

# **WSS NEWS**

**June 1994** 

## Presentation in Honor of Mahalanobis' Birth Centenary

Prasanta Chandra Mahalanobis' birth centenary is being celebrated this year. In honor of this occasion, we are very pleased to announce that on Tuesday, June 14th, at 3:00 p.m., Professor C.R. Rao of Penn State University will be discussing the many contributions of this great statistician. Following this talk, to be held at The George Washington University Medical School, there will be a small reception. The George Washington University Medical School is located at Ross Hall, 2300 Eye Street NW, Washington, DC (Just south of the Foggy Bottom Metro stop). Everyone is welcome to help commemorate this occasion.

Prasanta Chandra Mahalanobis viewed statistics in a wider context as a tool for enhancing the results of individual, societal and institutional efforts. He laid emphasis on fact finding through sample surveys and making information available to private and public organizations for decision making. On the theoretical side his contributions include Mahalanobis distance, two and four sector economic planning models and fractile graphical analysis. He held the view like his contemporary R.A. Fisher, that teaching of statistics should be done only by those who have practical applications of statistics. (For more details on Mahalanobis' life, see the Vol. 22, No. 6, 1993 issue of The IMS Bulletin, on pp. 593-597.)

WSS Seminars (All events are open to any interested persons)							
June 8	Wed.	A Multiple Imputation Approach to Microsimulation (Third in a series on modeling health policy)					
9	Thurs.	Linear Modeling for Imputation in Establishment Surveys					
15	Wed.	BLS Surveys of Employer-Provided Training					
16	Thurs.	Reminiscences of the WSS Methodology Section					
17	Fri.	Customer Satisfaction and Service Quality A Practitioner's Perspective					
21	Tues.	Improving Statistical Presentations					
22	Wed.	An Introduction to Internet for Statisticians					
29	Wed.	Converting Tables to Plots					

# **Announcements**

# Seminar on Defense Data Postponed

The seminar on Defense Data originally scheduled for Wednesday, June 22, 1994, will be postponed until fall. The guest speaker, David Signori, has been promoted to Deputy Director of the Defense Information Systems Agency (DISA). In his new position, he will be out of town visiting other offices of DISA on June 22. WSS and ASA Committee on National and International Security will reschedule his appearance in early Fall 1994.

#### Social Committee Volunteers Needed

The WSS Board of Directors needs interested people to work on the Social Arrangements Committee. This committee plans events such as the Annual Dinner and the Holiday Party. Please call Kim Long at (301) 299-5904 for more information.

# Visualizing Data: The New Frontier of Data Analysis

The Joint University of Maryland-University of Michigan Program in Survey Methodology (JPSM) will sponsor a short course on June 28-29, 1994, entitled "Visualizing Data: The New Frontier of Data Analysis" presented by Dr. William S. Cleveland at the Hyatt Regency Washington Hotel at 400 New Jersey Avenue, NW. Prerequisites are familiarity with basic statistics and the least-squares method of fitting equations to data. Registration is \$325 for nonstudents and \$175 for fulltime Participants will receive a copy of students. "Visualizing Data" (Hobart Press, 1993), and a notebook containing copies of course transparencies and text. Registration deadline is June 10, 1994, but early registration is encouraged as JPSM short courses tend to fill up quickly. To request a registration form, call 1-800-937-9320 or E-Mail to JPSM@UM.CC.UM.CC.UMICH.EDU.

### Joint Program in Survey Methodology

The University of Maryland - University of Michigan Joint Program in Survey Methodology (JPSM) announces the following courses:

■Data Collection Methods in Survey Research, June 1-July 20, M,W 7:00-9:30 p.m.

■Applied Sampling, June 2-July 21, T, TH 7:00-9:30 p.m.

■Cognition, Communication and Survey Measurement, June 1-June 24, M,T,W,TH,F5:00-7:00 p.m.

■Nonresponse in Surveys, June 27-July 22, M,T,W,TH,F5:00-7:00 p.m.

Call the JPSM office at (301) 314-7911 for more information.

