The team members were given quality improvement training using the Juran approach. The team used brainstorming, discovery analysis, and Pareto analysis to list problem areas, select those that were critical, and identify the "vital few" root causes for quality improvement. One measure of the success of this team in improving the FTD system was a drop in the number of unpostables (deposits that could not be applied because of incorrect or insufficient data) by almost 90 percent within a year of implementation of various improvements.

TOPIC:	**HIGH RESPONSE ERROR AND POOR COVERAGE ARE SEVERELY HURTING THE VALUE OF HOUSEHOLD SURVEY DATA**
SPEAKERS:	Donna Kostanich and Gary Shapiro, Statistical Methods Division, Bureau of the Census
CHAIR:	Myron Katzoff, ORM, NCHS
DISCUSSANT:	Curtis Jacobs, BLS
DATE & TIME:	Thursday, January 19, 1989, 12:30 to 2:00 p.m.
LOCATION:	Room 2437, GAO Building, Bureau of Labor Statistics, 441 G Street, N.W., Washington, D.C. (Please call 523-1760 at least one day in advance to assure building entrance.)
SPONSOR:	WSS Methodology Section

ABSTRACT: The speakers will show that both undercoverage and response variance can be quite substantial. For undercoverage they will survey effects as discussed in the literature and then present some speculative examples of effects on published data. For response variance, the speakers will present a simplified model, and show the relationship of bias to various population parameters under the model. They will then give examples of biasing effects.

OTHER ANNOUNCEMENTS

Seminar Series on Response Experience in Household Surveys Continues

The seminar series entitled "An Exploration of Methodologies for Improving Response Experience in Household Surveys" began in December with a review of response experience in the Survey of Income and Program Participation. It included a discussion of the outcome of an experiment in which respondents were given a calculator for their participation. The series will continue in mid-February with a seminar by Clyde Tucker and Adriana Silberstein of the Bureau of Labor Statistics, describing work done with alternative diary designs for the Consumer Expenditure Survey. Additional seminars are being planned monthly through May.

The purpose of the series is to facilitate an exchange of information regarding efforts to enhance response in household surveys. Each seminar will be a case study of the response experience of a particular survey or surveys and will focus on techniques to elicit appropriate responses. Topics will cover a broad spectrum, from innovation in standard survey methodologies (such as questionnaire design, interviewer training, follow-up procedures, etc.), to experiments with alternative strategies (such as gifts and incentives), as well as techniques to strengthen respondent cooperation (e.g., public relations). In all cases, the interest is in methods that are part of the survey data collection strategy and design, not procedures for making adjustments afterwards.

Since emphasis is being placed on sharing information and experiences, time will be provided for open discussion among speakers and audience participants following each presentation.

The seminar series is being sponsored by the National Agricultural Statistics Service and the Human Nutrition Information Service, both of the U.S. Department of Agriculture, and the Methodology and Social and Demographic Statistical Sections of WSS. Additional information will appear in future newsletters, or may be obtained by calling Diane Willimack (USDA/NASS, 202/475-3481).

Gertrude Cox Scholarship Race at the 1989 ASA Meetings

The Caucus for Women in Statistics and Council of Chapters is sponsoring the first annual Gertrude Cox Scholarship race in Washington, D.C. during the 1989 ASA meetings. A 5K run and 1 mile fun run are being planned for Sunday, the first day of the meetings. (Remember the meetings start a day early to allow for the ASA-150 sessions.) Look for more details in future issues. Please let Stephanie Shipp know if you would like to help before the race, and/or on race day.

We are seeking a corporate sponsor who will pay for the race expenses so that all entry fees can be given directly to the scholarship fund. Please contact Stephanie Shipp, 1000 Riva Ridge Drive, Great Falls, VA 22066, 703/759-4273 or 202/272-5060 for details.

Meeting of the Washington Academy of Sciences

Don Gross, Chair of the Operations Research Department at George Washington University, will speak on "Careers in Operations Research" at the Thursday, January 19 meeting of the Washington Academy of Sciences. There will be a reception at 6:30 p.m., a dinner at 7:00 p.m., and the talk will begin at 8:00 p.m. The location is the Mary Graydon Center of American University, at the corner of Massachusetts and Nebraska Avenues, N.W., Washington, D.C. For those attending the reception and dinner, the cost is $15.00. Dinner reservations should be made by January 12. Call Bob McCracken at 301/320-3621 for information. To make a reservation, make your check payable to "WAS Dinner" and mail to 5120 Newport Avenue, Bethesda, MD 20816.

