



WSS NEWS

WASHINGTON
STATISTICAL
SOCIETY

November 1992

2nd Morris Hansen Lecture

The Washington Statistical Society is pleased to announce that the second annual lecture to honor the memory of Morris Hansen will be held Tuesday, November 17, 1992. Wayne A. Fuller, from Iowa State University, will discuss the importance of measurement error, particularly as it applies to sample surveys. Barbara Bailer, from the American Statistical Association, and Paul Biemer, from Research Triangle Institute, will provide formal comments. This year's honorary lecture is co-sponsored by the National Agricultural Statistics Service, U.S. Department of Agriculture, which will also host a special reception afterwards. For more information on registration, see the program abstract on page 7.

Short Course on Applied Survey Data Analysis Methods

In a continuing effort to provide educational services to their members, the Washington Statistical Society and the Survey Research Methods Section of the American Statistical Association have joined together to co-sponsor a 2-day tutorial on Applied Survey Data Analysis Methods by Rick L. Williams, of Research Triangle Institute. (Continued on page 12.)

WSS Seminars		
(All events are open to any interested persons.)		
November		
4	Wed.	Geographic Trends in Prostate Cancer Mortality: An Application of Spatial Smoothers on Mortality Rates
6	Fri.	Estimating Oil and Gas Drilling Activity
10	Tues.	Handling Missing (or Bad) Data: Nonresponse Adjustments in a National Health Survey (2nd in series)
12	Thur.	Why X (X=Bush, Clinton) Won While the Predictions Were that Y (Y=Bush, Clinton) Would Win: An Election Postmortem
12	Thur.	Bayesian Sequential Design for Selecting the Better Treatment Using A Conservative Influence of Future Observations
13	Fri.	Detecting Departures from Additivity in Drug/Chemical Combinations
16	Mon.	The Information in Failure Data
17	Tues.	The 1992 Morris Hansen Lecture: Estimation in the Presence of Measurement Error
17	Tues.	Measuring Relative Importance of Variables in Multivariable Models
17	Tues.	Tightening the Clinical Trial
18	Wed.	Results from Quality Assurance Studies for the 1990 Decennial Census
19	Thur.	Technological Developments in the Data Collection Process for Establishment Surveys
December		
1	Tues.	Guidelines for Use of Model-Based Sampling in EIA
1-2	T-W	Short Course: Applied Survey Data Analysis Methods
17	Thur.	Holiday Party

Announcements

Call for Papers on Quality Control

The American Society for Quality Control and the American Statistical Association's Section on Physical and Engineering Sciences are co-sponsoring their 37th Annual Fall Technical Conference: Developing Continuous Improvement through Statistics, on October 14-15, 1993, in Rochester, NY. If you are interested in presenting an applied or expository paper in any of three parallel sessions -- Statistics, Quality Control and Tutorial/Case Study -- please send a title, abstract, and one-page outline to Ralph St. John, Applied Statistics and Operations Research Dept., Bowling Green State University, Bowling Green, OH 43403; tel.: (419) 372-8098; FAX: (419) 372-2875.

Update on Ethical Conduct Ruling

As of August 17, 1992, the Office of Government Ethics (OGE), which was revising ethical conduct rules for Federal employees, has postponed its final decision on an earlier proposal to prohibit employees from participating in any association-related activities while on the job. The ruling would have dealt a severe blow to nonprofit and voluntary organizations, such as the Washington Statistical Society, which depend heavily on such support from their members. Stephen Potts, Director of the OGE, said the proposal is still under consideration, but may be dropped altogether. *WSS News* will try to keep you informed of any new developments.

Videotape Statistics Course

Do you wish those you work with were more quantitatively literate? WSS has purchased the Annenberg videotape series *Against All Odds*, which has appeared on public television. The VHS tapes consist of 26 programs, covering a variety of statistical topics, from numerical descriptions and distributions, to random variables, experimental design, sampling and significance tests. The programs are suitable for a broad audience, including those with limited or no quantitative experience.

