

Washington Statistical Society

CHAPTER • AMERICAN STATISTICAL ASSOCIATION

WSS Newsletter - October 1982

CALENDAR

WSS Sponsored

Topic: A Method for Missing or Unobtainable Data on Air Pollution
Speaker: Prof. Yashaswini Mittal, Department of Statistics, Va. Polytechnic Institute & State University
Date and Time: Friday, October 8, 1982, 12:30-2:00 p.m.
Location: GWU, Rm. 310, Bldg. C, 2201 G Street, N.W., Washington, D.C.

Topic: Polling Affairs of State: Secondary Analyses of Survey Data in the State Department
Speaker: Alvin Richmond, Ph.D., Senior Public Opinion Analyst, Department of State
Date and Time: Wednesday, October 20, 1982, 12:30-2:00 p.m.--Date Correction--
Location: Room 3000A, Federal Building, 12th & Pennsylvania Avenue, N.W.

Topic: Generation, Forecasting, Signal Extraction, and Filtering of Non-stationary Time Series
Speaker: William Bell, U.S. Bureau of the Census
Date and Time: Thursday, October 21, 1982, 12:30-2:00 p.m.
Location: Main Commerce Building, Conference Room A

Topic: The Variability of Inflation Rates Across Household Types
Speaker: Robert Hagemann, Bureau of Labor Statistics
Date and Time: Tuesday, October 26, 1982, 12:30-2:00 p.m.
Location: Room N3437 A&B, Department of Labor

Topic: To Be Announced
Speaker: Bruce Chapman, U.S. Bureau of the Census
Date and Time: Tuesday, November 9, 1982, 12:30-2:00 p.m.
Location: To Be Announced

Topic: To Be Announced
Speaker: J. S. Hunter
Date and Time: Tuesday, November 16, 1982, 12:30-2:00 p.m.
Location: To Be Announced

Topic: Calibration Curves: A Realistic Evaluation of Their Uncertainties
Speaker: C. H. Spiegelman, National Bureau of Standards
Date and Time: Thursday, November 18, 1982, 12:30-2:00 p.m.
Location: Main Commerce Building, Conference Room A

Topic: The Residential Energy Consumption Survey
Speaker: Lynda Carlson, Department of Energy
Date and Time: Tuesday, November 23, 1982, 12:30-2:00 p.m.
Location: To Be Announced

Topic: Interactive Graphical Display and Analysis Techniques
Speaker: James J. Filliben, National Bureau of Standards
Date and Time: Thursday, December 9, 1982, 12:30-2:00 p.m.
Location: Main Commerce Building, Room 6802

WSS Party in Honor
of W. E. Deming
Thursday, Oct. 14
Cocktails (Cash Bar)
DINNER
GW University
Faculty Club
Marvin Center
(Additional details
inside Newsletter)

WORKSHOP ON IMPROVING FEDERALLY FUNDED SURVEYS

Dates: October 5 -Data Processing and Analysis of Results
October 12 -Preparing Study Requirements

Location: Department of Energy Conference Hall--Room
3000-A, 12th and Pennsylvania Avenue, N.W.

Contact Donald W. King or Ms. Helen Kurtz (881-6766) for
additional details

DETAILED INFORMATION ON THE MEETINGS

Topic: A Method for Missing or Unobtainable Data on Air Pollution
Abstract: The EPA air quality standards are based on levels of air pollutants in the air when they are observed at the specific frequency. For various practical reasons it is not always possible to make observations as frequently as specified. The discrepancy can best be treated as unobtainable data. For example, the standard for particulates in the air is 8 parts per hundred million for observations made every 3rd day. The collection and analysis of observations for particulates is an expensive and lengthy operation. The BAAPD (Bay Area Air Pollution District, located in San Francisco) wanted to reduce the frequency to every six days. We give the level for every 6 day observation that would ensure that the EPA standards are satisfied with probability P for any P between 0 and 1. The same technique can be used to deal with randomly missing data.

Topic: Polling Affairs of State: Secondary Analyses of Survey Data in the State Department
Chair: Llewellyn Howell, Ph.d., School of International Service, American U.
Discussant: Richard Taueber, Consultant
Abstract: Dr. Alvin Richmond will describe his responsibilities in the collection and interpretation of various public opinion surveys dealing with foreign affairs issues.

He will present recent examples of the findings and analyses which have proven most useful for his purposes.

Issues to be discussed will include public perceptions and preferences regarding:

1. Nuclear Arms Control
2. Middle East Situation
3. El Salvador - U.S. Problems

Topic: Generation, Forecasting Signal Extraction, and Filtering of Non-stationary Time Series
Chair: David Findley, U.S. Bureau of the Census
Abstract: Many aspects of applied time series analysis rely on some basic theoretical results on the generation, forecasting, signal extraction, and filtering of stationary time series. Non-stationary time series are more common, and analogs of the stationary results are often used in this case. The speaker will show why this can lead to difficulties, and will present results on the generation, forecasting, signal extraction, and filtering of non-stationary time series.

