



MARCH 1985

WASHINGTON
STATISTICAL
SOCIETY

NEWSLETTER

CALENDAR

- 1. March 6 & 8 Wed. & Fri. WSS/ASA Shortcourse: Expert Systems in Statistics
- 2. March 7 & 8 Thurs. & Fri. Workshops on Federally Funded Surveys
- 3. March 7 Thursday A Review of the Census Bureau's Population Estimates Program
- 4. March 12 Tuesday Aspects of Interchangeability
- 5. March 20 Wednesday Telephone Data Collection
- 6. March 21 Thursday Parallel Coordinate Representation of Multivariate Data
- 7. March 27 Wednesday Event History Methods for Longitudinal Data in the Social Sciences

RANDOM BITS: By Terry Ireland, WSS President: The emphasis this year is on Continuing Education and in addition to the regular monthly programs in March, WSS is sponsoring two Continuing Education courses: Workshop on Federally Funded Surveys, and the WSS/ASA jointly sponsored shortcourse on Expert Systems in Statistics. The first course, which has been given by Don King for the past two years, has proven to be immensely popular and valuable to both statisticians and nonstatisticians alike. We encourage you to circulate the enclosed announcement to individuals responsible for data collection in your organization/agency. The second course is sponsored by WSS and ASA and will be taught by William Gale of Bell Labs and myself. Members of WSS should have received a registration form through the mail from ASA for this course. If you have not, and wish to receive information, call me at 588-4420. In April, Harry Foxwell will be teaching a shortcourse on Statistical Packages for Microcomputers. This will also be handled by a mailing from ASA.

Also, in the spirit of Continuing Education, this month we are featuring a description of the statistics programs at the American University, George Washington University and the University of the District of Columbia. In the April Newsletter, we'll present information on the statistics programs at the University of Maryland and Georgetown University. We also invite submissions from other statistics departments in the Washington metropolitan area. I would also like to draw your attention to several other activities. The first is the Annual Open Board Meeting on Friday, March 22, 1985. Dr. Richard Savage will speak on ASA development plans and relationships with other chapters. Another activity is that WSS wants to provide information on our activities to members of ASA who are visiting in the area. If you know of a visitor to our area that might be interested in receiving the WSS Newsletter, contact Edith McArthur at 301/763-5158. Finally, we would like to start publishing some membership news in the letter. If you have changed jobs or received an honor or award, submit a notice to our Newsletter Editor. Details on all these activities can be found in the Announcement section of the Newsletter.

WASHINGTON STATISTICAL SOCIETY PROGRAM CHAIRS

Agri. & Nat. Res.

Fred Vogel 447-3638
Gary Liberson 363-7140

Phys. Sci. & Eng.

Seymour Selig 334-3522
Nozer Singpurwalla 676-7515

Short Courses

Wendy Alvey 376-0216

Economics

Wray Smith 484-9220
Bette Mahoney 695-9053

Pub. Health & Biostat

James Dambrosia 496-5763
Jai Choi 436-7047

Methodology

Cathryn Dippo 523-1874

Social & Dem.

Lee-Ann Hayek 357-1587
Charles Mann 466-6161

Stat. Computing

Harry Foxwell 872-8058
Ron Steele 475-3483

Newsletter

Julia Oliver 252-1121

Employment

Evelyn Kay 222-2520

ABSTRACTS

TOPIC: WSS/ASA Shortcourse: Expert Systems in Statistics
SPEAKERS: William Gale, Bell Labs and Terry Ireland, WSS
DATE AND TIME: Wednesday, March 6 and Friday, March 8, 1985; 9:30AM-5:00PM
LOCATION: Martin Luther King Memorial Library Auditorium, 901 G Street, N.W.
REGISTRATION: Registration by special mailing from ASA. Fee is \$90.00 for members and \$110 for non-members. For additional information contact Terry Ireland at 588-4420.

