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Washington Statistical Society

CHAPTER • AMERICAN STATISTICAL ASSOCIATION

NEWSLETTER - NOVEMBER 1977

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PUBLIC HEALTH AND BIOSTATISTICS

Topic: Utilization of Work History Data in Occupational Health Studies

Speaker: Robert Spirtas, Division of Surveillance, Hazard Evaluations, and Field Studies; National Institute for Occupational Safety and Health; Cincinnati, Ohio

Chair: Samuel Greenhouse, Department of Statistics, GWU

Discussant: Harry Rosenberg, Division of Vital Statistics, National Center for Health Statistics

Workers in many industries are exposed to a complex mixture of chemical and physical agents which may vary in intensity with time. Because of the tendency of workers to move from job to job, the task of estimating exposure is made even more difficult. A procedure is discussed for coding raw data from individual work histories and manipulating it into a form suitable for statistical analysis. The Experience Transformation Algorithm is described, and examples of its use are given.

When and Where: Friday, November 4, 1977, 12:30-2:00 p.m., IRS Auditorium, 7th Floor, IRS Building. (Please use entrance at 1111 Constitution Avenue, and bring a copy of this newsletter to show the building guard.)

SPECIAL EVENT

Event: The Third Regional Probability-Statistics Day

Time: November 5 (Saturday), 1977

Location: University of Maryland, College Park
Room Y3205, Mathematics Building

Parking: Please use Parking Lot 11 or Parking Lot RR

The Third Regional Probability-Statistics Day is part of a series of informal meetings in the Chesapeake Bay-Delaware Bay region initiated by the colleagues in the Johns Hopkins University, University of Delaware, and University of Maryland. The purpose of these one day gatherings is to foster academic and personal interaction among probabilists and statisticians and people interested in the subjects. Graduate students are especially encouraged to participate. The program consists of informal talks and discussions to be held in a morning (10-12 a.m.) session and an afternoon (2-4 p.m.) session followed by a wine and cheese party. A contribution of two dollars is requested from each attendant to share the expense.

Anyone interested in giving a presentation (20 minutes duration): Please mail the title and abstract to Grace Yang, Statistics Group, Department of Mathematics, University of Maryland, College Park, MD 20740 (Tel. 454-4884). For further information, please write or phone.

METHODOLOGY

Topic: Are Survey Data Any Good?

Speaker: Barbara A. Bailar, Bureau of the Census

Chair: Monroe G. Sirken, National Center for Health Statistics

Discussants: Joseph W. Duncan, Office of Federal Statistical Policy and Standards
Benjamin J. Tepping, Westat, Inc.

In 1976, the ASA's Subsection on Survey Research Methods conducted a pilot study to develop survey methods to evaluate general survey practices and the quality of survey data. Thirty-six surveys, of which 26 were Federally sponsored, were studied intensively. Interviews were conducted with survey sponsors and survey takers to provide information of survey objectives, sample design, data-gathering activities, coding procedures, estimation and tabulation, and report writing. An algorithm was developed to determine whether a survey met its objectives.

The ASA has now submitted a proposal to the National Science Foundation to extend this evaluation study to a nationwide probability sample of surveys. Dr. Bailar will discuss the methodology developed in the pilot study and the proposal for the nationwide survey. Suggestions for improvement are welcome.

When and Where: Tuesday, November 8, 1977, 12:30-2:00 p.m., Martin Luther King Library, 9th and G Streets, NW, Room A-5 (Auditorium).

SOCIAL AND DEMOGRAPHIC

Topic: Minorities in Statistics: A Panel Discussion

Panelists: Peter An, American Telephone and Telegraph
Leo Estrada, University of California, Los Angeles
Adam Herbert, Joint Center for Political Studies
Robert Hill, National Urban League
Grace Yang, University of Maryland

Chair: Maria Elena Gonzalez, Office of Federal Statistical Policy and Standards

A panel discussion will be held on minority participation within the field of statistics. The panelists will present their experiences and opinions on the subject, including training and employment opportunities. Following the panel discussion, attendees will be encouraged to participate and express special concerns of minority statisticians. The panel discussion, with audience participation, will be held from 12:30 p.m. to 2:00 p.m. At 2:00 p.m., coffee will be served and an informal discussion will continue with all interested attendees.