GAUSS User's Group Meeting

GAUSS/Washington, the area GAUSS User's Group, will meet on January 18, at 12:30 in Room B-14 of the Economic Research Service at 1301 New York Avenue, N.W. Call Jack Angle at 786-1505 to put your name on the list for the guard at the door.

OTHER ANNOUNCEMENTS (continued)

Efron to Speak at NIST

Brad Efron of Stanford University will give a talk entitled "Three Examples of Computer-Intensive Statistical Inference." The date is Thursday, January 12, and the time is 2:00 p.m. The talk will be held at the Green Auditorium in the Administration Building in the Gaithersburg campus of the National Institute of Standards and Technology (NIST). All members of the general Washington area statistical and scientific community are cordially invited to join us, both for the talk and for the tea/reception to be held immediately following the talk in the Employees Lounge of the ADMIN Building. For further information, contact Kaye Wade at 301/975-2838.

Short Course: Analysis of Binary Data

Sheila Edwards, ASA Manager of Continuing Education-Grants and Contracts, is pleased to announce that Sir David R. Cox and Joyce Snell will present a two-day short course on the "Analysis of Binary Data" at the August 1989 Sesquicentennial Annual Joint Statistical Meeting in Washington, D.C. The course will be based on the revised edition of Professor Cox's book which will be published in July 1989. Contact the ASA Continuing Education Program for registration details.

Sesquicentennial Souvenirs

Several souvenir items commemorating the ASA-150 celebration were available at the New Orleans annual meetings and a few more are planned for 1989. The Biopharmaceutical Section had very impressive canvas portfolios and gym bags for a donation of $10 each which are expected to be repeated next year. The Council of Chapters had a nice looking Shaeffer ballpoint pen for $3 and foam beverage can holders (Koozies). A supply of these two items has been procured for WSS and will be offered at the annual holiday party in December. A new WSS mug commemorating the ASA-150 celebration will also be available at that party.

Some souvenir items for next year are pending and may depend upon having enough preorders. An appropriately inscribed striped tie (in both men's and women's versions) is being pursued along with an inscribed clipboard which has a calculator built in. These items would probably need to sell for about $17 each so you can see the reason for judging interest through presell activities.

A prototype of an extremely handsome lapel pin was presented to the ASA Board at New Orleans. Something of that nature may be included in the registration next year as a permanent momento.

U.S. Census Bureau's Fifth Annual Research Conference (ARC V)

ARC V is scheduled to begin Sunday evening, March 19, 1989, and run through 2 p.m. on Wednesday, March 22, 1989, at the Holiday Inn Crowne Plaza (formerly The National Clarion Hotel) in Arlington, Virginia.

ARC V will address a wide variety of topics such as nonsampling errors, new techniques in questionnaire design, and analysis of longitudinal survey data. The sessions will address: New Directions for Some Household Surveys and Associated Research Needs; Administrative Records in Censuses; Edit and Imputation; Coverage Measurement; Disclosure Avoidance; Implications of Cognitive Research for Census Questionnaire Design; Longitudinal Household Survey Methodology; Cognitive Research of Survey Questionnaires; Analysis of Longitudinal and Cross-Sectional Data; Nonsampling Error; Panel Studies of the Elderly Population; Agricultural Statistical Issues; Management's Contribution to Innovation in Statistical Agencies; Field Operation Issues; and Databases and Software.

For additional information contact Maxine Anderson-Brown, Office of the Director, Bureau of the Census, Washington, D.C. 20233, 301/763-1150.

OTHER ANNOUNCEMENTS (continued)

Science Fairs 1989

Volunteers are still needed to represent the Washington Statistical Society as judges in local area science fairs this spring.

If you would like to be a WSS science fair judge, or if you would like additional information about this activity, please contact Susan Ellenberg at 301/496-0694; or send a note with your name, address and daytime telephone number to Susan Ellenberg, AIDS Program, NIAID, 6003 Executive Boulevard, Rockville, MD 20892.

Spotlight on WSS Board Members

This month's column focuses on our Statistical Computing and Physical Sciences and Engineering Committees as well as highlighting our newsletter editor.