TOPIC: Workshop on Federally Funded Surveys (See Enclosed Announcement)
SPEAKER: Donald King, King Research, Inc.
DATE AND TIME: Thursday and Friday, March 7 and 8, 1985; 1:00PM-4:30PM
LOCATION: IRS Auditorium, 7th Floor, 1111 Constitution Avenue, N.W., Washington, D.C.

TOPIC: A Review of the Census Bureau's Population Estimates Program
SPEAKER: Donald Starsinic, Census
CHAIR: Andrew White, NCHS
DISCUSSANT: Harry Rosenberg, NCHS
DATE AND TIME: Thursday, March 7, 1985; 1:30PM-3:30PM
LOCATION: Center Building, Room 1-23, 3700 East West Highway, Hyattsville, Maryland
ABSTRACT: The Bureau of the Census has an ongoing population estimates program covering the United States, States, Counties, Metropolitan Areas, and 36,000 Subcounty Political Units. This presentation focuses on the program, its evaluation, and the various methods used in developing the estimates.

TOPIC: Aspects of Interchangeability
SPEAKER: Nathan Mantel, American University
CHAIR: Bill Korin, American University
DATE AND TIME: Tuesday, March 12, 1985; 3:30PM-5:00PM
LOCATION: American University, Ward Bldg., Rm. 319, Massachusetts & Nebraska Ave., NW
ABSTRACT: Tests for interchangeability of a bivariate distribution (i.e., of whether the distribution is a symmetrical function of its arguments) will be discussed. In addition to interchangeability, other related characteristics of marginal homogeneity, equality of marginal means under transforms, and compound symmetry under which the location parameters and scale parameters are equal, will be considered. The proposed tests are substantially non-parametric and certain ones flow from considering data as arranged in a two-way contingency table.

TOPIC: All Day Conference: Telephone Data Collection
SPEAKERS: Representatives from various Federal Agencies and Survey Research Groups
CHAIR: Maria Gonzales, OMB and Charles Pautler, Census
DATE AND TIME: Wednesday, March 20, 1985; 9:00AM-4:30PM
LOCATION: IRS Auditorium, 7th Floor, 1111 Constitution Avenue, N.W.
ABSTRACT: (See the separate announcement enclosed)

TOPIC: Parallel Coordinate Representation of Multivariate Data
SPEAKER: Edward Wegman, Office of Naval Research
CHAIR: Nozer Singpurwalla, GWU
DATE AND TIME: Thursday, March 21, 1985; 12:30Pm-2:00pm
LOCATION: Room 410, Marvin Center, GWU, 800-21st Street, N.W., Washington, D.C.
ABSTRACT: The geometric properties of high dimensional Euclidean spaces have unexpected properties. Some simple geometric concepts will be reviewed. A new representation for multivariate data will be discussed. This representation has some interesting duality properties with the usual orthogonal coordinate system representations. The statistical interpretation will be given. Finally, we will discuss hyperdimensional manifold estimation.

PROGRAM ABSTRACTS (Continued)

TOPIC: Event History Methods for Longitudinal Data in the Social Sciences
SPEAKER: Andrew Kolstad, NCES
CHAIR: Virginia de Wolf, GAO
DISCUSSANT: David Myers, Data Resources, Inc.
DATE AND TIME: Wednesday, March 27, 1985; 12:30PM-2:00PM
LOCATION: Martin Luther King Memorial Library, Room 221, 901 G Street, N.W.
ABSTRACT: Event history methods are appropriate for analyzing processes that develop over time, using longitudinal data. Social scientists are interested in examining differences in the ways processes develop over time as a function of various factors that vary among individuals. The speaker will introduce the basic ideas of this class of model (rates of occurrences, censoring of observed spells, estimation using time at risk, and the incorporation of a multiple regression approach), and describe the nature of event history data.