#### **BLS Research and Evaluation Series**

The Bureau of Labor Statistics (BLS) announces the following seminar: on Friday, June 24, 1994 at 10:00 a.m., James Brown from Rice University will speak about "Multi-party Bargaining in the Newspaper Industry". These seminars will be held in the BLS Behavioral Science Lab, 2990 Postal Square Building, 2 Massachusetts Avenue NE (across from Union Station). Please direct any questions to Patricia O'Neal at (202) 606-7391.

#### American University: Fall 1994 Schedule

The Department of Mathematics and Statistics at The American University will offer the following graduate courses in the Fall 1994 Semester: Probability, Theory of Sampling I, Statistical Regression. Statistical Software, Methods. Data Analysis, Nonparametric Statistics. Mathematical Statistics I, Advanced Mathematical Statistics, Statistical Inference: Estimation. All courses are offered in the evening. Call (202) 885-3120 for further information.

## **Program Abstracts**

Topic:

A Multiple Imputation Approach to Microsimulation

(Third in a series on modeling health policy)

Speakers:

B. K. Atrostic, L. Bilheimer, and M. Ross,

Congressional Budget Office

Chair:

Arthur Kennickell, Federal Reserve

Date/Time:

Wednesday, June 8, 1994; 12:30 PM - 2:00 PM

Location:

BLS Cognitive Lab, Postal Square Building, Room 2990, 2 Massachusetts Avenue NE, Washington, DC (Red Line -- Union Station). Enter at Massachusetts Avenue and North Capitol Street. Federal government employees show ID; nongovernment employees call Ed

Riddick at (202) 606-7376 to add name to visitors' list.

Sponsor:

**Economics Section** 

Abstract:

The Congressional Budget Office (CBO) is developing a microsimulation model of health care service use and financing to provide a baseline description of current services receipt and financing against which the likely distributional consequences of reform proposals may be compared. In constructing this model, CBO makes multiple imputations to the 1989 Current Population Survey: health insurance premiums and plan characteristics, use of health care services, and health care expenditures from the 1987 National Medical Expenditure Survey; health insurance premiums from the 1991 Health Insurance Association of America survey; and Federal taxes from CBO's tax microsimulation model.

Topic:

Linear Modeling for Imputation in Establishment Surveys

Speaker:

James R. Knaub, Jr., Department of Energy

Discussants:

Nancy J. Kirkendall, Department of Energy Michael L. Cohen, Department of Energy Fritz Scheuren, Internal Revenue Service

Chair:

Linda Atkinson, Economic Research Service, USDA

Day/Time:

Thursday, June 9, 1994; 12:30 PM - 2:00 PM

Location:

1301 New York Ave., NW, Washington, DC (13th & New York Avenue), Waugh Auditorium, in basement (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:

Although it may often be desirable to combine model and design based estimation (Brewer, Kott, Särndal, etc. - even Cochran), it is sometimes better to use an exclusively model-based approach, focusing on the "largest" respondents, when response populations are highly skewed. The smallest respondents may often have large reporting errors, or simply nonrespond anyway. Some discussion will be made of the regression weights that might best be used when dealing in effect with some degree of model failure, particularly with regard to imputation in a census survey. Only one regressor is considered here, and when that regressor is the variable of interest for a previously completed census, then a linear, zerointercept model usually performs well. It is conjectured that subtle influences, perhaps from other independent variables not modeled or perhaps due to an unfortunate choice in the mathematical formulation of the regression weights, and/or other considerations, may cause there to be differences in results for different methodologies used to estimate a regression weight parameter. Although one such methodology is shown to be superior, in a sense, to another, a comparison of the two results may be useful in itself. Tentative conclusions from current work are drawn. The detection of "model failure" and its impact upon the estimation of totals will be the focus of this discussion.

Topic:

BLS Surveys of Employer-Provided Training

Speakers:

Michael Horrigan, Bureau of Labor Statistics Mary Joyce, Bureau of Labor Statistics Polly Phipps, Bureau of Labor Statistics Kate Donohue, Bureau of Labor Statistics Sharon Schierberg, Bureau of Labor Statistics

Chair:

Michael Horrigan, Bureau of Labor Statistics

Date/Time:

Wednesday, June 15, 1994, 12:30 PM - 2:00 PM

Location:

BLS Cognitive Lab, Postal Square Building, Room 2990, 2 Massachusetts Avenue NE, Washington, DC (Red Line -- Union Station). Enter at Massachusetts Avenue and North Capitol Street. Federal government employees show ID; nongovernment employees call Ed Riddick at (202) 606-7376 to add name to visitors' list.

