



The Southern California STATISTICIAN

❖ Meeting Memo and Newsletter ❖

vol. 21 no. 3 SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION March 1984

MARCH MEETING ANNOUNCEMENT

Los Angeles Area Meeting

- Who:** Dr. John W. Mamer, Assistant Professor
School of Business, U.C. Berkeley
- Topic:** A Model of Discounted and Per Unit Costs
of Product Warranty
- When:** Thursday, March 15, 1984
6:00 - Social Hour
7:00 - Dinner
8:00 - Speaker
- Price:** \$12.50 - Regular Members
\$10.00 - Full-time Students
Halibut Entree!
- Where:** The Lobster House
4211 Admiralty Way
Marina del Rey
(213) 823-5339

From the San Diego Fwy (#405): Take the Marina del Rey Fwy (#90) West to its end. Continue to the 3rd traffic light (Mindanao Way), where you turn left. Proceed to Admiralty Way, where you turn right. The Lobster House is at the corner of Admiralty Way and Palawan Way.

Dinner Reservations: Please place your dinner reservations by Tuesday, March 13 at one of the following numbers:

Orange County Area:

Bob Newcomb (714) 856-5366
856-6807

Los Angeles Area:

Marge Lebsock (213) 475-5700
(BMDP Stat Software)

The Speaker

Dr. John W. Mamer is an Assistant Professor in the Graduate School of Business at U.C. Berkeley. His primary research interests are in mathematical models of warranty and service contracts; inventory policies for spare parts systems; applications of graph and network techniques to optimization; applications of stochastic processes.

The Topic

Product warranties are pervasive in the marketplace. The offering of a product warranty is an undertaking fraught with uncertainty. The purpose of this work is to develop a realistic, yet analytically tractable, model for predicting warranty costs. This model can be used to compare the costs of various warranty programs and to analyze the trade off between product reliability and warranty costs.

Upcoming Chapter Events

Los Angeles Area

April 5: This is a special Chapter meeting to be held at U.C. Irvine. The speaker will be R.L. Anderson who is the Immediate Past President of the American Statistical Association. His topic will be "Statistics and the Environment." A future newsletter will contain more details concerning his visit.

April 19: Our regular April meeting will be held at U.C. Riverside.

April 27: The Third Annual Workshop on Applied Statistics will be held at UCLA. Further information attached.

May 24: Regular May meeting.

June 28: Regular June meeting: the final meeting of 1983-84.

San Diego Area Meeting Dates

April 6, May 4:

Solicitation

Now is the time to volunteer or identify members who would be willing to serve as an elected officer of our Chapter — The Chapter officers are:

President
President Elect
Vice-President: Academic Affairs
Vice-President: Professional Affairs
Secretary
Treasurer
Chairman: San Diego Area
Vice Chairman: San Diego Area
Representative: National Council of Chapters

Please forward any suggestions to: Mary Ann Hill, Chapter Secretary, BMDP Statistical Software, 1964 Westwood Blvd. Suite 202, Los Angeles, CA 90025.

Position Announcements

Biotechnology company needs Senior Statistician with Ph.D. in statistics and 1 or more years experience with clinical trials. Location is Northern California. Salary 35K and up depending on experience. Call Charles Kalb at Search West. (213) 986-6300.

Two Positions: Open for biostatisticians on the Comprehensive Epilepsy Program(CEP) at UCLA

Contact: Dr. Noel Wheeler, Department of Biomathematics, AV-167 Center for the Health Sciences, University of California, Los Angeles, CA 90024, (213) 825-3296

Director of Biostatistics Core Laboratory

Provide statistical expertise, leadership, and guidance in clinical studies on antiepileptic drugs and in research on genetics, epidemiology and basic mechanisms of epilepsy. Qualifications include Ph.D. in biostatistics, applied statistics or biomathematics and three years of professional statistical experience.

Statistician

Provide statistical consultation in planning and analyzing CEP research studies. Work directly and independently with researchers with general direction and guidance provided by more senior staff as required. Qualifications include a master's degree in Statistics, Biostatistics or a related field and at least one year of experience in an applied research setting. Require good verbal and written communication skills. Prefer PDP-11 (UNIX) experience.

