WASHINGTON STATISTICAL SOCIETY

WSS NEWS

May 1992

Madow's Memorial Session

A special session in honor of William G. Madow has been scheduled for Monday, May 11, 1992. Madow, one of the innovators in sampling theory, died February 11, at the age of 81.

The session, to be held at the GAO Building, will feature personal reminiscences by Ingram Olkin, Stanford University. Don Rubin, Harvard University, will also speak on use of synthetic microdata for confidentiality, in the hopes of stimulating discussion in the Madow tradition. See the program abstract on page 5 for full details.

1992 Election Ballot

An election ballot for the 1992-3 Program Year of the Washington Statistical Society Board of Directors is enclosed in this issue. Biographical information on the candidates is provided on pages 11 and 12. Be sure to fill in your ballot and mail it to the address on the reverse side. Ballots must be received by **Friday, May 22, 1992,** to be counted. Results will be announced at the WSS Annual Dinner at the China Garden, in Rosslyn, VA, on Wednesday, June 10, 1992.

WSS Seminars

(All events are open to any interested persons.)

May		
4	Mon.	Nonlinear and Non-Gaussian Modeling of Mortality and Morbidity Series
5	Tues.	Analysis of Data from Complex Surveys: Accounting for the Sampling Design
6	Wed.	The Effect of Differential Lead Time by Age Group on Recent Increases in Breast Cancer Incidence
11	Mon.	Madow Memorial Session
12	Tues.	A "Cognitive" Redesign of the Survey of Income and Program Participation
12	Tues.	Total Quality Management Successes
13	Wed.	Some Comments on Neural Networks in Statistical Modeling and Control
14	Thur.	Cointegration, Seasonality, Encompassing, and the Demand for Money in the UK
14	Thur.	Survival Analysis for 2-by-2 Factorial Clinical Trials
19	Tues.	Analysis of Data from Complex Surveys: Survey Data at the NCHS
19	Tues.	Age and Race Data from the 1990 Census: Dealing with Anomalies and Historical Discontinuities
June		
2	Tues.	Variance Estimation Seminar: Post-stratification and Conditional Variance Estimation
5	Fri.	Analysis of Data from Complex Surveys: Use of Estimating Functions for Interval Estimation
10	Wed.	ANNUAL DINNER

Announcements

New Series on Analysis of Data from Complex Surveys

The Methodology Section is sponsoring a new series on issues related to the analysis of data from complex surveys (analysis beyond simple presentation of point estimates and standard errors). Methods for incorporating the sample design (sample weights and clustering) into the analysis will be explored, as well as model-based approaches. Examples will utilize data from federal surveys. Experiences of various federal agencies will be presented. Four seminars will be presented this spring (May 5, May 19, June 5 and June 11). Further seminars will be planned for the fall. If you would like to share your experiences or discuss issues related to this topic, please contact Sue Ahmed (202) 219-1781.

New AU Course on Randomization

The Department of Mathematics and Statistics, College of Arts and Sciences, The American University, announces a new course to be offered this summer on Special Topics in Statistical Methods: Randomization Tests. The course, to be taught by Robert W. Jernigan, will be given on Monday and Wednesday evenings from May 11-June 26, 1992. The focus will be on methods for data analysis and statistical inference using randomization tests for analysis of variance, regression, analysis of spatial data, time series and periodicity tests, and techniques for multivariate data. Monte Carlo methods, jackknifing and bootstrapping will also be discussed. For more information, call (202) 885-3120.

Workshop on Seasonal Adjustment

The Census Bureau is organizing an International Workshop on Seasonal Adjustment Methods and Diagnostics, to be held June 2-3, 1992, in Suitland, MD. Topics to be discussed include the new Census X-12 program; non-Gaussian, nonlinear model-based seasonal adjustment; spectrum-based methods; methods for weekly data; and design principles for seasonal filters. Experts from the United States and abroad, including H. Akaike, M. Ishiguro, and G. Kitagawa, from Japan, and J. Durbin, from the U.K., will be featured. Participants are expected to have some expertise in the general subject area. Registration is required by Friday, May 22. Space is limited, so early registration is recommended. To register or obtain more information, contact Maxine Anderson-Brown, Office of the Director, Room 2270-3, Bureau of the Census, Washington, DC 20233; telephone: (301) 763-1150; Fax: (301) 763-4887.

