



**WASHINGTON
STATISTICAL
SOCIETY**

WSS NEWS

December 1992

JOIN US FOR OUR ANNUAL HOLIDAY PARTY!

Make your plans now to attend the WSS 1992 Holiday Party. If you missed last year's, you missed a treat. The Party is scheduled for **Thursday, December 17, 1992**, in the Rayburn House Office Building, overlooking the Capitol, and is once again being catered by Well Dunn! For more information about reservations, see the flyer in this newsletter.

SCIENCE FAIRS 1993

Volunteers are now being solicited to represent the Washington Statistical Society as judges in local area science fairs next spring. Since 1986, WSS has provided special awards at these fairs to students whose projects demonstrate excellence in statistical theory or application. Those who have participated in this activity have very much enjoyed the opportunity to interact with these students and to observe the widely diverse projects which are presented. The WSS sponsors awards at fairs in Northern Virginia, suburban Maryland and the District of Columbia. The fairs are held on a Saturday morning in mid- to late March and early April. The only time required is that one Saturday morning, plus one weekday lunchtime meeting to discuss judging strategy and to distribute the awards to be given out at each fair.

If you would like to be a WSS science fair judge, or if you would like additional information about this activity, please contact Lee Abramson at (301) 492-3949.

WSS Seminars

(All events are open to any interested persons.)

December

- | | | |
|-----|-------|---|
| 1 | Tues. | Guidelines for Use of Model-Based Sampling in EIA |
| 1-2 | T-W | Short Course: Applied Survey Data Analysis Methods |
| 2 | Wed. | Analysis of Recurrence Data with Applications to Product Repairs and Disease Episodes |
| 3 | Thur. | Confidentiality Issues -- Disclosure Avoidance Techniques: A Data Structure and Integer Programming Technique (1st in series) |
| 8 | Tues. | What Happens When Your Surveys Need A Radical Overhaul? |
| 9 | Wed. | Record Linkage Decision Rules, Analyses, and Applications |
| 10 | Thur. | A Time Series Approach to Small Area Estimation |
| 11 | Fri. | Estimating Energy Efficiency in the United States: Statistical & Economic Issues |
| 15 | Tues. | Combining Short-Run & Long-Run Forecasts: Modeling the Demand for Electricity Using Seasonal Cointegration Techniques to Produce Consistent Forecasts |
| 16 | Wed. | Handling Missing (or Bad) Data: Raking Ratio Estimation in the SOI Corporate Program (3rd in series) |
| 17 | Thur. | Holiday Party |

Announcements

National Research Council's Symposium on Clinical Trials and Statistics

On Tuesday, December 1, 1992, from 2:00 to 5:00 PM, the Board on Mathematical Sciences, National Research Council, will sponsor a symposium on "Clinical Trials and Statistics." This course will be held at the National Academy of Sciences, Lecture Room, 2100 C Street, NW, Washington, DC.

The symposium focuses on the interaction between statistics and strategy issues that occur in designing comparisons of drugs and clinical procedures. Since the 1950's, the standard method for determining which of two competing treatments is superior has been a randomized trial. How to design a randomized trial to obtain a maximum amount of clinically relevant information has been and will continue to be a subject of statistical research. Methods for design, conduct, and reporting of non-randomized studies have been and are being developed. The symposium will examine these ideas from three different vantage points. The need for large, simple trials, that is, trials that give coarse information -- such as "live" or "die" -- about many subjects, will be addressed by one speaker. Another speaker will discuss design of trials with appropriate representation of subgroups -- women, minorities, and people in different states of health. A third speaker will present the case for observational studies as alternatives or complements to clinical trials. Statisticians are involved in developing ways to utilize observational data from large national data banks.

The symposium is open to the public at no charge. However, seating is limited, and advance registration by is required. Contact the Board on

Mathematical Sciences, at (202) 334-2421 or bms@nac.edu, to register.

Thank You!