Beginning in December, the tapes will be available for loan to WSS members who wish to borrow them for

viewing by their own groups and organizations. Persons interested in borrowing the tapes should contact the WSS Video Librarian, Ed Milton, at (202) 366-2751 or FAX at (202) 366-7149.

AAAS*93 Student Awards

To encourage the development of young scientists and to recognize their achievements in all fields of scientific research, the American Association for the Advancement of Science (AAAS) will feature exceptional research by undergraduate and graduate students in a special poster session at AAAS*93, its annual meeting in Boston, February 11-16, 1993. The American Statistical Association's Committee of Representatives to the AAAS has been notified of the poster competition award in the following categories: physical sciences, life sciences, and social sciences. In each category cash prizes will be given: \$500 for 1st place, \$250 for 2nd place, and \$100 for 3rd place.

Students who are interested must send abstracts to AAAS*93 Contributed Papers, AAAS Meetings Office, 1333 H Street, NW, Washington, DC 20005, by November 6, 1992. Abstracts must be marked "Student Award Entry" and must be endorsed by a AAAS member or Fellow. For further information, call AAAS at (202) 326-6738.

Upcoming Simulation Conference

The 1992 Winter Simulation Conference will be held December 13-16, 1992, at the Crystal Gateway Marriott in Arlington, VA. It will feature sessions on both modeling and analysis methodologies, as well as applications in manufacturing, public systems, and service systems. In addition to state-of-the-art reviews of advances in simulations, the conference will include tutorials for beginners and experienced users and software/modelware demonstrations by leading vendors. For registration and information, contact EPIC Management, 8720 Red Oak Blvd., Suite 224, Charlotte, NC 28217; tel.: (800) 447-6949; FAX: (704) 525-2880.

(Continued on page 12.)

Program Abstracts

Topic: Geographic Trends in Prostate Cancer Mortality: An Application of Spatial Smoothers on Mortality Rates

Speaker: Karen K. Kafadar, National Cancer Institute

Chair: Barry I. Graubard, National Cancer Institute

Date/Time: Wednesday, November 4, 1992, 11:00 AM - 12:00 Noon

Location: Conference Room H, 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 WSS' Public Health and Biostatistics Section

Abstract: A statistical analysis of prostate cancer mortality rates begins with a description of general national trends among both white and nonwhite males in two time periods, 1953-72 and 1973-87. The country is divided into seven regions, within which rates are investigated with respect to urbanicity as a covariate. Finally, a statistical smoother applicable to age-specific rates illustrates geographic trends in a common direction for white males that differs from the apparent common trends within regions for nonwhite males. These trends may suggest potential risk factors and ultimately identify efforts that can be directed towards prevention.

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Topic: Estimating Oil and Gas Drilling Activity

Speaker: Kevin F. Forbes, Catholic University

Discussant: Jim Hewlett, Energy Information Administration

Chair: John H. Herbert, Energy Information Administration & Virginia Institute of Technology

Date/Time: Friday, November 6, 1992, 12:30 - 2:00 PM

Location: Room GJ-015 Forrestal Bldg., 1000 Independence Ave., SW, Washington, DC.
(Yellow or Blue/Orange Lines -- L'Enfant Plaza) Government employees show ID;
non-government employees call John Herbert at (202) 586-4360 for escort.

Sponsor: Agriculture and National Resources Section

Program Abstracts (cont'd)

Estimating Oil and Gas Drilling Activity (cont'd)

Abstract: Annual natural gas production as a proportion of reserves is near historically low levels. Many question whether drilling for new reserves has fallen to dangerously low levels. Naturally, many wonder whether drilling will increase in the near future. Analysts wish to respond to this issue. Yet, there is little solid empirical evidence to support a response.

Using econometric techniques, the relationship between the drilling decision and financial and economic variables is estimated. On a more general level, the important topic of the influence of imperfect capital markets on investment decisions is addressed.