Conference on Statistics for TQM

The 17th Annual Summer Institute of Applied Statistics at Brigham Young University will hold a conference on The Role of Statistics and Statisticians in Total Quality Management (TQM). The meeting will be held on June 17-19, 1992, at the Provo campus and will center on some of the fundamental concepts of TQM and the critical role of statistical science. The focus will be on statistical tools and techniques to be used for becoming effective catalysts for the improvement of quality in all sectors of society. Featured speakers include Thomas J. Boardman, Colorado State University, and G. Rex Bryce, Brigham Young University. To obtain brochure and registration information, contact Shauna Kuykendall, Department of Statistics, Brigham Young University, 230 TMCB, Provo, UT 84602; telephone: (801) 378-4527; Fax: (801) 378-5722; SIAS@byu.edu.

Conference on Radiation Risk

The Conference on Radiation Risk and Interactions, the 10th ASA conference on radiation and health, will be held at the Hyatt Regency, Hilton Head Island, SC, June 28-July 2, 1992. The meeting will focus on a broad overview of topical areas in radiation, in an attempt to bring out new areas of concern, such as the role other risk factors play in radiation risk, and to further investigate the results and methodological techniques of some long-term studies. Applicability of meta-analysis in the study of radiation risk will also be discussed. Registration is limited to 125 persons. For more information, contact Meetings Department, American Statistical Association, 1429 Duke Street, Alexandria, VA 22314-3402; telephone: (703) 684-1221; Fax: (703) 684-2037.

(continued on page 13)

Program Abstracts

Topic: Nonlinear and Non-Gaussian Modeling of Mortality and Morbidity Series

Speaker: Robert H. Shumway, University of California, Davis

Chair: Lester R. Curtin, National Center for Health Statistics

Date/Time: Monday, May 4, 1992, 10:00 - 11:30 AM

Location: National Center for Health Statistics, Auditorium, Presidential Building, 11th Floor, 6525 Belcrest Road, Hyattsville, MD 20782

Sponsors: Office of Research and Methodology, NCHS, and the Data Collection Methods Section, WSS

Abstract: We study the class of nonlinear non-Gaussian models for time series generated when measurement matrices in a dynamic linear model switch in accordance with the discrete states of a hidden Markov chain. This implies that an observed series can be represented as a mixture of component time series, where the mixing proportions are allowed to switch over time.

The switching approach of Shumway and Stoffer (1991) is generalized to this Markov-dependent case and estimators for the component time series are derived, along with time varying estimates for the mixture configurations. A class of additive structural models is proposed that is general enough to include arbitrary mixtures of pure or disturbed periodic seasonal components and constant or time-varying trend components. We derive maximum likelihood estimators for the parameters of the structural components and for the stationary and transition probabilities of the hidden Markov chain.

We illustrate the possibilities that the above model might have for dealing with regime changes by analyzing simulated data and real monthly influenza and diabetes mortality series. Using a formulation that expresses the underlying series and possible regime changes in terms of mixtures of structural state-space models, we isolate peaks in the influenza series associated with epidemic effects and tentatively identify several possible outliers in the diabetes record. We illustrate general software developed that allows arbitrary mixtures of (a) fixed and stochastic trend components, (b) fixed and disturbed periodic components and (c) autoregressive series of any order to enter the model.

This work is joint with M.J. Katzoff, National Center for Health Statistics, and D.S. Stoffer, University of Pittsburgh, and was supported, in part, by a personal services contract with the Office of Research and Methodology, National Center for Health Statistics, Centers for Disease Control.