The WSS Short Course Committee would like to acknowledge the work of **Milton Goldsamt** of the National Agricultural Statistics Service in editing and revising the WSS Short Course Evaluation. Mr. Goldsamt attended the *Categorical Data Analysis* short course given by Bob Fay on April 23, 1992. On the evaluation sheet, he offered to help design a better, more useful, and user friendly evaluation. The redesign took a couple of months, in which time the "best" of various evaluations were merged, while still addressing WSS concerns. The evaluation was redesigned in time for the 1992 *Quality Assurance in the Government Symposium* on July 9-10. Over 70 percent of the participants filled out the evaluation, a record in the five years of the QA Symposium. The new evaluation form will allow us to better and more easily obtain input from our members on their appraisal of the short courses and future topics for consideration. Thank you, Milton.

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.

(Continued on page 10)

Program Abstracts

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

Speaker: Nancy J. Kirkendall, Energy Information Administration

Chair: Richard Valliant, Bureau of Labor Statistics

Discussant: David Judkins, Westat, Inc.

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)

Sponsor: Methodology Section

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.

The *WSS NEWS* Editors
Wish all of you the
Happiest of Holidays
and a
Most Prosperous New Year!

Program Abstracts (cont'd)

Topic: Analysis of Recurrence Data with Applications to Produce Repairs and Disease Episodes

Speaker: Wayne Nelson, Consultant

Chair: Terry Logee, Department of Energy

Date/Time: Wednesday, December 2, 1992, 12:00 Noon - 1:00 PM

Location: Courtyard Marriott, Rosslyn, VA (Blue/Orange Line -- Rosslyn)

Sponsor: WSS' Physical Sciences and Engineering Section, Washington Chapter of IEEE and Washington Chapter of ASQC

Abstract: Most reliability analyses concern life data on components that fail once and, thus, have a life distribution. However, many products are repaired and, thus, undergo repeated failures. Such recurrence data also arise in biomedical data on recurrent disease episodes, factory simulation data, borrower credit histories, sociology and other data. Until recently, recurrence data have not been properly recognized and suitably analyzed.

This tutorial presents a simple and informative data plot for analyzing censored data on numbers and costs of repairs from sample systems with differing lengths of observation. The plot displays nonparametric estimates of the mean cumulative number (or cost) of repairs per system vs. system age. Its derivative is the instantaneous repair (failure) rate. The plot can be used to:

- Evaluate whether a cost or repair rate increases or decreases with system age (useful for system retirement and burn-in decisions);
- Compare samples from different designs, production periods, maintenance policies, environments, etc., or from different medical treatments or patient groups;
- Predict future numbers or costs of repairs or recurrences; and
- Reveal unexpected information and insights (an important advantage of data plots).

This talk also presents approximate confidence limits for the mean cumulative function for number and cost of recurrences at any age, and it describes how to compare samples with such confidence limits. All methods are illustrated with a variety of applications to product repair data and recurrent disease data on bladder tumors. Computer programs that do calculations and plots are presented.

Program Abstracts

- Topic:** Confidentiality Issues -- Disclosure Avoidance Techniques: A Data Structure and Integer Programming Technique to Facilitate Cell Suppression Strategies (1st in series)
- Speaker:** Colleen M. Sullivan, Bureau of the Census
- Chair:** Laura Zayatz, Bureau of the Census
- Date/Time:** Thursday, December 3, 1992, 12:30 - 2:00 PM
- Location:** National Science Foundation, Conference and Training Center, 5th Floor, 1110 Vermont Ave., NW, Washington, DC (Blue/Orange Lines -- McPherson Square; walk across park to 15th and K Streets, go two blocks to Vermont Avenue).
- Sponsor:** Statistical Computing Section
- Abstract:** The Economic Divisions of the Bureau of the Census employ a cell suppression technique that utilizes network flow methodology. This computationally fast technique is implemented using the commercially available Minimum Cost Flow (MCF) program of Glover, Klingman, and Mote. However, since the objective function minimizes the sum of the products of the data values chosen as complementary suppressions and their corresponding uncertainty variables, the solution is suboptimal; that is, there is potential for over-suppression. Provided that the solution space generated by MCF is small enough, an integer programming (IP) routine can refine the MCF solution without adding excessive computational time. Since MCF produces a data structure tree that corresponds to the complementary suppression scheme, we are able to use the information from the tree to construct a reasonably small set of constraints for the IP formulation. The resulting IP routine then attempts to refine the MCF solution by removing a subset of the complementary suppressions. This paper presents a hybrid technique that performs the refinement operation described above.