Khalid Aboura is serving his second year as cochair of the Statistical Computing Committee. His participation on the WSS Board is unique since he is our only present full-time student. Besides his work on his doctorate in Operations Research at George Washington University, he serves as a research assistant providing technical support in computing. Khalid has a B.S. in Mathematics from the University of Science and Technology of Algiers and an M.S. in Operations Research from George Washington. He has a strong interest in Bayesian Statistics as well as his interests in computing. He has coauthored papers with Nozer Singpurwalla and Refik Soyer on Reliability and Intelligent Systems which will appear in the ASQC Quality Congress and the International Symposium on Intelligent Control (IEEE) Proceedings. Besides his interest in WSS and ASA activities, Khalid is a member of ORSA and IMS.

Sylvia Leaver has joined Khalid as a cochair this year. She is a mathematical statistician in the Statistical Methods Division of the Office of Prices and Living Conditions at the Bureau of Labor Statistics. In that job, she is working on the sample design and sample allocations for the Consumer Price Index Surveys. She also works on variance estimates of the CPI and of price changes. This job ties in well with her major statistical interests of optimization and sample designs. Former positions included serving as a mathematical statistician in the Office of Enforcement at the U.S. Environmental Protection Agency and as a member of the Research Staff of the ASA Committee on Nuclear Regulatory Research. Like Khalid, Sylvia has strong ties to George Washington University with an M.S. and D.Sc. in Operations Research following her B.S. in Mathematics from the University of North Carolina. Sylvia was a coauthor of a major paper on the Sample Redesign for the 1987 CPI Revision which was presented at the ISI Tokyo meetings as well as in a WSS session. She has also been published in the ASA Statistical Computing Proceedings and in the George Washington University Technical Paper Series. Sylvia balances out her technical interests with her work as a parent volunteer teaching art to elementary school children.

Our George Washington University connections continue with **Refik Soyer**, cochair of the Physical Sciences and Engineering Committee for the second year. Refik also has a D.Sc. in Operations Research from George Washington following an M.Sc. in Operations Research from Sussex University in England and a B.A. in Economics from Bogazici University in Turkey. Refik is presently an Assistant Professor of Management Science at the George Washington School of Government and Business Administration. He works with GWU's MBA students, teaching courses in Production Management, Decision Support, Mathematics, and Statistics. Before shifting to his present position, he was a Research Associate in the Department of Operations Research. His major statistical interests include time series and forecasting, reliability, and Bayesian Statistics. Besides the papers with Khalid mentioned above, Refik published a paper this year with Tom Mazzuchi (Refik's cochair last year) on an Empirical Bayes Model for Software Reliability in the IEEE Transactions on Reliability and has other publications with Nozer Singpurwalla. Besides other activities, Refik serves on the Research Staff of the Institute for Reliability and Risk Assessment at George Washington.
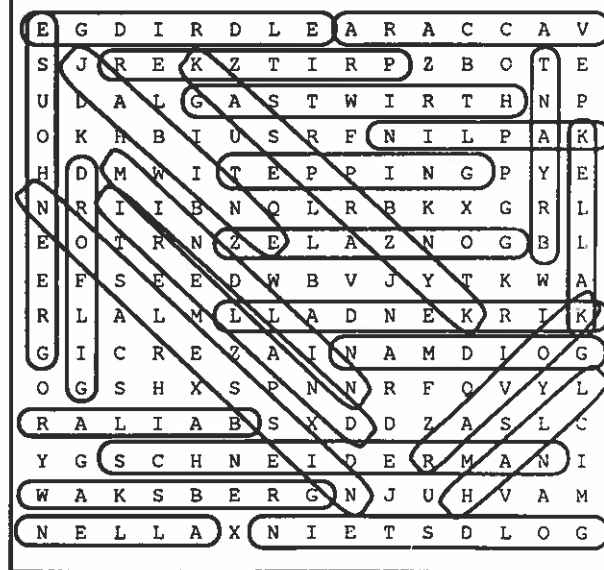
OTHER ANNOUNCEMENTS (continued)

Spotlight on WSS Board Members (continued)

Patricia Abel, the other cochair for Physical Sciences and Engineering, is also presently connected with GWU as she is working on a D.Sc. in Operations Research. Earlier degree work included a B.S. in Mathematics and Physics at Purdue University, an M.S. in Nuclear Engineering at the University of Washington, and an M.A. in Science, Technology, and Public Policy from GW. She is presently a member of the technical staff at MITRE Corporation, Division of Energy, Resources, and Environment. In that position she provides technical support in safety analysis, risk assessment, and reliability for the Nuclear Regulatory Commission. She has had other interesting work experiences at the Westinghouse Hanover Company, the Office of Technology Assessment, and the General Accounting Office. Most of her publications have been in various aspects of nuclear engineering such as economics, safety, and physics. She is a member of the American Nuclear Society and has been elected to various engineering honor societies.