Program Abstracts (cont'd)

Topic: Analysis of Data from Complex Surveys: Accounting for the Sampling Design (1st in series)

Speakers: Edward L. Korn and Barry I. Graubard, National Cancer Institute

Chair: Sue Ahmed, National Center for Education Statistics

Date/Time: Tuesday, May 5, 1992, 12:30 - 2:00 PM

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

Sponsor: Methodology Section

Abstract: Large scale surveys offer an opportunity to study underlying relationships between independent variables and outcomes in a population-based setting. Their complicated multi-stage sampling designs with differential probabilities of sampling individuals can make their analysis less than straightforward. Classical "design-based" methods that yield approximately unbiased estimators of associations and standard errors can be highly inefficient. Model-based methods require assumptions which, if wrong, can lead to biased estimators of associations and standard errors. This talk examines the implications of utilizing the sample clustering and sample weights in the analysis of survey data. The approach is to estimate the inefficiency of using these aspects of the sampling design in a design-based analysis when, actually, it was unnecessary to do so. If the inefficiency is small, then that aspect of the design is used in a design-based fashion. Otherwise, additional modeling assumptions are incorporated into the analysis. The issues are demonstrated with health survey data, including two controversial analyses previously published in the medical literature.

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Topic: The Effect of Differential Lead Time by Age Group on Recent Increases in Breast Cancer Incidence

Speaker: Eric J. Feuer, National Cancer Institute

Chair: Barry I. Graubard, National Cancer Institute

Date/Time: Wednesday, May 6, 1992, 11:00 AM - 12:00 Noon

Location: Conference Room G, Executive Plaza North, 6130 Executive Blvd., Rockville, MD (Red Line --White Flint; approx. 1 mile)

Sponsor: Division of Cancer Prevention and Control, National Cancer Institute, and Public Health and Biostatistics Section, WSS

Program Abstracts (cont'd)

The Effect of Differential Lead Time by Age Group on Recent Increases in Breast Cancer Incidence (cont'd)

Abstract: Largely unexplained increases in breast cancer incidence of about 1% per year have been documented back to the 1940's. Since 1982, breast cancer incidence in women 40 and above has been increasing at a faster rate than this long-term secular trend, especially in women 50 and above. Increases in the use of mammography since 1982 (which has been documented in population surveys of women) provide the most plausible explanation for the incidence increase over the long-term secular trend. We focus on the effect of breast cancer screening, especially the role of differential lead time (i.e., the time from screen detection to clinical detection in the absence of screening) by age group, on the recent observed increase in breast cancer incidence.

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Topic: Madow Memorial Session

Speakers: Ingram Olkin, Stanford University; Donald Rubin, Harvard University; and others TBA

Discussant: Robert Groves, Bureau of the Census

Chair: Fritz Scheuren, Internal Revenue Service

Date/Time: Monday, May 11, 1992, 12:30 - 2:30 PM

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

Sponsor: Methodology Section

Abstract: William G. Madow made major contributions to distribution theory, systematic sampling, and the problems of incomplete data in sample surveys. A panel of speakers has been assembled to discuss Madow and his contributions to current theory and methods. Madow was also noted for his role as a catalyst to further methodological development. To that end, Rubin will discuss "Can Multiply Imputed Synthetic Microdata Satisfy Confidentiality Restraints and Data Users?" His hope is to stimulate discussion in the Madow tradition.

Program Abstracts (cont'd)

Topic: A "Cognitive" Redesign of the Survey of Income and Program Participation: Development of Procedures and Initial Test Results

Speaker: Jeffrey C. Moore, Bureau of the Census

Discussant: Douglas J. Herrmann, National Center for Health Statistics

Chair: Thomas B. Jabine, Consultant

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

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

Sponsor: Data Collection Methods Section

Abstract: This paper, co-authored with Karen E. Bogen and Kent H. Marquis, describes the development, design, and initial testing of experimental data collection procedures for the Survey of Income and Program Participation (SIPP). The new procedures derive from prior research which has investigated SIPP measurement error levels, their importance, and their cognitive bases. Key features of the redesigned procedures are: a consistent message to all survey participants that the primary survey goal is response accuracy; and a recognition that accurate data, to the degree demanded by the survey, are often not easily accessible in memory, and may not reside in memory at all, thus requiring the use of income records.