Sponsor:

Social and Demographic Section

Abstract:

This session will provide an overview of the work that is being done in the Bureau of Labor Statistics to measure the nature and extent of both formal and on the job training. Specifically the panelists will discuss the 1993 Survey of Employer Provided Training (SEPT) that is designed to capture data on the existence of various types of formal training programs. Second, research that is being conducted on a second survey to measure the costs of both formal and informal training will be presented. Finally, a demonstration of the computer system will be presented. The goal of the SEPT computing system has been a comprehensive system that integrates mixed modes of data collection including mail, fax, and Computer Assisted Telephone Interviews (CATI). SEPT systems developers have built on the knowledge from four generations of CATI systems and have incorporated relatively new concepts of computer-human interface. The interactive SEPT system is windows-based and designed for a diverse user community.

Topic:

Reminiscences of the WSS Methodology Section

Speakers:

Sam Greenhouse, Professor Emeritus, George Washington University

Joe Waksberg, Westat, Inc.

Barbara A. Bailar, American Statistical Association

Fritz Scheuren, Internal Revenue Service

Phil Kott, National Agricultural Statistics Service

Chair:

Rich Allen, National Agricultural Statistics Service

Date/Time:

Thursday, June 16, 1994, 12:30-2:00 p.m.

Location:

BLS Training Center, Postal Square Building, Suite G-440, Room 2, 2 Massachusetts Avenue, NE, Washington, DC (Red Line -- Union Station). Enter at First Street. Federal government employees show ID; nongovernment employees call Ed Riddick at (202) 606-7376 to add name to visitors' list.

Sponsor:

Methodology Section

Abstract:

The WSS Methodology Section is now "thirtysomething." Its founding in the 1962-63 program year marked the beginning of a new era for WSS. For the first time, part of the burden of program planning was removed from the Board of Directors. In short order, other technical sessions of the Society were planned by specific program committees but no other section of WSS has ever been organized.

In this session, Sam Greenhouse will comment on the discussions leading to the formation of the new section and his actions as the first Chair person. Joe Waksberg will represent the early Methodology Section presenters in discussing how methodology issues have changed (or not changed) over time. The other planned speakers were Methodology Committee program chairs at various times throughout its history and have been asked to comment on their observations and remembrances. Time will be left for comments from the audience.

Topic:

Customer Satisfaction and Service Quality -- A Practitioner's Perspective

Speaker:

Timothy D. Ellard, Opinion Research Corporation

Chair:

Amrut Champaneri, U.S. Postal Service

Date/Time:

Friday, June 17, 1994, 12:30-2:00 p.m.

Location:

BLS Cognitive Lab, Postal Square Building, Room 2990, 2 Massachusetts Avenue, NE, Washington, DC (Red Line -- Union Station). Enter at Massachusetts Avenue and North Capitol Street. Federal government employees show ID; nongovernment employees call Ed Riddick at (202) 606-7376 to add name to visitors' list.

Sponsor:

Methodology Section

Abstract:

The discussion will include: what we measure, what we should measure, how we use our results, how to get bogged down, and an approach to analysis. Statistical questions that are of special interest in customer satisfaction/service quality will also be discussed.

## \* \* \* Note from the WSS NEWS Editors \* \* \*

Items for publication in the September 1994 WSS NEWS should be submitted no later than July 26, 1994. FAX items to:

Hattie Ramseur or Theresa Hallquist FAX: (202) 586-0018

Topic:

Improving Statistical Presentations

Speakers:

Wendy Alvey and Beth Kilss, Internal Revenue Service

Nancy Kirkendall, Department of Energy Nancy Spruill, Department of Defense

Chair:

Nancy Kirkendall, Department of Energy

Date/Time:

Tuesday, June 21, 1994, 12:30 - 2:00 PM

Location:

BLS Cognitive Lab, Postal Square Building, Room 2990, 2 Massachusetts Avenue, NE, Washington, DC (Red Line -- Union Station). Enter at Massachusetts Avenue and North Capitol Street. Federal government employees show ID; nongovernment employees call Ed

Riddick at (202) 606-7376 to add name to visitors' list.