ANNOUNCEMENTS

Annual Open Board Meeting

Under provisions of the Constitution of the Washington Statistical Society, at least one meeting of the Board of Directors each year must be advertised as an "open" meeting, with participation invited from the membership-at-large. This year's open meeting will be held Friday, March 22, 1985, in the American Statistical Association Conference Room, Room 623, at 806-15th Street, N.W. The meeting is expected to last until approximately 2:00 P.M. A special feature of this year's meeting will be remarks by Dr. I. Richard Savage on ASA development plans and relationships with chapters. Contact Rich Allen at 447-3896 for more details.

Forum on Career Management

Washington Women Economists are sponsoring a Forum on Career Management on Saturday, March 9, 1985. All interested professionals are welcome. The forum will feature speakers and workshops on career decision-making, strategies for career follow-through, and finding the hidden job markets. For information call Margaret Jess, after 6:00 P.M. at 543-8756.

Have You Changed Jobs Or Received An Honor Or An Award?

WSS wants to publish a monthly feature on Membership News. WSS members are invited to submit these notices to Julia Oliver, P.O. Box 23502, Washington, D.C. 20026. Each submission should include a daytime telephone number for verification purposes. Deadline for inserting notices is five (5) weeks before the month of publication.

Census Bureau Holds First Annual Research Conference

The Bureau of the Census will hold its First Annual Research Conference from March 20th through March 23rd, 1985 at the Sheraton International Conference Center and Hotel in Reston, Virginia. Session topics include automation, survey design and estimation, statistical computing, evaluation of data quality, confidentiality issues in Federal statistics, improving National population projections methodology, total survey design approach for telephone surveys, valuation of noncash benefits, the underground economy, non-response adjustment procedures in sample surveys, statistical standards, and quality issues and experiences. The conference also includes a Shirley Kallek Memorial Lecture delivered by Alan Greenspan, former Chairman of the Council of Economic Advisers, and presentations by Sidney L. Jones, Under Secretary for Economic Affairs, Department of Commerce, and Janet Norwood, Commissioner, Bureau of Labor Statistics. The cost of the conference is \$75. For additional information and/or reservations, contact the Conference Coordinator, Carolee Bush, Center for Survey Methods Research, Bureau of the Census, Washington, D.C. telephone 301/763-7976.

ANNOUNCEMENTS (Continued)

WSS Information for Visiting ASA Members

Short-term job assignments in the field of statistics often bring visiting statisticians, economists and social-scientists to the Washington, D.C. metropolitan area. WSS would like to invite these visitors to participate in the activities of our chapter. Contact Edith McArthur at 301/763-5158 if you are aware of visitors to our area that might like to participate in WSS activities and receive the monthly newsletter.

More Statistical Uses of Administrative Records

Selected papers presented at the 1984 ASA meeting in Philadelphia have been compiled into a recent publication by the Internal Revenue Service, entitled Statistics of Income and Related Administrative Record Research: 1984. The papers, most of which are from invited and contributed sessions sponsored by the Survey Research Methods Section, focus primarily on ongoing studies involving administrative record research being conducted by the Internal Revenue Service's Statistics of Income Division, the Bureau of the Census, and Statistics Canada.

Copies of the publications may be obtained by writing to: Wendy Alvey, Statistics of Income Division (D:R:S), Internal Revenue Service, 1111 Constitution Avenue, N.W., Washington, D.C. 20224.

Workshop on Exact Matching Methodologies

The Washington Statistical Society (WSS) and the Federal Committee on Statistical Methodology are sponsoring a Workshop on Exact Matching Methodologies, to be held at the Rosslyn Westpark Hotel, Arlington, Virginia on May 9-10, 1985.

The two-day conference features both invited and contributed papers by government and non-government analysts doing methodological research in the area of matching. The value and utility of such work from a user perspective will also be presented. The orientation of the papers will be the use of matching for statistical purposes; however, the techniques and methodologies described will be applicable to other purposes as well.