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Topic: Total Quality Management Successes

Speakers: Clifford J. Parker, Bureau of the Census; Denise Wells, Department of the Navy; and Donald McPartland, Internal Revenue Service

Chair: Carrol Kindel, National Center for Education Statistics

Date/Time: Tuesday, May 12, 1992, 12:30 to 2:00 PM

Location: NCES, Room 326, 555 New Jersey Ave., NW, Washington, DC (Red Line -- Union Station)

Sponsor: Quality Assurance Section

Abstract: Support for Total Quality Management (TQM) and subsequent implementation provide unique challenges in the federal government environment. However, TQM has been successfully implemented as an organization-wide program in a number of federal government agencies, some of them pre-dating private industry initiatives. Three examples will be presented by this panel of experts representing agencies with successful TQM programs.

Program Abstracts (cont'd)

Topic: Some Comments on Neural Networks in Statistical Modeling and Control

Speaker: James C. Spall, The Johns Hopkins University

Chair: Hosam M. Mahmoud, George Washington University

Date/Time: Wednesday, May 13, 1992, 12:30 - 2:00 PM

Location: Room 301, Staughton Hall, George Washington University, 707 22nd St., NW, Washington, DC (Blue/Orange Line -- Foggy Bottom/GWU)

Sponsor: Methodology Section, WSS, and George Washington University

Abstract: This talk will begin with a few general comments about neural networks and their role in statistical modeling. We will then discuss how they can be used in the control and regulation of a system in the face of uncertainty about the nature of the underlying process. In such control problems, one is attempting to make a dynamic system track a target when there is incomplete knowledge of the equations governing the system. This type of control problem arises in countless areas, including, for example, controlling a robot arm or aircraft or adjusting the money supply to achieve predetermined macroeconomic targets.

A critical problem that must be addressed in the application of neural networks to the control of complex systems is the estimation of the connection weights in the network. This can be a formidable problem, as there are typically many weights and there is often a need to perform this estimation quickly. One of the main lines of work being pursued by the speaker is the estimation of the weights by a new stochastic approximation algorithm. The talk will include some discussion on this estimation approach, in addition to general background material.

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Topic: Cointegration, Seasonality, Encompassing, and the Demand for Money in the United Kingdom

Speaker: Neil Ericsson, Federal Reserve Board

Chair: Arthur Kennickell, Federal Reserve Board

Date/Time: Thursday, May 14, 1992, 12:30 - 2:00 PM

Location: Room 3319, Eccles Building, Federal Reserve Board, 20th and C Streets, NW, Washington, DC (Red Line -- Farragut North or Blue/Orange Line -- Farragut West) Please call Sheila Griffin (202) 452-2992 to gain admission.

Sponsor: Economics Section

Program Abstracts (cont'd)

Cointegration, Seasonality, Encompassing, and the Demand for Money in the United Kingdom (cont'd)

Abstract: Virtually all previous narrow money demand studies for the United Kingdom have used seasonally adjusted data for money, prices and expenditure. This paper develops a constant, data-coherent M-1 demand equation for the UK with seasonally unadjusted data. For that model, we address issues of cointegration, error-correction, general-to-simple modeling, dynamic specification, model evaluation and testing, parameter constancy, and exogeneity. To interpret the joint existence of models with adjusted and unadjusted data, we establish theoretical and empirical relationships between models using those data. Finally, we derive and implement encompassing tests for comparing models using adjusted data with models using unadjusted data. Unlike the "standard" encompassing framework, variance dominance is not always a necessary condition for encompassing.

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Topic: Survival Analysis for 2-by-2 Factorial Clinical Trials

Speaker: Eric Slud, University of Maryland, College Park, and Information Management Services Corp.

Discussant: Ed Lakatos, National Heart, Lung, and Blood Institute

Chair: Michael Proschan, National Heart, Lung, and Blood Institute

Date/Time: Thursday, May 14, 1992, 1:30 - 3:00 PM

Location: NIH, Bldg. 31, Conference Room 7, 9000 Rockville Pike, Rockville, MD (Red Line -- Medical Center)

Sponsor: Public Health and Biostatistics Section

Abstract: Several methodological issues which arise within two-way factorial designs for sequentially monitored survival experiments are discussed. First, the distinction is made between unadjusted score statistics and those adjusted for other main effects. For both types of statistics, the separate main-effect test statistics and the statistic for interaction will be approximately independent in large randomized studies, if loss-to-followup times have the same distribution within all factorial levels. In this case, the unadjusted and adjusted statistics are approximately equal under the null hypothesis. In most practical applications, the dependence between the test statistics (whether both adjusted or both unadjusted) for different main effects is likely to be very small, and, in all cases, each main-effect test statistic is approximately independent of the other unadjusted main effect test statistic. Consequences are drawn in the situation where, during the study, accrual to one of the treatments has been terminated for ethical reasons.

