# Washington Statistical Society

# WSS Newsletter - December 1982

#### CALENDAR

# **WSS Sponsored**

Randomization, Why It Should Not Be Done! Topic:

Dennis Lindley, Visiting Professor, Department of Operations Research, SEAS, Speaker:

George Washington University

Thursday, December 2, 1982, 12:30-2:00 p.m. Date and Time:

G. W. University Academic Center, Room T206, 21st and J Street, N. W. Location:

Topic: Interactive Graphical Display and Analysis Techniques

James J. Filliben, National Bureau of Standards Speaker: Date and Time: Thursday, December 9, 1982, 12:30-2:00 p.m.

Location: Main Commerce Building, Room 6802

Topic: Bayesian and Non-Bayesian Methods of Estimating the Failure Rate Function,

with Critical Comments

Professor Nozer Singpurwalla, George Washington U. Speaker:

Thursday, December 9, 1982, 12:30-2:00 p.m. Date and Time:

Location: G. W. University Academic Center, Room T206, 21st and J Street, N. W.

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Topic: Interpreting Statistics on the Money Supply

Lloyd C. Atkinson, Deputy Asst. Director for Fiscal Analysis, Congressional Speaker:

**Budget Office** 

Date and Time: Postponed until February

#### SPECIAL CHRISTMAS PARTY

Washington Statistical Society Sponsors:

Washington Women Economists

National Association of Business Economists

National Economists Club

Society of Government Economists

Tuesday, December 14, 1982, 6:30 p.m. Date and Time:

Location: Empress Restaurant, 1018 Vermont Avenue, N. W.

Cost: \$5.00 by mail, \$6.00 after December 7, payable to WWE

Carol Meeks, USDA/ERS/EDD, 500 12th Street, S. W. Washington, D.C. 20250 Reservations:

For last minute reservations, call 293-2698

Topic: Bootstrapping a Regression Equation: Some Empirical Results

Speaker: David A. Freedman, Chairman, Department of Statistics, University of California

at Berkeley

Wednesday, December 15, 1982, 12:30-2:00 p.m. Date and Time:

Forrestal Building, 1000 Independence Avenue, S. W., Room GJ015 Location:

# Other Sponsors

Sponsor: Statistics of Income Division, Internal Revenue Service

Topic: Methodological Advances in the Corporation Statistics of Income Program Karen Cys, Timothy Wheeler, Susan Hinkins, and Jim Harte, Internal Revenue Speakers:

Service

Date and Time: Tuesday, December 7, 1982, 12:30-2:30 p.m.

1201 E Street, N. W., Room 806A, Washington, D. C. (Metro Center - Metro Stop) Location:

#### **DETAILED INFORMATION ON THE MEETINGS**

Topic: Chair: Randomization, Why It Should Not Be Done!

Joseph L. Gastwirth, President, Washington Statistical Society

Abstract: There are two forms of randomization in inference, before and after the data.

Arguments will be presented to show that post data randomization is not sensible.

Predata randomization is only a disguise for a property of haphazardness.

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Topic: Chair: Discussant: Abstract: Interactive Graphical Display and Analysis Techniques

Karen Kafadar, National Bureau of Standards

David Desjardens, Bureau of the Census

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.

The graphical approach is an important and necessary complement to the "classical" techniques for data analysis. For a wide variety of problems, graphics has proven to be the fastest, most direct, and most insightful approach for attacking and solving data analysis problems. Further, the use of such graphics in an interactive environment has given the analyst more power than ever before for carrying out exploratory data analysis, for testing assumptions, and for uncovering underlying structure.

The problems to be addressed are as follows:

Testing for randomness and autocorrelation

Testing for normality

Determining best transformation to normality Determining best distribution for the data

Testing for homoscedasticity

Determining best transformation to homoscedasticity

Examining 1-factor models Examining 2-factor models Examining 3-factor models Examining 4-factor models

Examining general multi-factor models

Examining dichotomous response

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Topic:

Bayesian and Non-Bayesian Methods of Estimating the Failure Rate Function, With

Critical Comments

Discussants: Abstract:

Professor Dennis V. Lindley and Dr. Kent Bailey

Recently developed non-Bayesian approaches for estimating the failure rate function will be presented and some weaknesses of these methods will be discussed. Alternative Bayesian methods are proposed.

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Topic: Chair: Discussants: Abstract: Bootstrapping a Regression Equation: Some Empirical Results Will Gersch, University of Hawaii, ASA Census Bureau Fellow Larry Thibodeau and Glenn Galfond, Applied Management Sciences

The bootstrap, like the jackknife, is a procedure for estimating standard errors. The idea is to use Monte Carlo simulations based on a nonparametric estimate of the underlying error distribution. The bootstrap will be applied to an econometric equation describing the demand for energy by industry. The name finding is that the conventional asymptotic formulas for estimating standard errors are too optimistic by factors of nearly three. This is joint work with Stephen Peters.