Topic: Variability of Inflation Rates Across Household Types
Chair: Nancy Gordon, Congressional Budget Office
Discussants: Joseph Minarik, Congressional Budget Office
Geoffrey Carliner, Council of Economic Advisers
Abstract: This talk presents the results of an analysis of the variability of inflation rates across households over the period 1972-73 to 1980-81. The purpose of the analysis is twofold: first, to determine the extent to which price indexes vary across households partitioned into homogeneous groupings; second, to analyze the differences in the indexes of retirees and CPI-W households by decomposing the relative discrepancy between their indexes into component-specific impacts.

Topic: Calibration Curves: A Realistic Evaluation of Their Uncertainties
Chair: Dr. Churl Eisenhart, National Bureau of Standards
Discussant: Dr. Edward Wegman, Office of Naval Research
Abstract: Calibration curves are used to obtain one type of measurement from another. Usually one type is measured less precisely than the other; let Y denote the former and x the latter type of measurement. The calibration curve relates Y to x according to the equation $Y = f(x) + \sigma\varepsilon$, where ε is a standard normal random error, σ is the unknown standard deviation of the measurement error; and f is the unknown calibration curve.

If f were known x would typically be estimated by $f^{-1}(Y)$. Since it is unknown, a calibration experiment is performed to collect the data x_i , $Y_i = f(x_i) + \sigma\varepsilon_i$, $i = 1, \dots, n$. These data are used to obtain an estimate, $\hat{\sigma}$, of the standard deviation, and, \hat{f} , an estimate of the calibration curve. The Y measurement process then said to be calibrated to the x process.

After calibration new measurements Y_i^* , $i = 1, 2, \dots, k_0$, $1 < k_0 < \infty$ are obtained, and for each the associated x_i^* is estimated by $\hat{x}_i^* = \hat{f}^{-1}(Y_i^*)$. Uncertainty statements are made about \hat{x}_i^* , $i = 1, \dots, k_0$ using information about the distribution of \hat{f} , $\hat{\sigma}$, and Y_i^* , $i = 1, \dots, k_0$. This talk examines critically various forms of calibration uncertainty statements. It proposes several basically new diagnostic techniques as well as calibration control chart procedures.

Topic: Interactive Graphical Display and Analysis Techniques
Chair: Karen Kafadar, National Bureau of Standards
Discussant: David Desjardens, Bureau of the Census
Abstract: The purpose of this paper is to examine various commonly-occurring data analysis problems, and to present graphical solutions to these problems. Several of the solutions presented are new and so may serve as additional tools to the growing arsenal of graphical techniques at the disposal of the practicing data analyst.

NATIONAL CENTER FOR HEALTH STATISTICS SEMINAR

Thursday, October 21, 1982 - 1:30 p.m. - 2:30 p.m.

Center Building, Room G-20, 3700 East-West Highway, Hyattsville, Maryland

Topic: VARIANCE ESTIMATION
 Variance estimators under several sample designs are proposed and compared when auxiliary information is available. Improvement of the bias and mean square error over some estimators commonly used and practiced is illustrated. A Monte Carlo comparison of the estimators is also presented.
Speaker: Cari Isaki, Ph.D., Bureau of the Census, Washington, D.C.

For further information, call Office of Research and Methodology (301) 436-7111

"REFLECTIONS ON BAYESIAN APPROACHES IN OPERATIONS RESEARCH, PROBABILITY, AND STATISTICS"

Saturday, November 6, 1982 at Blacksburg, Virginia

For information contact Professor Nozer D. Singpurwalla, Department of Operations Research, School of Engineering & Applied Science, The George Washington University, Washington, D.C. 20052, Telephone: (202) 676-7534 or Professor Yashaswini Mittal, Department of Statistics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061, Telephone (703) 961-5657.

COMPUTER APPLICATIONS IN MEDICAL CARE SYMPOSIUM

The George Washington University Medical Center
 Office of Continuing Medical Education

October 30 to November 2 at the Sheraton Washington, Washington, D.C.

EMPLOYMENT COLUMN

Deadline for inserting notices is the 10th of the month preceding the publication date

Send notices and requests to:
Evelyn R. Kay
National Center for Education Statistics
400 Maryland Avenue, S.W.
Washington, D. C. 20202 (301) 436-6791

JOB OPENINGS

SES VACANCY NCES

Senior Executive Service Position in the National Center for Education Statistics, Department of Education. Responsible for all phases of recurring and special one-time surveys and studies of statistical data covering the entire spectrum of postsecondary and vocational education. Salary range \$54,755 to \$64,600 (currently limited to \$58,500). Obtain Vacancy Announcement No. ED-33 from OPRM, Executive Resources Division, Room 1085, 400 Maryland Ave., N.W., Washington, D.C. 20202. Telephone (202) 472-3567. Send SF-171 by October 22, 1982.

ASSISTANT PROFESSOR U. of MARYLAND

Assistant Professor (tenure-track) in applied statistics beginning fall 1983. Requires D.B.A. or Ph.D. Selection criteria include excellent research potential, outstanding teaching ability and capability to teach course in statistical simulation. Must be willing to interact with other disciplines in the College of Business and Management. Contact Professor Frank B. Alt, Management Science and Statistics, College of Business and Management, University of Maryland at College Park 20742. Telephone (301) 454-4828. Equal Opportunity Employer; women and minorities are encouraged to apply.



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