Mike Cohen has no degrees from GWU, nor any present plans to pursue one. He is in his second year as Editor of the WSS Newsletter. He was previously on the Board of Directors as the Chair of the Methodology Section. As an Assistant Professor in the School of Public Affairs at the University of Maryland, he teaches two courses each semester in statistics and conducts research on the topics of robust regression, adjustment of decennial censuses, and statistics and public policy. Mike formerly served as a research associate with the Committee on National Statistics, a researcher at Applied Management Sciences, a mathematical statistician at the Energy Information Administration, and a visiting lecturer at Princeton University. He graduated, with distinction, with a B.S. in Mathematics from the University of Michigan and completed an M.S. and a Ph.D. in Statistics from Stanford. Mike has had a number of tie-ins to the American Statistical Association. He recently finished up as one of the ASA/NSF/Census fellows. He presently is Chair of the ASA Committee on Sections and Subsections, a member of the ASA Committee on Constitutional Revision, and a member of the ASA Transition Committee. He served as the program Chair for the Survey Research Methods Section at the 1986 meetings in Chicago. One of Mike's key professional accomplishments was serving as coeditor of the "Bicentennial Census, New Directions for Methodology in 1990" publication. One non-statistical interest is his proficiency as a table tennis player.

Answers to WSS Word Find

EMPLOYMENT COLUMN

The Washington Statistical Society Newsletter provides a service of notification of employment opportunities and descriptions of those seeking employment here in Washington. Evelyn Kay, who is in charge of this service, has achieved a high success rate. 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: Evelyn R. Kay, 2510 Virginia Avenue, N.W., #709, Washington, D.C. 20037, Phone 337-8418.

JOB OPENINGS

RESEARCH ASSOCIATES
AND STUDY DIRECTOR

The NATIONAL RESEARCH COUNCIL--NATIONAL ACADEMY OF SCIENCES has immediate openings for Research Associates and a Study Director to assist the Committee on National Statistics and its panels of experts in reviewing federal data collection programs. Research Associates would
work on studies of the decennial census, surveys of income, modeling of social welfare programs, quality of medical lab tests, confidentiality of data, and statistics on disabilities and on foreign trade. Study Director would work with panels of experts on evaluation of quality of U.S. foreign trade statistics. Study Director requires a Ph.D. or equivalent in statistics, economics, or related science with training in survey methodology or international trade plus four or more years relevant experience. Research Associates require a Ph.D. or equivalent in statistics or related science with training in quantitative methods. All positions require demonstrated abilities to organize and conduct or assist in research, to communicate clearly, and to interact effectively with senior scientists in a team effort. Full-time or part-time positions are available.

Send resume with names of three references to Director, Committee on National Statistics, National Research Council, 2101 Constitutive Ave., N.W., Washington, D.C. 20418. An Equal Opportunity Employer.

FACULTY POSITIONS

The Department of Statistics/Computer & Information Systems at the George Washington University has an opening for an Assistant Professor, tenure accruing, in the area of computer science or statistical computing, beginning Fall 1989. The position requires a Ph.D. in the relevant area. Applicants should have a strong commitment to both teaching and research in computer science or statistical computing. Applicants from all areas of computer science are invited; an interest in the interface between computer science and statistics is desirable.

The Department has approximately 70 undergraduate majors, the majority in Computer & Information Systems. In addition, the Department offers a masters degree in statistical computing and masters and doctoral degrees in Statistics.