* * * * *

- Topic:** Panel Discussion: What Happens When Your Surveys Need A Radical Overhaul?
- Panelists:** Linda Hardy, John Tsapogas, and Keith Wilkinson, National Science Foundation
- Chair:** Carolyn Shettle, National Science Foundation
- Date/Time:** Tuesday, December 8, 1992, 12:30 - 2:00 PM
- Location:** Postal Square Bldg., BLS Cognitive Laboratory, Room 2990, Conference Room 1, 2 Massachusetts Avenue, NE, Washington, DC (Red Line -- Union Station).
- Sponsor:** Social and Demographic Section

Program Abstracts (cont'd)

Panel Discussion: What Happens When Your Surveys Need A Radical Overhaul? (cont'd)

Abstract: This session describes the National Science Foundation's (NSF) progress in redesigning its Scientific and Technical Personnel Data System (STPDS) which collects information on U. S. scientists and engineers. An evaluation by the Committee on National Statistics several years ago pointed to needed improvements in instrument content, sample design, data collection methodology, and outreach activities. Based on this evaluation, the NSF has launched a multi-faceted redesign effort for the 1990s system. The goals for the redesign effort are: (1) increased conceptual clarity; (2) expanded coverage; (3) enriched content; (4) better comparability with other surveys; (5) improved survey quality; (6) more efficient sampling; and (7) increased dissemination of results. Panelists will discuss these issues and accomplishments, to date.

* * * * *

Topic: Record Linkage Decision Rules, Analyses, and Applications

Speaker: William E. Winkler, Bureau of the Census

Chair: Yahia Ahmed, Internal Revenue Service

Date/Time: Wednesday, December 9, 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: Statistical Computing Section

Abstract: This talk provides an overview of new techniques that have been developed within the framework of the Fellegi-Sunter model of record linkage. It points to independent work by computer scientists who have rediscovered the information-theoretic model and shown that the model works best among a variety of competing mathematical models. It shows how newly developed extensions of the EM Algorithm (Belin, Meng, Rubin, Thibaudeau, Winkler) can be used for estimating probability distributions used in a crucial likelihood ratio. It covers modifications of operations research and computer science ideas introduced by Jaro, (JASA 1989) that can significantly improve matching efficiency but can hinder formal methods for automatically estimating probabilities. It summarizes work by Scheuren and Winkler on how statistical analyses involving linked files can be corrected for matching error. The talk concludes with examples of applications in the Post-Enumeration Survey, that used capture/recapture methods for producing adjusted Census counts; the Housing Unit Coverage Study; the 1992 Agriculture Census List Development; the 1992 Update of the Standard Statistical Establishment List, and other studies.

Program Abstracts (cont'd)

Topic: A Time Series Approach to Small Area Estimation

Speaker: Richard Tiller, Bureau of Labor Statistics

Discussant: Donald Malec, National Center for Health Statistics

Chair: Mark C. Otto, Bureau of the Census

Day/Time: Thursday, December 10, 1992, 12:30 - 2:00 PM

Location: BLS Cognitive Laboratory, Room 2990, Conference Room 1, 2 Massachusetts Avenue, NE, Washington, DC (Red Line -- Union Station)

Sponsor: Methodology Section

Abstract: In this presentation, time series modeling is applied to State labor force data taken from the Current Population Survey (CPS). The time series approach to small area estimation offers important advantages, not only in achieving efficiency gains over the direct survey estimator but also in facilitating analysis of the characteristics of the true underlying series. Because of the CPS' complex design, the behavior of the observed sample estimates differs in important ways from the true values. Changes in the sample size and an overlapping survey design induce heteroscedasticity and autocorrelation in the sampling errors. Along with high variability due to small State sample sizes, these characteristics greatly complicate analysis. Model estimates achieve major reductions in variability and can be adequately seasonally adjusted even though the direct survey estimates cannot.