### SHISKIN AWARD FOR ECONOMIC STATISTICS

Nominations are invited for the fourth annual Julius Shiskin Award in recognition of outstanding achievement in the field of economic statistics. The Award has been established by the Washington Statistical Society Chapter of the American Statistical Association and will be presented, with an honorarium of \$250, at the WSS Annual Dinner in June 1983.

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 computers, in the use of economic statistics to analyze and interpret the economy, in the management of statistical programs, or in developing public understanding of measurement issues, to all of which Mr. Shiskin contributed. Either individuals or groups can be nominated.

Previous winners of the Award have been Estella Dagum of Statistics Canada, James Bonnen for his work chairing the President's Reorganization Project for the Federal Statistical System, and Edward Denison for his work at the Bureau of Economic Analysis and the Brookings Institution.

A nomination form may be obtained by writing to the Julius Shiskin Award Committee, c/o American Statistical Association, 806 - 15th Street, N. W., Washington, D. C. 20005. Completed nomination forms must be received by April 1, 1983.

## INTERNAL REVENUE SERVICE, STATISTICS OF INCOME DIVISION SEMINAR

Topic: Chair: Abstract: Methodological Advances in the Corporation Statistics of Income Program

Lillie B. Dorsey, Internal Revenue Service

This session contains four presentations which briefly introduce recent methodological changes in the Internal Revenue Service's Statistics of Income (SOI) Corporation income tax program. First, improvements in SOI processing will be discussed, with emphasis on data capture and testing techniques. Then, some pilot work involving imputation of missing balance sheet items will be described. The last paper will present some post-stratification approaches being explored to improve the efficiency of the Corporate SOI sample.

#### **WSS PROGRAM SESSIONS**

The Washington Statistical Society attempts to offer sponsorhsip of a well balanced program of sessions each year of interest to its members and the Washington area statistical community. Sessions vary from topics of general interest to technical presentations of new developments in statistical methodology. Many sessions during the year are cosponsored with other organizations. The chairpersons for WSS program areas this year include:

For general information about the Washington Statistical Society, details on upcoming program sessions, or to make suggestions concerning the Society and its activities, contact Rich Allen, P. O. Box 23502, Washington, D. C. 20024 (202) 447-4557.

# **EMPLOYMENT COLUMN**

Deadline for inserting notices is the 10th of the month preceding the publication date Send notices and requests to: Evelyn R. Kay 520 - 22nd Street, N.W. Washington, D. C. 20037 (202) 331-1153

#### JOB OPENINGS

Mathematical The Agriculture Division, Bureau of the Census, is interested in applicants for two anticipated positions. Individuals may work on sampling plans, estimates, variance estimation, nonresponse imputation, quality control, or special evaluation studies related to the Census of Agriculture and associated sample surveys. A sound statistical background and interest in sampling, agriculture, and programming is required. Interested individuals should send a SF 171 to Dr. David D. Chapman, Agriculture Division, Bureau of the Census, Washington, D. C. 20233.

Mathematical The Statistical Methods Division is responsible for the application of Statisticians GS-1531-7/12 mathematical statistical techniques in the design, conduct, and evaluation of the results of demographic sample surveys and censuses conducted by the Census Bureau. The Division presently has about 100 mathematical statisticians. Some examples of projects include: Preparing an optimum sample design and developing estimation and variance estimation techniques; developing methods for evaluating results of censuses; and teaching statistics courses to foreign students. Send SF 171 and/or call Maurice Kniceley, Statistical Methods Division, Federal Building 3, U. S. Bureau of the Census, Suitland, Maryland 20233, telephone (301) 763-1102.

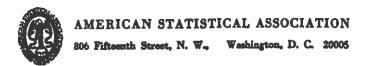
Mathematical A supervisory position is available for an applicant with experience in household surveys. Responsibilities include evaluation and research of alternative sample designs, weighting and data adjustment procedures. Familiarity with SAS useful. Send SF 171 to Cathryn S. Dippo, Bureau of Labor Statistics, Office of Survey Design, 441 G Street, Room 2122, Washington, D. C. 20212.

Mathematical Multiple positions are available in survey design on major BLS programs.

Statistician Applicants should have at least a Master's degree or equivalent experience.

GS-1529-9/11/12 Send SF 171 to Cathryn S. Dippo, Bureau of Labor Statistics, Office of Survey Design, 441 G Street, Room 2122, Washington, D. C. 20212.

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