



JUNE 1991

WASHINGTON
STATISTICAL
SOCIETY

NEWSLETTER

June 3	Monday	A COMPARISON OF TWO-DIMENSIONAL SMOOTHERS WITH APPLICATIONS TO GEOGRAPHIC EPIDEMIOLOGY
June 10	Monday	NONLINEAR MODELING OF LONGITUDINAL MORTALITY AND MORBIDITY SERIES
June 10	Monday	CONFIDENTIALITY ISSUES IN COMPUTER DATABASES
June 17	Monday	PARADOXES, MIXTURES AND SPACES
June 18	Tuesday	A MULTIVARIATE PROCEDURE TOWARDS COMPOSITE ESTIMATION OF THE CONSUMER EXPENDITURE FOR THE CPI

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, June 25. The meeting will be held in the GAO Building, Room 2437, at 441 G Street N.W. from 12:30pm to 2:00 pm. The GAO Building is accessible by the Gallery Place or Judiciary Square Metro Stations. Any photo ID will allow you access to the building but you will need to register with the security guards.

This open meeting is an opportunity for those members interested in learning more about the WSS and for those interested in becoming more involved in the activities it

sponsors. Since the June meeting is the transition meeting for the outgoing and incoming officers, members also will have the opportunity to meet both sets of officers.

SHISKIN AWARD WINNERS TO BE HONORED AT ANNUAL DINNER

Carol F. Carson of the Bureau of Economic Analysis and Stephen P. Taylor of the Federal Reserve(retired) have been awarded the 1991 Julius Shiskin Award for Economic Statistics. This 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 WSS will present Ms. Carson and Mr. Taylor with the Shiskin Award at the Annual Dinner on June 11, 1991.

WASHINGTON STATISTICAL SOCIETY PROGRAM CHAIRS

Agriculture & Natural Resources
Cynthia Clark 763-8558
John Herbert 532-4544

Social & Demographic Statistics
Harvey Schwartz 443-6990
Tom Dietz 323-2916

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
Sam Slowinski 452-2622
Sue Ahmed 357-6781

Public Health & Biostatistics
Ed Lakatos 496-5905
Gordon Lan 881-9260

Physical Sciences & Engineering
Nozer Singpurwalla 994-7515
Julia Abrahams 696-4320

Statistical Computing
Nancy Flournoy 885-3127
Sylvia Leaver 272-2350

Quality Assurance
Stanley Freedman 586-2038
John Galvin 272-5066

Newsletter Editor
Stephen H. Cohen 523-7551

Employment
Bill Arends 447-6812

THE SUMMER INSTITUTE IN SURVEY RESEARCH TECHNIQUES

In addition to the workshops, the annual Summer Institute will offer 14 regular 4-week graduate level courses in various aspects of survey design, data collection and analysis. The emphasis in the program is on the sample survey as a basic measuring instrument for 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 the 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 1991 Summer Institute will be held in Ann Arbor from July 1 to August 23.

First Session - July 1 through July 26:

- *Introduction to Survey Research, Rob Quinn (Center for Users Surveys, Inc.)
- *Introduction to Statistical Research Design, Bill Yeaton (U. of Michigan)
- *Longitudinal Survey Design, Richard Campbell (U. of Illinois.) & Duane Alwin (Univ. of Michigan)
- *Analysis of Survey Data, Frank Andrews (U. of Michigan)
- *Questionnaire Design, Nora Cate Schaeffer (U. of Wisconsin)
- *Mail and Telephone Survey Methods, Don Dillman (Wash. State U.) & Paul Biemer (Research Triangle Institute)
- *Methods of Survey Sampling, Colm O'Muirheartaigh (London Schools of Economics)

Second Session - July 29 through August 23:

- *Introduction to Survey Research, Rob Quinn (Center of User Surveys, Inc.)
- *Design Evaluation Research, Bill Yeaton (U. of Michigan)
- *Computer Analysis of Survey Data, Laura Klem (U. of Michigan)
- *Analyses of Survey Data II, Willard Rogers (U. of Michigan)
- *Longitudinal Analysis of Survey Data, Christopher Hertzog (Georgia Inst. of Tech.)
- *Event History Analysis, Jay Teachman (U. of Maryland)
- *Cognitive Psychology and Survey Methods. McKee McClendon (U. of Akron)
- *Reliability and Validity of Survey Measurement, Duane Alwin (U. of Michigan)

For application materials and further information, contact Dr. Duane F. Alwin, Director of the Summer Institute, Survey Research Center, The Institute for Social research, University of Michigan, P.O. Box 1248, Ann Arbor, MI 48106-1248. Or you may telephone (313) 764-6595.