Sponsor:

Washington Statistical Society

Abstract:

This is a workshop on improving statistical presentations, particularly aimed at people who will be presenting papers at the Joint Statistical Meetings (JSM) in Toronto this August. The instructors are experienced presenters who will share general lessons and specific hints about making more effective presentations. Topics include selecting and organizing material, effective communication with the audience, visual aids, and handouts. A video on presentation techniques will be interspersed with the presentations and handout material will be made available. Participants will also have a little time to ask specific questions about their presentations and to share their experiences and views.

Anyone planning on giving a presentation at the JSM -- especially first-time presenters -- should consider attending. Experienced speakers are also welcome.

Topic:

An Introduction To Internet For Statisticians

Speaker:

Chapman Gleason, U.S. Environmental Protection Agency

Chair:

Daniel B. Carr, George Mason University

Date/Time:

Wednesday, June 22, 1994, 12:30-2:00 PM

Location:

BLS Cognitive Lab, Postal Building, Room 2990, 2 Massachusetts Avenue NE, Washington, DC (Red line -- Union Station). Enter at Massachusetts Avenue and North Capitol Street. Federal government employees show ID. Nongovernment employees call Ed Riddick at (202) 606-7376 to add name to the visitors' list.

Sponsor:

Statistical Computing Section

Abstract:

It is the goal of the Clinton Administration to move the US out of the Industrial Revolution and fully into the Information age. Like the rail roads and the Interstate Highway system did for the Industrial Revolution the National Information Initiative will do for the Information age. In this paper I will define the Internet, describe the National Information Initiative and the Government Information Locator System (GILS), and describe and give examples of the following Internet tools:

- 1) Listserv(ers),
- 2) FTP and Anonymous FTP,
- 3) Archie,
- 4) Veronica,
- 5) WAIS,

- 6) Gopher,
- 7) World Wide Web (WWW),
- 8) Mosaic.
- 9) Internet resources for statisticians

Topic:

Converting Tables To Plots

Speaker:

Daniel B. Carr, George Mason University

Chair:

Alan Dorfman, Bureau of Labor Statistics

Date/Time:

Wednesday, June 29, 1994, 12:30-2:00 PM

Location:

BLS Cognitive Lab, Postal Building, Room 2990, 2 Massachusetts Avenue NE, Washington, DC (Red line -- Union Station). Enter at Massachusetts Avenue and North Capitol Street. Federal government employees show ID. Nongovernment employees call Ed Riddick at (202)

606-7376 to add name to the visitors' list

Sponsor:

Statistical Computing Section

Abstract:

Government documents report many statistical summaries as tables. While some readers are comfortable with tables, the majority prefer plots. In fact many people skip over tables in search of graphics. This preference suggests that government agencies should convert more tables to plots. However, the conversion process is complicated by the absence of graphical paradigms for handling tables of moderate complexity and by the corresponding lack of software. This talk presents row-labeled plots that can accommodate up to five way tables on a single page, depending on the number of levels for the factors. Examples illustrate new ideas in representing distributional summaries and improvements in dot plot graphics as well as the conversion of tables obtained from EPA, NASS and BLS documents. An Splus function for producing row-labeled plots is available via anonymous ftp along with script files and data for each of the examples.

# Employment Column

As a service to local statisticians, WSS News provides notification of employment opportunities and description 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 or call: Bill Arends, USDA-NASS, Room 4133 South Building, Washington, DC 20250-2000, (202) 720-6812.

#### Job Applicant

Listed below is a brief description of the qualifications of an applicant seeking employment. Employers interested in interviewing an applicant should write or call: Bill Arends, USDA-NASS, Room 4133 South Building, Washington, DC 20250-2000; (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 # 94-09

Looking for position in statistics/biostatistics. Open to both research/consulting and teaching positions. Ten years experience at academic position and more than two years experience as research/consulting statistician.