* * * * *

Topic: Estimating Energy Efficiency in the United States: Statistical and Economic Issues

Speaker: Dwight French, Energy Information Administration

Discussant: Ron Sutherland, Argonne National Laboratory

Chair: John H. Herbert, Energy Information Administration

Date/Time: Friday, December 11, 1992, 12:30 - 2:00 PM

Location: Room GJ-015, Forrestal Bldg., 1000 Independence Avenue, 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 Energy Efficiency in the United States: Statistical and Economic Issues (cont'd)

Abstract: Emerging energy legislation relies on improving energy efficiency as a centerpiece for meeting future energy goals. The concepts of energy efficiency and efficiency improvement are easy to support as general principles. Measuring and quantifying those concepts is a much more difficult and controversial topic. This presentation discusses the practical and statistical difficulties of efficiency measurement. It summarizes the possibilities and problems of alternative approaches for defining, measuring, and analyzing energy efficiency and efficiency change across the U. S. economy.

* * * * *

Topic: Combining Short-Run and Long-Run Forecasts: Modeling the Demand for Electricity Using Seasonal Cointegration Techniques to Produce Consistent Forecasts

Speakers: Fred L. Joutz and Robert Trost, George Washington University

Discussant: Neil Ericsson, Federal Reserve Board

Chair: Mary Hutzler, Energy Information Administration

Date/Time: Tuesday, December 15, 1992, 10:30 AM - 12:00 Noon

Location: Waugh Auditorium (in basement), 1301 New York Ave., NW, Washington, DC. (Blue/Orange Line -- between Metro Center and McPherson Square) Call Linda Atkinson on (202) 219-0505 to place your name on the guard's list for entry.

Sponsor: Economics Section

Abstract: Forecasters are asked to produce models for predicting the short run and long run. Conventional practice involves the construction of separate models for the two horizons. The short-run model explains demand as a function of seasonal or rapidly changing variables. The long-run model explains demand as a function of slowly changing variables like demographic characteristics and income. In general, these two models result in conflicting forecasts at overlapping horizon(s). An ad hoc means of reconciling the difference(s) is employed to produce a unified forecast. This paper will incorporate the information from a short-run and a long-run model for electricity demand into a single model using the error correction framework. Recent developments in the cointegration and seasonal cointegration literature will be exploited in the model's construction and estimation. The forecast performance (from the merged model) can be compared against the separate model's predictions.

Program Abstracts (cont'd)

- Topic:** Handling Missing (or Bad) Data: Raking Ratio Estimation in the SOI Corporate Program (3rd in series)
- Speaker:** Jeri Mulrow, Internal Revenue Service
- Discussant:** Charles H. Alexander, Bureau of the Census
- Chair:** Phil Kott, National Agricultural Statistics Service
- Date/Time:** Wednesday, December 16, 1992, 12:30 - 2:00 PM
- Location:** Postal Square Bldg., BLS Cognitive Laboratory, Room 2990, Conference Room 1, 2nd Floor, 2 Massachusetts Avenue, NE, Washington, DC (Red Line -- Union Station)
- Sponsor:** Methodology Section
- Abstract:** This presentation is a combination of two papers that have been presented at the ASA annual meetings. It features a discussion of the use of raking ratio estimation in the Statistics of Income (SOI) corporate programs.

Raking ratio estimation was first introduced by Deming and Stephan in 1940. It began to be used in the SOI program in 1980. Oh and Scheuren modified the technique in 1987. The modification was to constrain (bound) the raking adjustments to fall within a relatively narrow range. A discussion of the bounding used in this approach will be presented.