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Topic: Handling Missing (or Bad) Data: Nonresponse Adjustments in a National Health Survey (2nd in series)

Speaker: Trena M. Ezzati, National Center for Health Statistics

Discussant: Matt Fetter, National Agricultural Statistics Service

Chair: Phil Kott, National Agricultural Statistics Service

Date/Time: Tuesday, November 10, 1992, 12:30 - 2:00 PM

Location: BLS Cognitive Lab, Postal Square Bldg., Rm. 2990, 2 Massachusetts Ave., NE, Washington, DC. (Red Line -- Union Station) Enter at First Street.

Sponsor: Methodology Section

Abstract: Sample surveys rarely get all persons to participate. In an attempt to reduce nonresponse bias, adjustments for nonresponse have to be considered. Weighting class adjustment procedures are widely used in surveys to compensate for unit nonresponse. This paper describes the procedures used to define weighting classes and calculate adjustment factors for the sampling weights of survey respondents in the third National Health and Nutrition Examination Survey. A two-stage nonresponse adjustment procedure is described to adjust for nonresponse to the examination component of the survey. The first stage adjusts for persons interviewed but not examined, using health data reported in the interview, and the second-stage adjusts for persons screened but not interviewed, using demographic information and geographic location data. The effect of the adjustment on the precision of the estimates is also investigated.

Program Abstracts (cont'd)

Topic: Why X (X = Bush, Clinton) Won While the Predictions Were that Y (Y = Bush, Clinton) Would Win: An Election Postmortem

Speaker: Allan J. Lichtman, The American University

Chair: Michael A. Greene, The American University

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

Location: Postal Square Building, Room G-440, Meeting Room 10, 2 Massachusetts Ave., NE, Washington, DC. (Red Line -- Union Station) Enter at First Street.

Sponsor: Social and Demographic Section

Abstract: The speaker will review predictions based on polls and mathematical models in the clear light of who won the election. Strengths and shortcomings in prediction methods will be discussed, as well as developments in the campaign which were unanticipated and escaped notice. The speaker will also evaluate his own system -- 13 Keys to the Presidency (see *Washingtonian Magazine*, October 1992, page 45) -- and explain his prediction for a Clinton victory in view of the November 3rd outcome.

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Topic: Detecting Departures from Additivity in Drug/Chemical Combinations

Speaker: Chris Gennings, Virginia Commonwealth University

Chair: Dean Follmann, National Heart, Lung and Blood Institute

Date/Time: Friday, November 13, 1992, 1:30 - 3:00 PM

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

Sponsor: Public Health and Biostatistics Section

Abstract: The usual approach taken for detection and characterization of drug interactions involves representing the multidimensional dose-response surface with a model parameterized to depict the nature of the interaction. This general approach is useful and practical from a design perspective, as long as the number of drugs in combination is not too large. However, the curse of dimensionality diminishes the usefulness of such an approach as the

Program Abstracts (cont'd)

Detecting Departures from Additivity in Drug/Chemical Combinations (cont'd)

number of drugs/chemicals in combination exceeds, say, three or four. The classical approach for detecting interactions is that of the isobologram, quantified and generalized by Berenbaum (1981), which states that contours of constant response of the dose-response surface are planar if the drugs do not interact. Other authors have included in the analysis of isobolograms appropriate manipulation of the implicit variability without fitting a multidimensional response surface. The purpose of this paper is to apply the work of Berenbaum to the problem of detecting and characterizing drug interactions when the number of drugs is greater than two, while appropriately accounting for biological variability.