Ph.D. in statistics. Strong and broad background in statistics. Excellent analytical and applied skills. Thorough grasp of statistical modeling in various data settings. Extensive experience in data modeling and analysis (clinical trials, epidemiological and environmental studies). Able to conduct study design and methodological evaluation and development. Able to teach a full spectrum of statistics courses for Master's program and a series of courses for Ph.D. program.

Excellent computer skills (both mainframe and PC environment). SAS proficiency and familiarity with other statistical packages.

# **Obituaries**

#### William Costello

William E. Costello, 71, an economist, died of pneumonia February 16, 1994 at Fairfax Hospital. After moving to the Washington area 40 years ago, he was a labor policy researcher for a congressional committee. He was an analyst with the Central Intelligence Agency. He retired in 1983 after 16 years with the Federal Reserve Board. He was a member of the American Statistical Association.

#### Joel Williams

Joel Williams, 78, died of sepsis February 14, 1994 at Suburban Hospital. He moved to the Washington area in 1940 and joined the Census Bureau as a survey statistician. In 1956, he joined the U.S. Office of Education, where he helped establish the National Center for Educational Statistics. He was a member of the American Statistical Association.

#### Lenore Bixby

Lenore Bixby, 79, retired director of the division of retirement and survivors studies at the Social Security Administration, died of heart ailments April 5, 1994 at Doctors Community Hospital in Lanham. She moved to the Washington area in 1937 to work at the Bureau of Labor Statistics. After World War II, she was an operations officer with the Marshall Plan for the postwar economic recovery of Europe, initially in Washington and later in Paris. She worked at the Social Security Administration from 1954 until she retired in 1977. She was a fellow of the American Statistical Association.

# 1994 Science Fair Winners

WSS presented awards to 41 Washington area students at five regional science fairs this spring. Since 1986, WSS has been making these awards to students whose projects demonstrated excellence in the investigation or application of statistical methods to a particular scientific problem. This vear, first award winners received a book--Statistics: A Guide to the Unknown, by Tanur, et. al., or The Fascination of Statistics, by Brook, et. al. Others received certificates of honorable mention.

The judging was coordinated by Lee Abramson. Thanks to all of those who volunteered as judges. They are: Eugene Burns, Jo Burns, Allison Clark. Bob Clickner, Paul Cook, Brenda Edwards, Susan Ellenberg, Linda Hardy, Ellen Hertz, Gene Heyman, John Irvine, Tzu-Cheg Kao, Jim Knaub, Lara Maiste, Paul Maiste, Michael Moll, Dan Ramey, Lou Rizzo, John Rogers, Sid Schwartz, Stuart Scott, Heather Smith, Michael Stoto, Brian Taylor, Leslie Wallace, Dan Weinburg, and Glenn White.

Awardees and their schools and project titles are as follows:

#### Arlington - Falls Alexandria Church

#### First Awards:

Kristina Toth, 8th grade, St. Thomas More Elementary School, "Which Sex Takes the Best Care of Their Body, Part II"

Laura Hartman, 10th grade, Washington-Lee High School, "Effect of Astringent on Skin Bacteria"

#### Honorable Mentions:

Ruby Afram, 10th grade, Washington-Lee High School, "The Human Balancing Act: The Effect of Flexibility on Balance"

Stephen Bender, 10th grade, H-B Woodlawn Secondary Program, "What are the Effects of Centrifugal Force (Simulating Acceleration Stress) on Yeast Cells?"

Emma Brown, 10th grade, Washington-Lee High School, "What is the Effect of Playing Surface and Crowd Size on the Home Field Advantage in the National Football League?"

Tu-Anh Bui, 10th grade, Washington-Lee High School, "The Effect of Various Amounts of UV Radiation on the Reversion of E. Coli Negative Lactose Stain"

Brian Crandall, 8th grade, H-B Woodlawn Secondary Program, "Random Probabilities"

Hua Dai, 11th grade, Washington-Lee High School, "The Concentration of Caffeine in Different Brands of Tea"

Jeffrey Hadden, 10th grade, Yorktown High School, "A Statistical Analysis of When Baseball Games are Decided: Sometimes It Is Over Before It's Over"

Matthew Munsey, 10th grade, Wakefield High School, "Chaos: Various Amounts?"