Scheduled sessions will include: (1) an overview of the early developments in matching theory and methodology and prospects for the future; (2) discussion of current theory and practice; (3) descriptions of selected applications; and (4) demonstrations of some available computer software. The program will also include a special session with hands-on access to selected software packages. A limited number of contributed papers are still being accepted.

A registration fee of \$75 for WSS members and \$100 for non-members will be charged. A volume based on this Workshop will be published in the Fall. Persons interested in obtaining more information and especially those interested in submitting contributed papers may write to: Beth Kilss, Statistics of Income Division, D:R:S, Internal Revenue Service, 1111 Constitution Avenue, N.W., Washington, D.C. 20224, Telephone: 202/376-0216.

Summary of the January WSS Board Meeting

The Board of Directors started initial planning for the WSS Annual Dinner at the January 29th Board Meeting. Some possible dinner locations and speakers were discussed. The dinner will most likely be held between June 4-6, or June 11-13. In other actions, the Board decided to co-sponsor a two-day workshop on Exact Matching Techniques to be held May 9 and 10. Revisions of the WSS By Laws were further discussed, but no final action was taken.

STATISTICAL PROGRAMS AT LOCAL UNIVERSITIES

Statistics At The American University

The American University offers the B.S., M.A., and Ph.D. degrees in statistics through its Department of Mathematics, Statistics, and Computer Science. In addition, non-degree registration is possible for those who wish to enroll in only selected courses and not follow a formal degree program. The Department also offers separate degree programs in mathematics, applied mathematics, and computer science. However, maintaining all mathematical sciences programs in one unit allows the Department special opportunities for unusually flexible and specialized training in the mathematical sciences. In particular, the combination of education in statistics and computer science in a unified environment at both the undergraduate and graduate levels has become extremely attractive and rewarding for many students.

The Bachelor of Science Degree may be completed by means of an Applied Statistics option, allowing strong emphasis in a discipline outside of statistics, or a Mathematical Statistics option, which offers strong preparation for continued graduate work in statistics as well as an introduction to statistical applications. A combined B.S./M.A. program for especially qualified students allows completion of both degrees in less than the usual time frame.

The M.A. in Statistics also offers the options of Applied Statistics and Mathematical Statistics options. The former allows emphasis on statistical applications and the latter emphasizes statistical theory. The degree requires thirty semester hours of course work (ten courses), including a thesis or supervised independent study project. The Applied Statistics option allows the opportunity to include work in areas of statistical application. In particular, inclusion of study in computer science and statistical computing is becoming a common occurrence, and the Department is considering formulation of an expanded and more formal program for students wishing to follow a course of study in this area.

Admission to the Ph.D program in Statistics is selective and candidates must have demonstrated the capacity to work independently, as well as have acquired the formal mathematical and statistical background to successfully complete this degree. Prospective candidates should discuss their plans in person with a member of the faculty before application, to assure that particular interests can be accommodated and that the formal requirements of comprehensive examinations, tools of research, and dissertation are understood.

All degree programs can be completed on either a full time or part time basis, with requirements and standards being identical for all students. All courses required for completion of any degree are offered in the evening allowing students who are employed full time access to all departmental programs. As a member of the Washington Consortium of Universities, degree students are allowed to take courses at other affiliated institutions as a part of their degree requirements. For further information interested persons should contact the Department directly. Telephone: 202/885-3120.

The George Washington University
The Department of Statistics/Computer and Information Systems

The Department currently offers Bachelor's, Master's and Ph.D. level degree programs. Courses ranging from fundamental theory to specialized areas of application are available at both the undergraduate and graduate levels. Many Washington area professionals also take specific courses on a non-degree basis to acquire new skills and enhance job performance.