Candidates should send applications including curriculum vitae, relevant reprints and three letters of reference to Professor R. Smythe, Chairman, Department of Statistics/Computer & Information Systems, The George Washington University, Washington, D.C. 20052. Applications must be received by February 15, 1989. EO/AA

JOB OPENINGS (continued)

SENIOR STATISTICIAN

Systems Applications provide the U.S. Environmental Protection Agency and other governmental and industrial organizations with consulting services related to air and water pollution. The Environmental Statistics group performs data analyses which typically require originality and ingenuity and offer the opportunity for professional growth. Data analytic responsibilities are of both a confirmatory and exploratory nature. Thus, imaginative approaches to probing and presenting data are sought. Conscientiousness concerning the accuracy, appropriateness, and timeliness of results is essential. Depending on qualifications and interests, the individual may be given major responsibility for selected statistical projects and may participate in marketing activities.

At least one year of statistical consulting, especially in the environmental field, is preferred as well as a Ph.D. degree in statistics or equivalent. In addition to statistical expertise, candidates should possess the oral and written communication skills needed to present results clearly to clients. Ability to program in Fortran, SAS, Minitab, BMDP, and/or other statistical packages required.

To apply, send resume to Job#4-P-89 to Systems Applications, Inc., 101 Lucas Valley Road, San Rafael, CA 94903. Indicate on resume or cover letter your salary expectations and the referral source. EO/AA

PROFESSOR OF STATISTICS/BIOSTATISTICS
The George Washington University

The Department of Statistics/Computer and Information Systems, in conjunction with its research facility, the Biostatistics Center, is recruiting a full professor with tenure or tenure accruing, starting in the Fall of 1989. The position will be funded on a nine to twelve month basis jointly by academic funds from the University and by sponsored research funds from the Biostatistics Center. The Department offers a broad curriculum leading to advanced degrees in statistics, and the Biostatistics Center serves as the Coordinating Center for over 12 cooperative studies and engages in statistical methodological research. The position involves teaching (at reduced effort), doctoral student supervision, and serving as a senior statistical advisor on methodologic issues for ongoing medical research projects. A strong record of research in statistical theory and methods related to biostatistical applications is required. Salary will be commensurate with experience and past performance. Please send a resume and three letters or reference to: Dr. John M. Lachin, Director, The Biostatistics Center, 6110 Executive Blvd., Suite 750, Rockville, Md. 20852. Applications will be accepted until February 1, 1989. It is anticipated that funding will be available effective July 1, 1989. EOE.

JOB OPENINGS (continued)

SENIOR RESEARCH ASSOCIATE

Application Deadline: December 31, 1988; **Position to be filled by:** March 15, 1989

A research and managerial position on the Panel Study of Income Dynamics, Survey Research Center, Institute for Social Research, University of Michigan, to (1) perform responsible administrative work, including supervision of data processing support staff, planning and implementing procedures and timetables for the performance of work, assisting in the recruitment and evaluation of support staff; (2) plan, develop and implement experimental methodological projects on survey research techniques and procedures; (3) create statistical programs to prepare survey data and documentation for analysis, and collaborate with staff in analyzing and reporting on the data.

Required Qualifications: Master's degree in sociology, economics, or a related social science, or an equivalent combination of graduate study and work experience; two or more years of progressively responsible experience in the conduct and management of social science research; two or more years' experience in supervising and evaluating research support staff; knowledge of and experience with OSIRIS preferred; knowledge of and experience with survey data coding, editing, tape and documentation production.

RESEARCH INVESTIGATOR

Application Deadline: March 15, 1989; **Position to be filled by:** Summer 1989

A non tenure-track position on the Panel Study of Income Dynamics, Survey Research Center, Institute for Social Research, University of Michigan, to perform primary research functions including (1) develop and write research proposals; (2) develop and oversee procedures for coding, programming, and publishing complex data on family histories, relationships and economic events: (3) collaborate with PSID staff to analyze data and write-up results for publication in articles and reports.

Required Qualifications: Two or more years' work experience with large, longitudinal data sets, such as SIPP, PSID, National Longitudinal Studies, etc.; a Ph.D. in sociology, economics or a related social science, or an equivalent combination of graduate study and work experience; knowledge of the literature in economics or other social science field, and in demography; two or more years' experience in programming and statistical analysis of survey research data.

To apply for either position, send application letter, resume, and three references to:
Mary Wreford, 3205 ISR, P. O. Box 1248, Ann Arbor, MI 48106. EO/AA

P.O. Box 70843
Washington, D.C. 20024-0843

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