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Topic: The Information in Failure Data

Speaker: Ehsan S. Soofi, University of Wisconsin--Milwaukee

Chair: Refik Soyer, George Washington University

Date/Time: Monday, November 16, 1992, 12 Noon - 1:00 PM

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

Sponsors: WSS' Physical Sciences and Engineering Section and George Washington University's Departments of Management Science and Operations Research

Abstract: Often in reliability analysis, like in most statistical analysis, a parametric model is chosen to describe the underlying distribution of a set of observed lifetimes. The observations are used to infer about the unknown parameters of the chosen model. This practice immediately raises a number of questions. How much and what type of information is assumed in the model chosen for the analysis? Is the information content of the data in accord with the information assumed by the chosen model? How much information is contained in the data about the parameter of interest? How much information about the parameter would have been gained or lost if an alternative data gathering scheme was employed? In this talk, the speaker will discuss these issues from an information-theoretic point of view. He will also present some recent and current developments in information-theoretic analysis of failure data; a number of information statistics useful for modeling lifetime distributions; the use of information diagnostics as traditional test statistics; and information measures for diagnosing sensitivity of nonparametric statistics to the parametric families of distribution.

Program Abstracts (cont'd)

SPECIAL SESSION: The 1992 Morris Hansen Lecture

Topic: Estimation in the Presence of Measurement Error

Speaker: Wayne A. Fuller, Iowa State University

Discussants: Barbara Bailar, American Statistical Association
Paul Biemer, Research Triangle Institute

Chair: Joseph Waksberg, Westat, Inc.

Date/Time: Tuesday, November 17, 1992, 3:30 - 5:30 PM

Location: Jefferson Auditorium, USDA South Bldg., 14th and Independence Ave., SW,
Washington, DC. (Blue/Orange Lines -- Smithsonian Station)

Sponsors: The Washington Statistical Society and the National Agricultural Statistics Service,
U.S. Department of Agriculture.

Reception: The lecture will be followed by a reception from 5:30 to 6:30 PM in the Patio,
USDA North Building.

Registration: Attendees must confirm their intention to attend the lecture and reception in advance.
Please call (703) 836-3245 and leave a message giving names of attendees.

Abstract: The second Morris Hansen Lecture will be presented by Wayne Fuller, a Distinguished Professor in the Departments of Statistics and Economics at Iowa State University. A Fellow of the American Statistical Association and the Institute of Mathematical Statistics, Dr. Fuller is the author of *Introduction to Statistical Time Series* and *Measurement Error Models*. His lecture will focus on the importance of measurement error for parameter estimation and for the design of statistical studies, particularly sample surveys. Beginning with a brief review of Hansen's contributions, the discussion concentrates on estimation problems in which measurement error leads to bias in the usual estimators. Emphasis is placed on regression and related procedures, and the implications for the design of surveys are discussed.

The first discussant is Barbara Bailar, Executive Director of the American Statistical Association (ASA). Dr. Bailar was previously Associate Director for Statistical Standards and Methodology at the Bureau of the Census and a Past President of the ASA. The second discussant is Paul Biemer, Principal Scientist, Research Triangle Institute. Dr. Biemer was one of the organizers of the International Conference on Measurement Errors in Surveys, held in November 1990.

This session is made possible by a grant from Westat, Inc., where Morris Hansen worked for 20 years as a senior statistician and served as Chairman of the Board of Directors.

Program Abstracts (cont'd)

Topic: Measuring Relative Importance of Variables in Multivariable Models

Speaker: Ehsan S. Soofi, University of Wisconsin--Milwaukee

Chair: Jose Luis Girero, Georgetown University

Date/Time: Tuesday, November 17, 1992, 12 Noon - 1:00 PM

Location: 316 Old North, Georgetown University, Main Campus, 37th & O Streets, NW, Washington, DC.

Sponsors: WSS' Physical Sciences and Engineering Section, Georgetown University's School of Business, and George Washington University's Departments of Management Science and Operations Research

Abstract: How important are explanatory variables included in a model? In many studies such as regression analysis, analysis of variance, discriminant analysis, canonical correlation, choice modeling, ..., it is desirable to make a statement about the relative importance of the variables. In a study of scientific literature, Kruskal and Major (*The American Statistician*, 1989) confirm such a desire, observe lack of self-consciousness about quantification of relative importance, and regretfully report widespread misuse of statistical significance for quantification of relative importance. In this talk the speaker will review some recent developments in quantification of relative importance. He will show that information theory provides suitable measures for diagnosing relative importance of variables in various linear and non-linear models.