Program Abstracts (cont'd)

Topic: Analysis of Data from Complex Surveys: Survey Data at the National Center for Health Statistics (2nd in series)

Speaker: Van L. Parsons, National Center for Health Statistics

Chair: Stuart Scott, Bureau of Labor Statistics

Date/Time: Tuesday, May 19, 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 destination.

Sponsor: Methodology Section

Abstract: The National Center for Health Statistics (NCHS) sponsors several national surveys which collect data on the health of the population, the availability and use of health resources, and health care expenditures. In this presentation, some of the data analysis methodologies used at NCHS will be discussed. The talk will focus on some of the practical problems resulting from analyzing data from complex-design surveys: variance estimation, simplified design structures, and complex-design computer software. Examples from NCHS data will be given.

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Topic: Age and Race Data from the 1990 Census: Dealing with Anomalies and Historical Discontinuities

Speakers: Gregory Spencer and Frederick W. Hollmann, Bureau of the Census

Disc./Chair: Jeffrey S. Passel, The Urban Institute

Date/Time: Tuesday, May 19, 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 destination.

Sponsor: Social and Demographic Section

Abstract: Analysts and others using data from the 1990 census must deal with a number of anomalies, response errors, and discontinuities with historical data sets and many administrative records. Two examples are a large shortfall in the number of children under age 1 and the 9.8 million people, mainly of Hispanic origin, who did not respond with a specific race group and were, thus, classified as being of "other" race. The age and race data from the 1990 census, as enumerated, had to be "modified" to create data more consistent with historical data, such as previous censuses, and with most administrative records, such as birth and death certificates. This "modified" file will serve as the beginning point for all demographic estimates, survey controls, and population projections produced by the Census Bureau until 2001.

Program Abstracts (cont'd)

Age and Race Data from the 1990 Census: Dealing with Anomalies and Historical Discontinuities (cont'd)

The presentation focuses on some of the difficulties associated with direct analysis of the unmodified age and race data from the 1990 census. Included is a description of the procedures used to modify the census age and race data, together with a summary of some of the fundamental inconsistencies between age and race as measured in the 1990 census and as collected through administrative records which could not be rectified by the modification procedure. The presentation concludes with a description of some of the research being done at the Census Bureau to ameliorate these remaining inconsistencies. **This session is a MUST for all serious users of data from the 1990 census.**

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Topic: Variance Estimation Seminar: Post-Stratification and Conditional Variance Estimation (7th in series)

Speaker: Richard Valliant, Bureau of Labor Statistics

Discussant: Charles Alexander, Bureau of the Census

Chair: Dale Atkinson, National Agricultural Statistics Service

Date/Time: Tuesday, June 2, 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 destination.

Sponsor: Methodology Section

Abstract: Post-stratification estimation is a technique used in sample surveys to improve efficiency of estimators. Survey weights are adjusted to force the estimated numbers of units in each of a set of estimation cells to be equal to known population totals. The resulting weights are then used in forming estimators of means or totals of variables collected in the survey. Although the variance of a post-stratified estimator can be computed over all possible sample configurations, inferences made conditionally on the achieved sample configuration are desirable. Theory and a simulation study using data from the U.S. Current Population Survey are presented to examine both the conditional bias and variance of the post-stratified estimator of a total. The linearization, balanced repeated replication, and jackknife variance estimators are also explored, to determine whether they appropriately estimate the conditional variance.