Due to the nature of collecting data from administrative records, a time lag in producing and publishing data exists. SOI's final data users, the Office of Tax Analysis, the Bureau of Economic Analysis and the Joint Congressional Committee on Taxation have expressed a desire to have earlier data estimates. In an attempt to meet this request, SOI is exploring the use of raking to project ahead for future estimates. A discussion of how stable the raking has been in the SOI corporate programs and how raking may be used to produce estimates on demand will also be presented.

* * * NOTE FROM WSS NEWS EDITORS * * *

Items for publication in the January *WSS NEWS* should be submitted no later than Tuesday, November 24, 1992. Fax items to:

Betty Jamerson or Wendy Alvey
Fax: (202) 874-0922

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:

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.

01/03/93: SHAZAM & LIMDEP.--A double feature of econometric packages. SHAZAM also has an OS/2 version.

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

New Statistics Department at NORC

The National Opinion Research Center has formed a new Statistics Department that will be housed in its Dupont Circle office. Heading the department will be Senior Scientist Roger Tourangeau and reporting to him will be a team of statisticians and survey methodologists. NORC is locating the department in Washington in order to offer Federal survey clients based here greater opportunity to meet with sampling and methods professionals. The establishment of the department and the consolidation of sampling and related statistical and methodological work marks the beginning

of an expanded program in methods research. It is a logical step to follow the 1985 establishment of the NORC Methodology Research Center.

Most of Tourangeau's staff will be based in Washington, but several will be located in NORC's Chicago headquarters. NORC's current senior statisticians -- Martin R. Frankel and Bruce D. Spencer, professors of statistics at Baruch College and Northwestern University, respectively -- will continue to be responsible for sample design, selection, weighting, and other statistical tasks on specific projects, and will act as advisers to Tourangeau. In addition, Frankel will continue to have corporate responsibility for quality assurance and for setting organizational standards.

For more information, contact Jeff Hackett, Public Information Coordinator, NORC, at (312) 753-7578.

1993 ASA Winter Conference

The American Statistical Association's Winter Conference will be held January 3-5, 1993, in Ft. Lauderdale, Florida. This year's meeting, sponsored by the Association's Social Statistics Section, Government Statistics Section and Section on Survey Research Methods, will focus on "Families and Children: Research Findings, Data Needs and Survey Issues." In addition to a full spectrum of sessions, two tutorials will be offered: "The Importance of Sampling Principles for the Analysis of Survey Data," by David Morganstein and J. Michael Brick, Westat, Inc. and "Sampling and Analytic Methods for Rare and Hard-to-Find Populations," by Charles Cowan, Resolution Trust Corporation. Pre-registrations are due by December 4, 1992. To obtain more information about the 1993 ASA Winter Conference, contact ASA at (703) 684-1221; FAX (703) 684-2036.

Announcements (cont'd)

Short Course Sold Out!

The WSS/ASA Survey Research Methods tutorial on "Applied Survey Data Analysis Methods," by Rick Williams, Research Triangle Institute, is sold out. For those who have already registered, a reminder: the session will be held in the Embassy Hall, Dupont Plaza Hotel, Washington, DC, December 1-2, 1992, 8:00 AM to 4:00 PM. The hotel is located at the intersections of Massachusetts and Connecticut Avenues, near the Red Line's Dupont Circle Metro Station. Hotel parking is available for \$12 a day.

Hogg Paper Available

The paper Robert Hogg handed out at his session "On the Road to Benchmarking" (October 7, 1992) is now available upon request. To obtain a copy of "A Quality Journey," by Robert and Allen Hogg, send a self-addressed stamped envelope to:

Otto Schwartz
SOI Division (R:S:P)
P.O. Box 2608
Washington, DC 20013-2608.