* * * LATE ANNOUNCEMENT * * *

John J. Deely, from the University of Canterbury, New Zealand, will present a paper on Bayesian Sequential Design for Selecting the Better Treatment Using a Conservative Influence of Future Observations. This talk will be held on November 12, 1992, 4:30 - 5:30 PM, Staughton Hall 301, George Washington University, 707 22nd Street, NW, Washington DC. (Blue/Orange Lines -- Foggy Bottom)

Program Abstracts (cont'd)

Topic: Tightening the Clinical Trial

Speaker: John W. Tukey, Princeton University

Chair: Karen Kafadar, National Cancer Institute

Date/Time: Tuesday, November 17, 1992, 12:30 - 2:30 PM

Location: Conference Room 6, Building 31, National Institutes of Health, 9000 Rockville Pike, Bethesda, MD. (Red Line -- Medical Center)

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

Abstract: Clinical trials adhere more closely to pre-agreed-upon protocols than almost any other type of experiment; yet, we can tighten up their analysis if we desire. If we convert the analysis into a randomization analysis -- where the one set of data is analyzed many times -- once as though each acceptable randomization has been employed, we can eliminate any dependence of the analysis on statistical or probabilistic assumptions. To do this effectively when many randomizations could be acceptable, we can go to double randomization, in which a subset, usefully kept balanced, of randomizations is selected (perhaps randomly) before data acquisition.

If we have one covariate, adjustment for which answers a question that is at least as acceptable, we can easily build this in. Imperfect covariance adjustments can help almost as much as perfect ones. If it is appropriate to work with many covariate(s), it is often desirable to first construct a (few) compound covariate(s), and then work with it (them). Often, we can base the coefficients in our compound on the univariate regressions of response on single covariates. Doing this within each arm of the trial and pooling keeps the fitting of the final adjustment unbiased. Since we can pre-specify how the compounds are calculated and fitted, we can do all this retaining rigid pre-specification.

Pre-specification, randomization, and intelligent use of covariates combine to make the resulting analysis of Platinum Standard quality. (If we want confidence statements, as we ordinarily should, it may make sense to take somewhat less than Platinum Standard quality.)

*** * Attention * ***

Sign up early for the Holiday Party!
Look for the enclosed flyer.

Program Abstracts (cont'd)

Topic: Results from Quality Assurance Studies for the 1990 Decennial Census

Speaker: John Linebarger, U.S. Census Bureau

Chair: Sid Schwartz, U.S. Postal Service

Date/Time: Wednesday, November 18, 1992, 12:30 - 2:00 PM

Location: USPS Headquarters, Room 1P629 (one floor below street level), 475 L'Enfant Plaza, SW, Washington, DC. (Yellow or Blue/Orange Lines -- L'Enfant Plaza) All visitors must register at guard's station upon entering.

Sponsor: Quality Assurance Section

Abstract: Many individual operations, some large and some small, go into the process of taking a census. The Census Bureau hires many temporary employees to carry out these tasks. Quality assurance programs are developed to protect that the quality of these operations is as high as possible.

This presentation will discuss the major operations that were conducted to carry out the 1990 Decennial Census, the quality assurance plans that were used, and the results from the analysis of the plans. Comparisons between similar operations will be made when possible and recommendations for future research will be discussed.

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Topic: Technological Developments in the Data Collection Process for Establishment Surveys

Speakers: Richard L. Clayton and Richard J. Rosen, Bureau of Labor Statistics

Chair: Michael P. Cohen, National Center for Education Statistics

Date/Time: Thursday, November 19, 1992, 12:30 - 2:00 PM

Location: BLS Cognitive Lab, Postal Square Bldg., Room 2990, 2 Massachusetts Ave., NE, Washington, DC. (Red Line--Union Station) Enter at First Street.