Biographical Information

1992 Candidates for Office on the Board of Directors Washington Statistical Society

(Please mark your selections on the enclosed ballot and return to the address on the reverse side **by Friday, May 22, 1992.**)

President-Elect (President, 1993):

Dwight Brock is Chief, Biometry Office, Epidemiology, Demography and Biometry Program, National Institute on Aging. He received his Ph.D. in statistics from Southern Methodist University. Since fall 1991, Brock has served on the WSS Board as Chapter Representative to the ASA Council of Chapters. Prior to that, he was elected Representative-at-Large (1989-91), served as co-Chair of the Social Arrangements Committee (1987-9) and as a member of the Local Arrangements Committee for the 1989 Joint Statistical Meetings. Brock's service to the American Statistical Association includes being a member and Chair of the ASA Snedecor Award Committee (1989-92). His statistical interests include design and analysis issues related to data on the epidemiology of aging; applications of random effects and Markov models to longitudinal data on physical functioning, disability and other health variables; and extensions of these models to complex sample surveys.

Michael L. Cohen is an Assistant Professor in the School of Public Affairs, University of Maryland, College Park. He has also done work for the Energy Information Administration; Department of Statistics, Princeton University; and the Committee on National Statistics. Cohen has a Ph.D. in statistics from Stanford University. He has served as Program Chair and Section Chair of WSS' Methodology section (1983-5) and as editor of the **WSS Newsletter** (1987-90). His service to ASA includes being Program Chair for the Section on Survey Research Methods (1986), member and Chair of the ASA Committee on Sections and Subsections (1987-9), and member of the ASA Committee on Constitutional Revision (1988-9) and the ASA Transition Committee (1990-1). Cohen's research interests include adjustment of the census for undercoverage, model validation and robust regression.

Methodology Chair-Elect (Chair, 1993):

Phillip S. Kott is a Senior Mathematical Statistician for the National Agricultural Statistics Service. Previously, he worked as an economist and mathematical statistician at the Bureau of the Census, the Bureau of Labor Statistics and the Energy Information Administration. Kott has a Ph.D. in mathematical statistics from Brown University. He has done extensive research in survey design, estimation and analysis.

Stuart Scott is a Mathematical Statistician in the Office of Survey Methods Research, Bureau of Labor Statistics. He has a Ph.D. in statistics from Catholic University of America. Scott is an Associate Editor of the *Journal of Official Statistics*. His areas of interest include seasonal adjustment, time series modelling, and measurement errors in surveys.

Biographical Information (cont'd)

1992 Candidates for WSS Board (cont'd)

Representatives-at-Large, 1992-3:

Susan Ahmed is Chief Mathematical Statistician, Statistical Standards and Methodology Division, at the National Center for Education Statistics. She has a Ph.D. in biostatistics from the University of North Carolina at Chapel Hill. She served as Chair of WSS Methodology Section in 1990-2 and is currently serving on the OMB Working Group on Nonresponse. Her major areas of interest are statistical methodology, issues related to the analysis of data from complex surveys, and analysis of multilevel data.

A. Richard Bolstein is an Associate Professor in the Center for Computational Statistics and the Department of Operations Research and Applied Statistics, George Mason University. He also taught at University of North Carolina, Chapel Hill, before coming to GMU. Bolstein has a Ph.D. in mathematics from Purdue University. He has held several offices on the Washington Operations Research and Management Science Council, from 1981-7, including President (1986-7). Bolstein has also been an Associate Editor of the *Journal of the American Statistical Association* since 1990. His current interests are primarily in survey sampling, an area in which he has been an active consultant for the past 10 years.

Nancy Flournoy is an Associate Professor in the Department of Mathematics and Statistics at The American University. She has also worked for the Statistics and Probability Program, National Science Foundation; the Fred Hutchinson Cancer Research Center; the University of Washington; and the Southwest Regional Laboratory for Educational Research and Development. Flournoy has a Ph.D. in biomathematics from University of Washington. Her service to WSS includes Representative to the Washington Academy of Sciences, co-Chair of the Statistical Computing program and as a member of the Local Arrangements Committee for the 1989 Joint Statistical Meetings. For ASA, she has been involved with the Ad Hoc Committee on Certification of Statisticians, the Committee of ASA Representatives to the American Association for the Advancement of Science, and the ASA Committee on a National Institute of Statistical Sciences. Flournoy's areas of expertise include multivariate discrete-state processes, adaptive experimental designs, and statistical information systems for networked cross-disciplinary experiments.