Academic Fair in Statistics

The Washington Statistical Society will sponsor its second biennial Academic Fair on Thursday, January 28, 1993, at the Conference and Training Center, Postal Square Building, 2 Massachusetts Ave., NE, Washington, DC. The Fair will run from 12:30 - 3:30 PM and will include exhibits and presentations about graduate programs in statistics available in the Washington, DC area. Schools or organizations wishing to exhibit information about training programs in advanced statistics should contact Nancy Flournoy at (202) 885-3127. Large groups planning to attend should RSVP by calling

the Mathematics and Statistics Office, The American University, at (202) 885-3120.

Society for Clinical Trials Scholarships

The Society for Clinical Trials will provide scholarships for students to attend their annual meeting, May 23-26, 1993, in Orlando, Florida. Students (including post-doctoral and physicians in residency) are invited to submit abstracts on clinical trial-related topics. Students selected to present papers will be invited to attend the meeting with all fees waived and travel and living expenses paid. The best paper will also receive a cash award. All abstracts are due by December 18, 1992. For further information, contact Theodore Karrison, Ph.D., University of Chicago, Department of Medicine (MC6098), 5841 S. Maryland Ave., Chicago, IL 60637; (312) 702-9326.

NIH Conference on Current Topics in Biostatistics

On January 25-26, 1993, the National Institutes of Health will sponsor a conference on applications of statistics to biomedical research. The program will include a broad range of topics covering methodologic approaches to the diverse design and analysis issues encountered by NIH statisticians. Space is limited and pre-registration is highly recommended. For information, contact Dina Rice, Biostatistics Conference, CONWAL Inc., 520 N. Washington St., Suite 100, Falls Church, VA 22046; (703) 536-3200.

Reminder: NSF Fellowship Applications Due

The ASA/NSF Research Fellowship for On-Site Research to Advance the Quality of Science and Technology Resources seeks senior researchers and recent doctorate recipients for its 1993-4 Fel-

Announcements (cont'd)

lowship within the National Science Foundation's Division of Science Resources Studies. Applications are due January 4, 1993. For information, contact Carolee Bush, ASA, 1429 Duke Street, Alexandria, VA 22314-3402; (703) 684-1221.

The ASA/NSF/Census Research Program and the Census Bureau Research Fellow Program seek researchers with recognized work in relevant fields to make major advances in methodological and subject matter research related to Census Bureau operations and data. Applications are due January 4, 1993. For information, contact Maxine Anderson-Brown, Program Manager, DIR Room 2270-3, Bureau of the Census, Washington, DC 20233; (301) 763-1150.

The ASA/NSF/NIST 1993-4 Senior Research Fellowship Program seeks senior researchers, advanced graduate students and recent Ph.D.'s for Fellowships and Associateships at the National Institute of Standards and Technology; in particular, applicants with strong interest in cross-disciplinary research in process modelling and optimization. Applications are due, for Fellows, by January 15, 1993 and, for Associates, by February 15, 1993. For information, contact Carolee Bush, ASA, 1429 Duke Street, Alexandria, VA 22314-3402; (703) 684-1221.

Holiday Idea # 356

Did you draw the name of a colleague in the office pool? Stumped for a gift for a friend or relative? Give the gift that lasts a whole year: a WSS Associate membership! Associate memberships are \$14 a year and entitle the member to attend all local events and receive the *WSS News* ten times a year. For more information, contact Antoinette Martin at (202) 254-5409 or Renee Miller at (202) 254-5507.

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.

Vacancies

Mathematical Statisticians

The Center for Disease Control, National Center for Health Statistics, Office of Research and Methodology announces openings for Mathematical Statisticians at the GS-12/13/14 levels (\$45,336 - \$74,627). Incumbents will develop statistical designs for national population and establishment sample surveys, design and conduct studies and experiments to examine and evaluate sampling and nonsampling survey errors, and conduct statistical research on designing and making inferences from complex sample surveys. They will participate with professional staff and survey sponsors in developing the survey objectives, serving as Project Officer, and providing statistical consultation during all survey phases. Send SF-171 to Dr. James Massey, Chief, Survey Design Staff, National Center for Health Statistics, 6525 Belcrest Road, Room 915, Hyattsville, MD 20782.