Program Abstracts (cont'd)

Technological Developments in the Data Collection Process for Establishment Surveys (cont'd)

Sponsor: Data Collection Methods Section

Abstracts: **Integrating Centralized CATI in a Decentralized Collection Environment**
George Werking, Richard Clayton, Kathleen Donohue

The Current Employment Statistics Survey is implementing Computer Assisted Telephone Interviewing (CATI) as a temporary means of improving the timeliness, control of data collection, and Touchtone Data Entry (TDE) for ongoing collection. The initial research was conducted at the state level, but an accelerated implementation plan involves the use of two CATI centers. This paper reviews the issues involved in integrating centralized CATI with decentralized TDE in the states.

An Operational Test of FAX for Data Collection Activities

Richard Rosen and Richard Clayton

The Bureau of Labor Statistics is currently conducting operational tests of the use of a fully automated PC-based FAX system, capable of respondent notification and nonresponse prompting. This paper reviews methodological and technological issues surrounding the use of FAX and the results of operational tests. The tests were conducted in the monthly Current Employment Statistics survey of establishments.

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Topic: Guidelines for Use of Model-Based Sampling in EIA

Speaker: Nancy J. Kirkendall, Energy Information Administration

Discussant: David Judkins, Westat, Inc.

Chair: Richard Valliant, Bureau of Labor Statistics

Date/Time: Tuesday, December 1, 1992, 12:30 - 2:00 PM

Location: BLS Cognitive Lab, Postal Square Bldg., Room 2990, 2 Massachusetts Ave., NE, Washington, DC. (Red Line -- Union Station) Enter at First Street.

Sponsor: Methodology Section

Program Abstracts (cont'd)

Guidelines for Use of Model-Based Sampling in EIA (cont'd)

Abstract: The Energy Information Administration (EIA) has a number of survey situations that may be appropriate for the application of strictly model-based sampling theory. In these situations, a periodic census survey (e.g., annual) and a more frequent periodic sample survey (e.g., monthly) monitor activities of a highly-skewed and stable population. This paper considers guidelines for model-based sampling:

- how to determine when model-based sampling is appropriate,
 - how to estimate mean squared errors, and
 - what requirements are needed for routine model validation.
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Announcements (cont'd)

Short Course (cont'd)

The course will present appropriate analysis methods for dealing with complex surveys, where designs based on stratification, clustering and unequal probabilities of selection make analysis with standard statistical packages difficult. In this hands-on training, SUDAAN, a comprehensive survey data analysis software package, will be used to demonstrate a full range of analytical techniques.

The short course will be held Tuesday and Wednesday, December 1-2, 1992, from 8 AM to 4 PM, in the Embassy Hall of the Dupont Plaza Hotel, Washington, DC. A registration form for the course is enclosed in this newsletter. For further information, contact Glenn White at (202) 874-1114 (at work) or (301) 952-1507 (at home).

1990 Census/EEO Data Available

FYI: Users of Census data will be glad to hear that the 1990 census data on occupation and education are now available for use by demographic and economic researchers. The 1990 Census/Equal Employment Opportunity File (EEO) is a valuable resource for employ-

ers in recruitment and affirmative action planning. It contains data on 512 occupation categories by sex, race, and Hispanic origin. Educational attainment is also provided for seven age groups, by sex, race and Hispanic origin. Finally, both sets of tables are summarized for all geographic levels shown on the file (down to places and minor civil divisions with a population of 50,000 or more).

The Census Bureau makes these data available on computer tape, compact disc, microfiche, CENDATA, and printed form. For further information, contact Thomas S. Scoop, Housing and Household Economic Statistics Division, Bureau of the Census, Washington, DC 20233 -- or call (301) 763-8199 -- or contact your favorite vendor.