Undergraduate Programs

Bachelor's degrees are offered in Statistics; Statistics with an Option in Computer Science; and Computer and Information Systems. For specific information regarding undergraduate course offerings or degree programs, you may refer to the current GWU Bulletin or contact the following faculty members: Statistics, and Statistics with CS Option, Peter Thall, 676-6358; Computer and Information Systems, Ray Thomas, 676-6667, Phil Wirtz, 676-6369 or 331-8706 and Hosam Mahmoud, 676-6549.

Master's Level

Degree programs are offered in Applied Statistics; Biostatistics; Sampling and Survey Research; Computer Science; and Mathematical Statistics. Each is a 30-36 semester hour program. Some of the course offerings at the Master's level are: Mathematical Statistics, 201, 202; Data Analysis, 210, Fall; ANOVA and Experimental Design, 217, 218; Biostatistics, 225, 226; Research Strategies: Biostatistical Basis and Analysis, 227; Expert Systems, 204; and, Fundamental Algorithms, 203, Spring 1986.

Doctor of Philosophy

The Department offers a 36-48 semester hour program of advanced coursework and a dissertation. The broad range of faculty interests enables the student to choose a program of study and a dissertation research topic from among numerous areas of modern statistical theory and practice. For information regarding graduate programs or course offerings, you may contact the following faculty members: H. Lilliefors, 676-6664; Joe Gastwirth, 676-6548; Bob Smythe, 676-6888, and Hosam Mahmoud, Computer Science, 676-6917.

Computer Facilities

The Department maintains its own computer laboratory, consisting of eight on-line terminals and a printer, plus an independent network of IBM PCs and PC-XTs with printer and color plotter. The University Computer Center has an IBM 4381 and two IBM 4341 mainframes, with VM/SP, OS/VSI, CMS, and a full range of compiler and software enhancements.

Biostatistics Center

Created in 1972, the Biostatistics Center is a medical research facility that provides statistical design, analysis, and consultation for numerous projects. The Center has coordinated many clinical trials and case control studies, including the National Cooperative Gallstone study and the current NIH Diabetes Control and Complications Trial. Several faculty members hold joint appointments with the Department and the Center, and many research projects involving both faculty and graduate students arise directly from activities at the Center.

The Department feels strongly that statistical and computing theory and methodology motivated by the practical problems of the medical, industrial, legal, Federal regulatory and defense sectors will receive an increasingly greater emphasis during the next two decades. A major consequence of this will be an increased demand for statistical and computational methods in the areas of survival analysis, risk assessment, quality control, acceptance sampling, experimental design, evolutionary operation, response surface methods, simulation, expert systems, algorithms, stochastic process control, time series analysis, reliability, and life testing.

The George Washington University
The Department of Statistics/Computer and Information Systems
(Continued)

Accordingly, Departmental course offerings are continuously developed and updated, and the Department also offers seminars in specialized areas of interest.

Several faculty members are actively engaged in research and consulting with numerous corporations and branches of the Federal government. In addition to those taught by our full time faculty, several courses in the Department are taught by experts in their fields, working at the U.S. Census Bureau, Department of Energy, National Institutes of Health, National Security Agency, Naval Research Laboratory, and Department of Defense. The relationship between the Department and Washington's Federal and private sector professional community has always been a close one, and we plan for this to continue in the future. For further information contact: Arthur D. Kirsch, Chairman, 676-6356.

The University of the District of Columbia
Washington, D.C.

Department of Mathematics
Statistics Program

Existing Program

Currently, the Department of Mathematics at the University of the District of Columbia in Washington, D.C. offers the following courses: Elementary Statistics and Probability, 6 hours; Probability and Statistics, 6 hours; Mathematical Statistics, 6 hours; and Statistics and Probability for Teachers Program, (6 hours; for Mathematics Majors, Engineering Majors, and Master of Science for Teachers Program).