When and Where: Thursday, November 10, 1977, 12:30-2:30 p.m., Martin Luther King Library, 9th and G Streets, NW, Room A-5 (Auditorium).

Note: Coffee will be served at 2:00 p.m.

PHYSICAL SCIENCES AND ENGINEERING

Topic: Estimating the Parameters of Multivariate Exponential Distributions

Speaker: Professor Pasquale Sullo, School of Management, Rensselaer Polytechnic Institute, Troy, New York

Chair: Professor Nozer D. Singpurwalla, GWU

Parameter estimation for the multivariate exponential distribution (MVE) of Marshall and Olkin will be discussed. The approach to estimation is basically the maximum likelihood procedure. However, since the likelihood equations are not solvable explicitly, an iterative procedure must be used. The first iterate in this procedure has the same intuitive interpretation as does the MLE and is itself a viable alternative extimator, which is shown to be highly efficient in the bivariate case.

The basic estimation procedure for the Marshall/Olkin MVE is extended to multivariate exponential models arising from variations of the fatal shock model which characterized the Marshall/Olkin MVE. This fatal shock model and its variations are suggestive of many potential applications and thus will be duly emphasized.

When and Where: Tuesday, November 29, 1977, 12:30-2:00 p.m., IRS Auditorium, 7th floor, IRS Building. (Please use entrance at 1111 Constitution Avenue, and bring a copy of this newsletter to show the building guard.)

PUBLIC HEALTH AND BIOSTATISTICS

Topic: Some Reflections and Speculations on Modeling in Schistosomiasis

Speaker: Warren M. Hirsch, Professor, Program in Mathematics-Biology-Medicine, Courant Institute of Mathematical Statistics, New York University, New York, New York

Chair: R. Clifton Bailey, Naval Medical Research Institute

Introduction: Douglas J. DePriest, Office of Naval Research

Schistosomiasis (also known as bilharzia or bilharziasis) is one of the great endemic diseases of the tropical and subtropical regions. In 1965 it was estimated by the World Health Organization to affect 180-200 million persons throughout the world. Moreover, unlike most other infections, schistosomiasis is on the increase particularly in the developing countries, where man-made changes in the environment are creating ideal breeding sites for various species of aquatic snails that serve as intermediate hosts for the parasite responsible for the infection. Since this parasite has a complex life-cycle, many different opportunities for the disturbance of this cycle present themselves. A central problem, therefore, is to develop methods that make it possible to compare the relative efficacies of various proposed strategies for control or eradication. Professor Hirsch has contributed to the development of a mathematical methodology for studying the course of the infection as a function of the various biological and environmental factors that determine prevalence, intensity, and incidence.

When and Where: Friday, December 2, 1977, 3:00-4:30 p.m., Naval Medical Research Institute Auditorium, Building 17, National Naval Medical Center, Bethesda. Parking is available on level 4 or 4A of the Outpatient Parking Garage. For information on parking and location call 295-0136.

E M P L O Y M E N T C O L U M N

Notes to job applicants and to employers with job openings:

1. Deadline for inserting notices is the 12th of the month preceding the publication month

2. Reruns of notices may be made on a space-available basis

3. Send all notices and requests to the Employment Committee Chairman

Evelyn R. Kay
National Center for Education Statistics
400 Maryland Avenue, SW
Washington, DC 20202 202/245-8340

JOB OPENING

Applied Statistician Experience in household survey organization and supervision. Background in sample design, statistical analysis and the application of data processing. Position will periodically require work away from home. Salary $18,000. Call 301/770-3414.

JOB APPLICANT

Listed below is a brief description of the qualifications of an applicant seeking employment. Employers interested in interviewing this applicant should notify Mrs. Kay of their interest by CODE NUMBER. The request should be by mail and should include the 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 confidential.

CODE NUMBER: 11-3-77

Education:	B.A. (Economics and Statistics), M.S. (Applied Statistics)
Fields of competence:	Quality assurance evaluation and reporting, statistical quality control, maintainability, reliability, industrial engineering, technical evaluation, operational testing, providing statistical advice.
Experience:	2 years senior mathematical statistician 1 year systems analyst 13 years senior statistician 1 year senior reliability engineer 8 years senior quality control engineer
Salary level:	GS-14 Government in Washington Metro area.