George Mason University Course Offerings for 1992-93 in the Federal Statistics Program

The Department of Applied and Engineering Statistics at George Mason University offers a graduate certificate program and a Masters degree program in Federal Statistics. All courses are offered in late afternoon or evening by regular faculty members at either the

Announcements (cont'd)

George Mason (cont'd)

Main (M) or Arlington (A) campus. The Fall offerings include Applied Statistics, Exploratory Data Analysis, Survey Sampling, and Statistical Inference in Survey Sampling. The courses for Spring 1993 will be:

STAT 612: Use of Computer Statistical Packages
Gantz Tu/4:30-7:10/M

STAT 654: Applied Statistics
Sutton W/4:30-7:10/M

STAT 658: Time Series Analysis and Forecasting
Wegman T/7:20-10:00/M

STAT 665: Categorical Data Analysis
Bolstein W/7:20-10:00/M

STAT 679: Topics in Survey Design and Analysis
Bolstein Th/6:00-8:40/A

Most of the above courses have a prerequisite of only one solid undergraduate course in statistics at the third year level. For more information on these and other statistics courses and programs offered, call (703) 993-1680 or Fax your request to (703) 993-1700.

QL Update

This summer, Bob Baskin, Leslie Miller, and Jill Montaquila met for two days with a team of Fairfax County educators, led by Dr. Ron Zirkle, to discuss mathematics curriculum, with a focus on statistics for the 7th and 8th grades in Fairfax County. The main project was to prepare a lesson plan which could be used to introduce 7th and 8th graders to statistics.

An interesting and educational lesson plan was developed, which begins with an introductory study and ends with students creating their own study. The introductory study is led by the teacher and involves the types of tennis shoes worn by the students. In this example, the students are introduced to various statistical concepts, including sampling; measures of central tendency and variability; frequency tables; and graphical representa-

tions such as bar charts, pie charts, and scatter plots. Following this example, students will be asked to create their own study, including selecting their sample, designing a questionnaire, and collecting and analyzing their data.

The meeting also focused on the importance of presenting statistics to 7th and 8th graders, as well as other ways to incorporate statistics into the classroom. The educators appear to be sincere in their efforts. In their proposal, they recommend using this lesson plan as an introduction, and continuing statistics education with other lessons and interdisciplinary projects.

It was encouraging to us to see that schools are taking a genuine interest in statistics education at the 7th and 8th grade levels. It will be even more encouraging to see this become the rule, not the exception. We feel that with careful planning and continuing collaboration between statisticians and educators, the public will become more statistically literate. (Submitted by Bob Baskin, Leslie Miller and Jill Montaquila.)

Can You Use a Student?

The Department of Mathematics and Statistics at The American University is offering internship opportunities in Statistics for undergraduate and graduate students. Our undergraduate majors take a variety of theoretical and applied courses. Many students also take courses in Computer Science and become proficient using SAS on the IBM mainframe, using SYSTAT on PC's or using a variety of software on Unix workstations. Graduate students include Masters candidates in Mathematics, Statistics and Statistical Computing, as well as Ph.D. candidates in Statistics.

Each student on an internship is supervised by a faculty member. We are interested in broadening our internship program to provide students with access to data in a "real-world" environment. If you have any projects where one of our students, possibly consulting with a faculty member, could be useful, please contact Nancy Flournoy at (202) 885-3127, (202) 885-3155 (FAX) or FLOURNOY@auvm.american.edu.

Announcements (cont'd)

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:

- 11/19/92: S-Plus Programming.**-- Examples of using S-Plus as a statistical programming language will be presented.
- 12/09/92: RATS 4.0.**--RATS stands for Regression Analysis for Time Series. We'll look at the latest release of the 386 version.

All meetings are scheduled for Wednesdays from 12:30-1:30 PM in Room B-14, 1301 New York Ave., NW, Washington, DC. The building is located midway between the Metro Center and McPherson Square Metro stops. If this is your first SIGSTAT meeting, call Charlie Hallahan at (202) 219-0507.