ICPSR SUMMER TRAINING PROGRAM

The Inter-university Consortium for Political and Social Research (ICPSR) offers a Summer Training Program in Quantitative Methods which provides Additional opportunities for participants in the SRC Summer Institute. Information on ICPSR courses may be obtained by writing Henry Heitowit, Director, Educational Resources, ICPSR Summer Program, P.O. Box 1248 University of Michigan, Ann Arbor, MI 48106-1248. Telephone (313) 764-8392.

**SUMMER INSTITUTE IN SURVEY RESEARCH TECHNIQUES
THE SURVEY RESEARCH CENTER
INSTITUTE FOR SOCIAL RESEARCH,
THE UNIVERSITY OF MICHIGAN**

WILL CONDUCT WORKSHOPS ON

THE PANEL STUDY OF INCOME DYNAMICS and EVENT HISTORY ANALYSIS

JULY 22 - JULY 26, 1991

The Survey Research Center of the Institute for Social Research, the University of Michigan, will hold its 44th Annual Summer Institute in Survey Research Techniques at ISR during the Summer of 1991. Among the courses being offered, the Summer Institute will sponsor a one-week workshop focusing on the Panel Study of Income Dynamics (PSID). Concurrently, there will be a workshop on event-history methods that can be used to analyze data from PSID and other longitudinal studies. These workshops will each be offered during the week of July 22-26 at the Institute for Social Research, 426 Thompson Street, in Ann Arbor, Michigan. The PSID workshop will be held from 9:00-12 noon, and the Event History Analysis workshop will be held from 1:30-4:30 pm. The time schedule of these workshops is coordinated so that participants can attend both workshops. Of course, participation in either workshop is not conditional upon taking the other.

For application materials and further information, contact Dr. Duane F. Alwin, Director of the Summer Institute, Survey Research Center, The Institute for Social research, University of Michigan, P.O. Box 1248, Ann Arbor, MI 48106-1248. Or you may telephone (313) 764-6595.

Reminder!
**THE ANNUAL DINNER OF THE
WASHINGTON STATISTICAL SOCIETY**

The Annual Dinner of the Washington Statistical Society will be held Tuesday, June 11, 1991. It will take place at Bish Thompson's Seafood Restaurant where we will begin to gather for a Cash Bar from 6:00-7:00pm followed by Dinner at 7:00 pm. Dr. Walter Smith of the University of North Carolina at Chapel Hill, noted statistician, will serve as our *Humorous* after-dinner speaker. We will also join in lauding and congratulating Carol F. Carson, Bureau of Economic Analysis and Stephen P. Taylor, Retired Federal Reserve, on being named recipients of the *1991 Julius Shiskin Award for Economic Statistics*. Please see last month's newsletter for all the details. (We've included the flyer again this month for those who may have misplaced theirs.) **Reservations must be received no later than June 7, 1991.**

PROGRAM ABSTRACTS

TOPIC: A COMPARISON OF TWO-DIMENSIONAL SMOOTHERS WITH APPLICATIONS TO GEOGRAPHIC EPIDEMIOLOGY

SPEAKER: Dr. Karen Kafader, Biometry Branch, Division of Cancer Prevention and Control, National Cancer Institute

DAY & TIME: 11:00-12:00 noon, Monday, June 3, 1991

LOCATION: Room 301, 707 22nd Street, N.W., The George Washington University. Close to Foggy Bottom-GWU Metro (blue/orange lines). Pay parking is available at GWU Marvin Center (800 21st Street, H Street entrance), and at 22nd and Eye Street garage.