#### District of Columbia

#### First Awards:

Shauna Fields, 8th grade, Hardy Middle School, "Probabilities Melt in Your Mouth, Not in Your

Andrew Leaver-Fay, 9th grade, Gonzaga High School, "Buffing Pi"

#### Honorable Mentions:

David Messman and Damon Metz, 11th grade, Wilson High School, "Probability" Nicholas Williams, 7th grade, Sidwell Friends

School, "Is Cooperation or Exploitation the Best Strategy for Prisoner's Dilemma?"

# 1994 Science Fair Winners

#### **Fairfax**

#### First Awards:

Katharine Slimak, 10th grade, West Springfield High School, "Using Avoidance Response as a Method of Evaluating the Effects of Pesticides on Earthworm Populations"

Patrick Montemerio, 9th grade, Lake Braddock High School, "Earthquake Measurement: Horizontal and Vertical Tremors"

#### Honorable Mentions:

Teal Anderson, 10th grade, West Springfield High School, "A Multiple Regression Analysis of the Effect of Weather on High School Attendance" Della Vilsoreanu, 9th grade, Jefferson High School, "The Effect of Acid Rain on the Growth of Plants"

Kelley Wolfe, 9th grade, Herndon High School, "Does an Oil and Water Mixture Diffuse Though Soils Differently?"

Stacie Trollinger, 10th grade, Edison High School, "Mutagenic Effects of Prometon, a Triazine Herbicide, Using the Ames Assay"

Jean Jancaltis, 12th grade, Chantilly High School, "Running Speed as a Function of Style"

Matthew Levy, 12th grade, Langley High School and Megan Wheeler, 12th grade, McLean High School, "The Affect of Narrow Spectrum Actinic Light on Mangrove Jellyfish"

# Montgomery County

#### First Awards:

Mike Greene, 7th grade, Takoma Park Middle School, "A Statistical Comparison of Product Freshness"

Alex MacArthur, 9th grade, Walt Whitman High School, "Effect of Age on Tactile Discrimination"

#### Honorable Mentions:

Catherine Davenport, Walt Whitman High School, "An Investigation of Gauss' Theory of Competitive Exclusion"

Yves Chretien, 7th grade, Holy Cross High School, "Test Paper Color Effects Your Math Score"

Siddarth Sudhir, 9th grade, Walt Whitman High School, "Effect of Secondary Smoking on House Plants"

Vishal Kapur, 9th grade, Montgomery Blair High School, "An Investigation Into Microcomputer Performance"

Peter Sanderron-Kilchenstein, 9th grade, Thomas Wooten High School, "Effect of Ultraviolet Radiation on the Growth of Plants"

Caitlin Freeh, 9th grade, Thomas Wooten High School, "The Effect of Retinoic Acid On Leaves"

## Prince George's

#### First Awards:

Dan Fontaine, 9th grade, Eleanor Roosevelt High School, "Watching the Moon"

Scott Chase, 12th grade, LaPlata High School, "How Random is a Random Number Generator?"

#### Honorable Mentions:

Anne Connolly, 12th grade, Oxon Hill High School, "Genetic Linkage in Soybeans"

Jennifer Park, 12th grade, Eleanor Roosevelt High School, "Measurement of Total Atmospheric Ozone"

Kristen Rhode, 11th grade, LaPlata High School, "Population Growth: Chaotic"

Bianca Conti, 12th grade, Eleanor Roosevelt High School, "A Study of Interspecies Behavior"

Sherry Ashby, 12th grade, Eleanor Roosevelt High School, "Shrink Fit Systems"

Sean Phelan, 10th grade, Thomas Stone High School, "Photosensitivity of Turbatrix Aceti"

Raman Henderson, 12th grade, Eleanor Roosevelt High School, "The Effects of Vitamin C on Platelets" President Michael L. Cohen

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**Data Collection Methods** 

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