Employment Column

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

Vacancy

Statisticians/Mathematical Statisticians

The Office of Applied Studies, in the newly created Substance Abuse and Mental Health Services Adminis-

tration (SAMHSA), is recruiting for statisticians (GS-12-14 levels) to join its Division of Surveys and Analysis. These positions will involve work on SAMHSA's national sample surveys of households, hospital emergency rooms, and drug abuse treatment facilities. Positions are available for persons with expertise in one or more of the following areas: statistical programming (primarily SAS), analysis of complex survey data, sample selection and maintenance, development of weights, survey management, questionnaire design, design and conduct of methodological studies, and drug abuse epidemiology. Send SF-171 to: Joseph Gfroerer, Director, Division of Surveys and Analysis, Office of Applied Studies, Substance Abuse and Mental Health Services Administration, 5600 Fishers Lane, Rockwall II, Suite 615, Rockville, MD 20857.

Research Scientist Appointments Available

The Survey Research Center (SRC) of the University of Michigan plans to make several new appointments to an interdisciplinary Program in Survey Methodology. Although the Survey Research Center is located in Ann Arbor, Michigan, all of these appointments will be for fulltime faculty to be located in College Park, Maryland.

The appointments will be in the Survey Research Center's new Survey Methodology Program. This unique program will have two sites, one at SRC in Ann Arbor, another at the newly created Joint University of Maryland-University of Michigan Program in Survey Methodology, located on the College Park campus of the University of Maryland. It is expected that two appointments will be made under this announcement, contingent on approval of funding for the joint program from the National Science Foundation.

The Survey Methodology Program at Michigan will conduct research on survey methods, provide direction on the introduction of new methodological developments in the Survey Research Center's surveys, and provide graduate and postgraduate teaching in survey methodology. It will be comprised of a Director, several Ph.D. level research staff, and support staff. Most staff will be located in Ann Arbor. However, three will be located at the joint Program in Survey Methodology in College Park.

Employment Column

Research Scientist (cont'd)

The Survey Research Center seeks applications for research scientists positions from persons with research interests in one or more of the following areas:

- questionnaire design, including the application of cognitive psychology to the survey process;
- modes of interviewing, interviewer behavior, and interviewer-respondent interaction;
- modes of data collection, including mail and other self-completion techniques and computer-assisted interviewing;
- sampling and survey statistics, including sample design, variance estimation with complex sample designs, weighting and imputation, model-based vs. design-based inference, and small area estimation; and
- all aspects of statistical analysis and computing for survey data.

Those appointed under this announcement will be staff of the University of Michigan Survey Research Center's Survey Methodology Program, with joint appointments in the Joint University of Maryland/Univer-

sity of Michigan Program in Survey Methodology. They will devote approximately one-half time to teaching and one-half time to research. The positions are open-rank (Assistant, Associate, or Full Research Scientist) and will be tenured or tenure-track in the University of Michigan Institute for Social Research. It is expected that a mixture of junior and senior appointments will be made. Applicants for tenured level appointments should have strong records of funded research, publication, and proposal development in relevant areas of survey methodology, and applicants for tenure-track positions should have promise for leadership in survey methodology research indicated by initial accomplishment and future potential.

Applicants should forward a curriculum vitae to:

James M. Lepkowski
Survey Research Center
Institute for Social Research
University of Michigan
P.O. Box 1248
Ann Arbor, Michigan 48106-1248.

Screening of applications will begin immediately and continue until all positions are filled. The University of Michigan is an affirmative action/equal opportunity employer and encourages women and minorities to apply. The University makes every effort to be responsive to the needs of dual-career couples.

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Help us Avoid Conflicts!

The WSS News welcomes announcements of talks and events scheduled by other groups, which would be of interest to the membership. In order to avoid conflicts with WSS sessions, organizers can contact Carolyn Shettle, the WSS Local Arrangements Chair, at (202) 634-4664 or FAX (202) 634-4683. Items for publication in the December WSS NEWS should be submitted no later than Tuesday, October 27, 1992. Fax items to:

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