SPONSOR: The Washington Statistical Society

ABSTRACT: Data arising in the context of geographic epidemiology are characterized by values which represent accumulations over irregularly shaped and unevenly spaced regions throughout an area under investigations. To decipher patterns, it is sensible to smooth the data in two dimensions. Seven different smoothers as representatives of two general classes of smoothers are evaluated in terms of their ability to capture patterns and ignore random fluctuations in two-dimensional structures. These smoothers are tested on two patterns generated with three levels of noise that are typical of measurement error in epidemiological and engineering applications. Mean squared error and percent false significances are the criteria used to evaluate smoothers. Mortality rates due to lung cancer in U.S. counties will be used to illustrate the application of the smoothers and the ability to decipher patterns in the data.

TOPIC: NONLINEAR MODELING OF LONGITUDINAL MORTALITY AND MORBIDITY SERIES

SPEAKER: Robert H. Shumway, Ph.D., Division of Statistics, University of California, Davis

CHAIR: Myron Katzoff, Ph.D., Office of Research and Methodology, NCHS

DAY & TIME: Monday, June 10, 1991, 10:00-11:30 am

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

SPONSOR: Office of Research and Methodology, NCHS and the Washington Statistical Society

ABSTRACT: Several nonlinear time series models are proposed for describing the evolution through time of mortality and morbidity series. Such series typically have a nonlinear and/or non-Gaussian character that might plausibly be ascribed to (1) nonlinear and/or non-Gaussian behavior of the response function and (2) changes in regime induced by events such as epidemics occurring at unknown times. Additional complications are due to irregularly observed data and the presence of constant or time varying fixed or random effects due to cause, age or other factors.

A hybrid generalization of the state-space model with (a) fixed and random effects, (b) random switching and (c) nonlinear link functions is introduced to account for the above complications. The resulting model might be described as a mixed longitudinal time series GLIM model with random switching. An approach to solving problems of estimation, inference, and forecasting in such situations will be outlined. This work is joint with Myron Katzoff of the Office of Research and Methodology, NCHS.

PROGRAM ABSTRACTS (continued)

TOPIC: CONFIDENTIALITY ISSUES IN COMPUTER DATABASES

SPEAKER: George Duncan, Carnegie Mellon University

DAY & TIME: Monday, June 10, 1991, 12:30-2:00pm

LOCATION: Room 2736, GAO Building, 441 G Street, N.W., Washington, DC

SPONSOR: WSS Methodology Section

ABSTRACT: Maintaining confidentiality is increasingly difficult for the wealth of microdata now stored in computer databases. Computer scientists have found disclosure limitation mechanisms such as query size control and random sample query control wanting in response to data snooper tactics such as trackers. A probabilistic framework for the risk of disclosure for sequential queries is proposed. Some implications for the design of more effective disclosure control mechanisms are explored.

TOPIC: PARADOXES, MIXTURES AND SPACES

SPEAKER: Dr. Nell Sedransk

DAY & TIME: Monday, June 17, 1991, at 11:00-12:00 noon

LOCATION: Room 301, 707 22nd Street, N.W., The George Washington University. Close to Foggy Bottom-GWU Metro (blue/orange lines). Pay parking is available at GWU Marvin Center (800 21st Street, H Street entrance), and at 22nd and Eye Street garage.

SPONSOR: The Washington Statistical Society

ABSTRACT: When Euclidean thinking is imposed on problems which have natural non-Euclidean formulations, anomalies often result. These anomalies are recognized as paradoxes, non-identifiability, and ill-conditioning. Examples are explored where resolution depends upon recharacterization in terms on non-Euclidean spaces.

TOPIC: A MULTIVARIATE PROCEDURE TOWARDS COMPOSITE ESTIMATION OF THE CONSUMER EXPENDITURE FOR THE CPI

SPEAKER: Partha Lahiri, University of Nebraska, Lincoln and ASA/NSF/Census Research Fellow

CHAIR: Sylvia Leaver, BLS

DAY & TIME: Tuesday, June 18, 1991, 12:30-2:00 pm.

LOCATION: Room 2437, GAO Building, 441 G Street, N.W., Washington, DC.

SPONSOR: WSS Methodology Section

ABSTRACT: We consider the problem of estimating the consumer expenditure and relative importance of different item strata for the local market basket areas. The estimation of these parameters is needed to construct the Consumer Price Index Numbers (CPI). We use multivariate models to construct composite estimators which combine information from relevant sources. The data we analyze arise out of the 1982-83 Consumer Expenditure Survey (Diary Survey). The mean squared errors (MSE) of the proposed and the existing estimators are estimated using the balanced repeated half samples available from the survey. Based on our numerical results, the proposed estimators seem to be superior to the existing estimators.