Sam Slowinski is a Statistician for the Board of Governors of the Federal Reserve System. He has an M.A. in statistics from Pennsylvania State University. Slowinski previously served as Methodology Section Program Chair for the WSS. His areas of research interest include sampling, survey research and probability modelling.

Treasurer, 1992-3:

Virginia de Wolf is a Mathematical Statistician at the Department of Transportation's National Highway Traffic Safety Administration. She has a Ph.D. from the University of Washington (Seattle). Currently, de Wolf serves as WSS' Treasurer. Previous positions with WSS include Chair of the Short Course Committee, Representative-at-Large, member of various WSS Committees, including the Program Planning Committee for the ASA Sesquicentennial. Her service to ASA includes being General Methodology Program Chair for the 1991 Joint Statistical Meetings. Areas of interest include confidentiality of and access to statistical data, data quality, and continuing education.

Announcements (cont'd)

Call for Papers on Undercounted Ethnic Populations

The Bureau of the Census has just begun planning for a Research Conference on Undercounted Ethnic Populations, to be held May 5-7, 1993, in Washington, DC. In preparation, the Bureau has issued a call for papers on research relating to undercounted ethnic populations in the decennial censuses. Papers may be methodological, ethnographic, sociological or statistical in nature, focussing on either the rural or urban undercount. The population groups of interest include American Indians, Alaskan natives, Asian and Pacific islanders, Blacks, and Hispanics. To be considered, a 500-word abstract should be sent by September 1, 1992, to David Whitford, Conference Chair, Decennial Planning Division, Bureau of the Census, Washington, DC 20233.

QL Update

During March, the following Quantitative Literacy (QL) activities took place:

- **Shail Butani** gave a presentation to a group of about 20 Markham Elementary School teachers in Fairfax County. The presentation consisted of some examples of activities that could be done with elementary school students, in particular grades K-2.

- **Butani** also gave a talk to women students in two math classes at Mount Vernon College in Washington, DC. The purpose of the talk was to encourage females to appreciate the basic concepts of math, so that they can understand and question some of the usage of statistics in every day life.

- **Sharon Bobbitt, Amrut Champaneri,** and **John Gaudiosi** served as judges for mathematics and computer science exhibits at the Fairfax County Regional High School Science Fair. All the judges enjoyed the experience very much and felt that their efforts were greatly appreciated.

- **Jean-Claude Bonhomme** made a presentation on the use of statistical quality control in the industrial environment to a seventh grade algebra class at Jefferson Junior High in Washington, DC. He was pleasantly surprised at the ability of the students to grasp technical concepts, such as sampling plans, probability, and control charts. The students asked many intuitive and complex questions.

Do you want to try a similar activity in your area? Join the WSS Quantitative Literacy Group by calling Ron Fecso at (202) 334-2295.

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:

May 13 **Mesosaur.**-- A time series analysis from the Soviet Union, distributed by SYSTAT, Inc. Includes hot-linked graphs (change data values and the graph changes instantly and conversely).

June 3 **Microfit.**-- An interactive, menu-driven, econometric package from England. Includes many specification tests.

All meetings are scheduled for Wednesdays from 12:30 - 1:30 PM in Room B-14, 1301 New York Ave., NW. (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.

Employment Column

As a service to local statisticians, the **Washington Statistical Society News** provides notification of

Employment Column (cont'd)

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 Division of Science Resources Studies, National Science Foundation, is seeking a statistician, economist, or social scientist. The person will be responsible for aspects of the design, management, and/or analysis of a system of large-scale surveys of scientists and engineers. Initial salary will be at the GS-11/12/13 levels ($32,423 - $60,070). Applicants should have skills in several of the following areas: sampling statistics, computer modeling, questionnaire design, data analysis, survey operations, and report writing. Relevant education and/or experience are required. To obtain a more detailed description of the position, write to Dr. Carolyn Shettle, Director, S&E Personnel Program, Division of Science Resources Studies, National Science Foundation, 1800 G Street (L-609), Washington, DC 20550. EOE

Consulting Opportunity

The American Petroleum Institute, a major trade association representing the petroleum industry, is seeking an expert statistical consultant to service statistical projects and programs on an "as needed basis." This individual will compliment the existing in-house statistical capability at API. The fee arrangement is commensurate with experience and areas of expertise.