The University of D.C. has at present, an IBM 4341 and a DEC 2060 Time Sharing System. The Mathematics Department has been utilizing the existing facilities for teaching purposes on a small scale. It is suggested by the Statistics Committee that the Department should move forward to update the existing Statistics Laboratory so that it fulfills a long felt need in the Department for teaching statistics through a fuller utilization of the UDC's current computing capabilities. It is also proposed that the existing courses should be modified because of the availability of computerized instruction. In addition to the modification of the existing courses, it has been suggested to the Department by the Committee, to offer more courses on Statistics, such as: courses on Regression Analysis and Analysis of Variance; Statistical Research and Practice; and a course on Statistics for Actuarial Science.

The primary objective of the proposed program is to prepare students toward graduate study, to have better options for their degree program, to enable students to handle and analyze and to make statements about the problems that they may come across in their disciplines, and to reduce the need for on-the-job training by their future employers. The proposed statistics program is designed in such a way that this will give students an opportunity to earn Bachelor of Arts or Bachelor of Science degrees with a major in Mathematics, with an option in Statistics; or a BA or BS degree with a major in Statistics. The proposed courses for the program are: Elementary Statistics, 6 hours; Regression Analysis and Analysis of Variance, 6 hours; Probability and Statistics, 6 hours; Courses on Computer Programming, FORTRAN and BASIC; and to use the Statistical Packages SPSS, SCSS, SAS, BMDP and Senior Seminars, 9 hours; in addition to the required mathematics courses. It is suggested that the Mathematics Department must make progress toward implementing such a program. A significant improvement in the quality of the Statistics Program at the University of the District of Columbia will of course, greatly enhance the institution's growing potentials as the area's primary University, geared to solving the staggering problems confronting local Blacks, Hispanics and other minority groups. In particular, the above Statistics Program will increase the capacity of the Mathematics Department of the UDC to cope adequately with the consultation and advice sought frequently by other departments of the University, as well as by outside groups.

ANNOUNCEMENTS (Continued)

Meeting Rooms Needed

It has become increasingly difficult to identify meeting rooms for WSS program sessions which can be scheduled far enough ahead of time to inform our members of meetings, and which do not have extensive building security requirements. If you know of rooms which might be available to WSS, contact Virginia de Wolf, telephone 275-4419. Normally WSS program sessions require either rooms which can accommodate twenty to forty people, or eighty to one-hundred and twenty people.

EMPLOYMENT COLUMN

Deadline for inserting notice is five (5) weeks before the month of publication.

Send notices and requests to:
Evelyn R. Kay
520-22nd Street, N.W.
Washington, D.C. 20037 202/331-1153

JOB OPENINGS

Analytical Statistician Statistician with demonstrated experience and skills in compiling and analyzing statistical data needed for consulting firm. Hands-on experience with statistical packages for large mainframe and microcomputers desirable. Applications are largely in the health field, but can encompass many others. The individual sought should be able to communicate effectively orally and in writing and have the maturity and expertise to assume increasing levels of project responsibility in assignments from government and industry. Contact Dr. Jack Moshman, Moshman Associates, 6400 Goldsboro Road, Bethesda, Maryland 20817.

Statistician/GS-1530-11 Applicant must have knowledge of the principles and theories of statistical methods related to biology and/or health sciences, Ph.D. or Ph.D. Candidates. Forward resume to Charles Ris, Office of Research and Development RD-689, U.S. Environmental Protection Agency, 401 M Street, S.W. Washington, DC 20460

A management consulting firm has several openings in its Statistical Studies Division. These positions require the ability to work independently on a variety of environmental statistical problems. To qualify, you should have an M.S. with at least two years experience, or a Ph.D. in statistics or a related discipline. Experience in experimental design, data analysis and statistical computing is required, combined with strong problem-solving, writing, and oral communication skills. We offer a competitive compensation package and excellent opportunities for professional growth. To respond, forward your resume and salary requirements in confidence to: The Washington Consulting Group, 1625 Eye Street, N.W., Suite 214, Washington, D.C. 20006, Attention: David Cox.



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