Statistician/Analyst/Programmer

Klemm Analysis Group, Inc. (KAG) is an innovative and highly respected statistical/analytical firm located in downtown Washington. Recent

Employment Column (cont'd)

successes make it necessary to expand its staff. They are looking for exceptional individuals with the following qualifications:

Project Task Manager.--Analysis of financial and tax data. MS/MA/MBA required with at least 5 years experience in research, necessitating the use of complex statistics, econometric modeling, report and proposal preparation and communication with clients.

Project Analyst.--Minimum of MS/MA in statistics/biostatistics, epidemiology, environmental engineering, etc., with analytical programming and writing skills to support several challenging research projects.

Applications Programmer/Analyst.--Versatile mainframe/PC skills (i.e., SAS, IBM, JCL, S Plus, SUDAAN, ORACLE/SQL, Paradox). Responsible for applications programming, technical analysis, report and some proposal preparation. MS/MA or BS/BA with 1-5 years experience in statistics, economics or related areas.

Klemm Analysis Group, Inc., offers a competitive compensation package. Send resume and salary requirements to: KAG, 1785 Massachusetts Ave., NW, Fifth Floor, Washington, DC 20036, Attn: Sharon.

Job Applicant

Listed below is a brief description of the qualifications of an applicant 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 #93-01

Looking for full-time employment in an entry level position that would utilize my statistical abilities.

Education:

George Mason University -- 9/91 - present. Graduate Student in Statistics. Completed 15 semester hours. Applied Statistics, Regression Analysis, Multivariate Statistics, Survey Sampling, with SAS programming applications. GPA 4.0/4.0.

Virginia Polytechnic Institute and State University -- 9/86 - 5/88. Master of Science in Mathematics -- Differential Equations, Real Analysis. GPA 3.4/4.0.

Computer Experience:

FORTRAN, PASCAL, SAS. Experience using SAS for statistical programming. Experience with PC, VAX/VMS, and UNIX.

President
Marie Argana (301) 763-4595

Past President
Fritz Scheuren (202) 874-0700

President-Elect
Michael L. Cohen (301) 405-6345

Secretary
Ruth Ann Killion (301) 763-7003

Treasurer
Ginny deWolf (202) 606-7374

WSS Program Chairs

**Agriculture & Natural
Resources**

Carol House (202) 720-3895
John Herbert (202) 586-4360

Economics

Linda Atkinson (202) 219-0505
Art Kennickell (202) 452-2247

Methodology

Phillip Kott (703) 235-5211
Tapan Nayak (202) 994-6355

**Physical Sciences and
Engineering**

Refik Soyer (202) 994-6445
Tom Mazzuchi (202) 994-7528

Quality Assurance

Ken Riccini (301) 763-5734
Sid Schwartz (202) 268-3490

**Social & Demographic
Statistics**

Mike Horrigan (202) 606-5907
Michael Greene (202) 885-3123

Statistical Computing

Dan Carr (703) 993-1671
Franklin Winters (301) 763-8571

Short Courses

Glen White (202) 874-1114

Public Health and

Biostatistics

Barry Graubard (301) 496-8547
Dean Follmann (301) 496-5905

Data Collection Methods

Jared Jobe (301) 436-7111
Clyde Tucker (202) 606-7382

Employment

Bill Arends (202) 720-6812

WSS NEWS Editors

Wendy Alvey (202) 874-0455
Bettye Jamerson (202) 874-0453

Membership

Antoinette Martin (202) 254-5409
Renee Miller (202) 254-5507
Michael P. Cohen (202) 219-1917

Quantitative Literacy

Ron Fecso (202) 334-2295

Local Arrangements

Carolyn Shettle (202) 634-4664



P.O. Box 752
Suitland, MD 20752

NON-PROFIT ORG.
U.S. POSTAGE
PAID
FALLS CHURCH, VA.
PERMIT NO. 186