The qualifications include a Ph.D. in statistics with at least 10 years of experience in the application of statistical techniques to real problems. Must possess strong theoretical background, particularly in the areas of linear models, sample design and estimation, and experimental design. Knowledge of SAS skills are essential.

Major responsibilities include: responding to inquires on statistical theory and techniques; engaging in short-term projects, encompassing surveys and special studies, requiring statistical analysis; and reviewing the statistical methodologies used in studies of interest.

Qualified individuals should call Robert Cunningham, Employment Manager at (202) 682 - 8388 or submit a resume/statement of qualifications to Employee Relations, American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005. EOE

Biostatistician

The EMMES Corporation, a statistical consulting firm, has an opening for a biostatistician with a strong data orientation and communication skills. Projects involve controlled clinical trials and epidemiologic studies in ophthalmology, arthritis, AIDS, and renal disorders. Important considerations include training in biostatistics at the Master's level, and previous experience in the use of microcomputers for data management and statistical analysis. Salary commensurate with experience. Excellent benefits and stable, pleasant work environment. Please send resume to: Mrs. Fritz, The EMMES Corporation, 11325 Seven Locks Road, Suite 214, Potomac, MD 20854. EOE

Supervisory Mathematical Statistician

The Energy Information Administration announces an opening for a Supervisory Mathematical Statistician. The position is a term appointment, not to exceed 2 years, at a GM-1529-15 ($64,233-$83,502). The incumbent will serve as supervisor of the EIA Model Quality Team, direct academic researchers in the Independent Expert Review Program, and oversee the work of nationally recognized experts under the Visiting Scientist Program in evaluating existing capabilities and developing improvements to them. He or she will develop an integrated

Employment Column (cont'd)

Vacancies (cont'd)

Supervisory Mathematical Statistician (cont'd)

plan of evaluation, research and development, policy development, and enforcement for ensuring the uniformly high quality of EIA's modeling and analysis and maintain nationwide contacts with top academics and experts to ensure a steady supply of candidates for projects and to further mission-enhancing relationships.

Candidates must be U.S. citizens. To apply, submit a current completed Standard Form 171, "Application for Federal Employment," a copy of an official transcript, or a completed copy of an OPM Form 1170/17, "Supplemental Qualification Statement," to: U.S. Department of Energy, 1000 Independence Ave., SW, AD-533.2 -- Room 4H-062, Washington, DC 20585, ATTN: Bulletin 92-EI-. 283. Or call, Margaret Bynum: (202) 586-9857. 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 #92-04

Objective: A position in federal government at GM-15 level. Will consider GM-14/15 level.

Education: Ph.D. in Statistics

Experience: Extensive experience in:

- Designing large scale complex surveys, including longitudinal surveys;
- Designing survey methodological experiments;
- Conducting research in survey methodological areas, including weighing (estimation), variance estimation, and oversampling;
- Supervising and directing staff on research and other projects;
- Handling nonsampling errors; and
- Managing a multi-million dollar survey and a number of other smaller budget surveys.

Papers: Published 15 papers.

Applicant #92-05

Objective: Seeking a position which draws upon my background in statistics, applied mathematics and computer science.

Education: ABD in Statistics; M.S. in Mathematics

Experience:

- Programmer/Analyst.--Transferred data from magnetic tapes to cartridges; created data sets from the cartridges using SAS; used SAS to analyze the data for inconsistencies; and provided detailed reports based on the analysis.

- Graduate Research Assistant.-- Provided software support for CMS, FORTRAN, SAS, and SPSSX in an IBM/MVS mainframe environment, and MYSTAT, SYSTAT, ISP, Lotus 1-2-3, Wordperfect and dBase in a Novell LAN Network environment; manipulated a large data set; performed statistical analysis; and generated reports.

- Lecturer--Taught undergraduate courses in Algebra.

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