This talk will cover work done in collaboration with Dr. Wenyu Wang.

EMPLOYMENT COLUMN

The Washington Statistical Society Newsletter provides a service of notification of employment opportunities and descriptions of those seeking employment here in the Washington, DC area. Readers are encouraged to take advantage of this feature of the newsletter. 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. Contact Mr. Arends at 202-447-6812.

JOB OPENINGS

SYSTEMS ANALYST/STATISTICIAN: GS 12/13

Systems analyst/statistician for data base and micro-simulation model development and validation for models of the Supplemental Security Income (SSI) and Social Security (QADSI) programs. Substantial experience with high level languages in a mainframe environment (e.g., PL-1, Fortran, C, Pascal), and mainframe application packages (e.g., SAS, TPL, SPSS) required. Scientific programming experience involving social science modeling highly desirable as is familiarity with national household surveys. In particular, experience with the Survey of Income and Program Participation (SIPP) a plus, but not required. Permanent position. Salary ranges from GS-12 to GS-13 depending upon experience and education. Send resume and/or 171 to: Bernard Wixon, Social Science Analyst, Office of Research and Statistics, Social Security Administration, 4301 Connecticut Avenue, N.W., Suite 211, Washington, DC 20008. For further information, call (202) 282-7183

STATISTICIANS

U.S. FOOD AND DRUG ADMINISTRATION

The Division of Biometrics, Center for Drug Evaluation and Research, Food and Drug Administration, has several openings for statisticians interested in the review and evaluation of new drugs. Salaries are commensurate with experience and education. Statisticians interested in the review and evaluation of new drugs, and in the application of innovative statistical methodology to clinical trials, animal tumorigenicity, bioequivalence epidemiology, laboratory research and other problems related to the assessment of safety and effectiveness of drugs are encouraged to apply. Candidates should have a doctoral degree or completed a course of study for a degree in biostatistics or mathematical statistics.

Persons interested in these positions should contact Dr. Robert O'Neill (301) 443-4594, or send a resume to Delores Rhodes, Office of Professional Development (HFD-3), Room 9B04, 5600 Fishers Lane, Rockville, MD 20857.

Applicants for Civil Service and USPHS Commissioned Corps appointments must be U.S. citizens. Resident aliens may be considered for available staff fellow positions. Visiting Scientist positions are also available for qualified non-U.S. citizens. FDA is an Equal Opportunity Employer.

JOB APPLICANTS

Listed below is a brief description of the qualifications of an applicant seeking employment. Employers interested in interviewing this applicant should notify Mr. Arends of their interest by CODE NUMBER. The request should be by mail and should include the 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.

JOB APPLICANTS

CODE 91-02

EDUCATION: * B.S. in Mathematics, University of North Carolina, Chapel Hill, NC.
* M.S. in Geology, University of Pennsylvania, Philadelphia, PA

CAREER INTERESTS: Broad-based and flexible. Ideally would like to gain employment in a field which utilizes statistical knowledge in research.

RESEARCH EXPERIENCE: Research assistant in sedimentology laboratory. Primary duty entails modeling of estuary environment through statistical analysis of biological, light transmission, and hydrological field data.

TEACHING EXPERIENCE: Laboratory instructor of advanced undergraduate courses in crystallography, optical mineralogy and petrology.

SKILLS: Experience in mainframe (VM-CMS environment) and personal computing (IBM and compatibles, AT/286/386). Vast experience in MS-DOS, SYSTAT/SYSGRAPH, SAS, LOTUS, BASIC, and FORTRAN programming. Statistical methods applied in research include: general linear modeling, regression and analysis of variance, time, series, and experimental design.

HONORS: Elected to Phi Beta Kappa, Alpha Chapter of North Carolina.

CODE 91-03

EDUCATION: *Ph.D. in Anthropology
*M.S. in Statistics

CAREER INTEREST: Interested in position with collaborative research group in fields of agriculture, public health, the environment, etc.

EXPERIENCE IN STATISTICS: Work experience in pharmaceutical industry, psychology research, and social science research.

RELATED SKILLS: Experience with several statistical computer packages.



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