SOUTHERN CALIFORNIA CHAPTER

American Statistical Association

Program in Social Ecology
University of California
Irvine, California 92717
Steve Colomé



The Southern California STATISTICIAN

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SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION

Volume 21, No. 4

March-April, 1984

RICHARD L. ANDERSON VISITS THE SOUTHERN CALIFORNIA CHAPTER

ORANGE COUNTY AREA CHAPTER MEETING

WHO: Richard L. Anderson
Immediate Past President
American Statistical Association

TOPIC: Statistics and the Environment

WHEN: Thursday, April 5, 1984
6:00 p.m. - Social Hour
7:00 p.m. - Dinner
8:00 p.m. - Speaker

WHERE: The University Club
University of California
Irvine

Directions: The UCI University Club is located on the south side of the UCI campus near the Computer Science building. Parking is available in Lots 1B and 1BA. The University Club telephone number is 714-856-6400.

PRICE: Dinner will cost \$11.00 (\$8.00 for full-time students). There is no charge for the after-dinner program.

RESERVATIONS: Please place your dinner reservations by TUESDAY, APRIL 3 at one of the following numbers:

Orange County Area:
Bob Newcomb [714] 856-5366
[714] 856-6806

Los Angeles Area:
Marge Lebsock [213] 475-5700
(BMDP Statistical Software)

The Topic

Since 1969 the Federal government has brought forth numerous pieces of legislation designed to improve the environment by reducing the amount of pollutants introduced into our water and air. Statisticians have been active in advising about the formulation of such legislation and in assessing the legislation's effects. Our speaker describes, from first-hand experience, some of the roles that statisticians have played in this process and some of the problems they have worked to solve (eg. Love Canal, Dioxin, Acid Rain, etc.). This talk will be based upon a sequence of three Forum articles which appeared in the April, September-October, and November 1983 issues of the AMSTAT NEWS.

The Speaker

Professor Richard L. Anderson is currently Assistant, for Statistical Services, to the Dean of the College of Agriculture at the University of Kentucky where he has been a member of the faculty since 1967. Professor Anderson was the President of the American Statistical Association for 1983. He is a fellow of the American Statistical Association, the Institute of Mathematical Statistics, and the American Association for the Advancement of Science. His research interests include experimental designs and estimating procedures for variance components, effect of misclassification in the analysis of frequency data, time series analysis, selection of predictors and the use of prior information in regression analysis. He is widely published with more than 40 articles, more than 10 contributed chapters, and is a co-author of the well known book Statistical Theory in Research.

TWO MORE PRESENTATIONS BY R.L. ANDERSON

UCI-Friday, 6 April: At 2:00 p.m. Professor Anderson will present a lecture at the UCI University Club. His topic will be Statistics in the Early Years where he will discuss his recollections concerning statisticians with whom he has worked during the 43 years that span his career. While at Iowa State, Princeton, North Carolina State, and Kentucky he worked closely with the most famous statisticians of that period. In this informal talk Anderson presents personal profile of his colleagues.

UCLA-Monday, 9 April: At 4:00 p.m. Professor Anderson will repeat his lecture on Statistics and the Environment at the UCLA Center for Health Sciences, in Room CHS 43-105. For further information about this program, contact Marge Lebsock, BMDP Statistical Software, 213-475-5700.

Upcoming Chapter Events

- April 6: San Diego Area Chapter Meeting—Speaker: Don Guthrie, Biostatistics, UCLA.
- April 19: Riverside Area Chapter Meeting.
- April 27: The Third Annual Workshop on Applied Statistics will be held at UCLA. Further information on the back of this page.
- May 4: San Diego Area Chapter Meeting.
- May 24: Los Angeles Area Chapter Meeting

THIRD ANNUAL WORKSHOP IN APPLIED STATISTICS

The 1984 Workshop in Applied Statistics, Statistical Computing with Microcomputers: Prospects and Problems, will be held at UCLA on Friday, April 27. Designed for applied statisticians, teachers, students and other professionals who are planning to purchase statistical software for their personal computers, the Workshop will present criteria comparing software packages performance characteristics and features. The keynote speaker, Peter A. Lachenbruch, will raise the issue of the need to consider the statistical accuracy of such software, from his article, Statistical Programs for Microcomputers (BYTE Magazine, November 1983). Our second speaker, Jay B. Siegel, the author of an extensive comparative assessment of 25 microcomputer software packages for statisticians, economists, and planners, will present an array of criteria for comparing among such packages. The lunch hour will afford participants the opportunity to discuss particular packages with vendors and experienced users. Following lunch, various statistical software packages will be demonstrated and participants will be given the opportunity to "try them out".

The registration fee for this Workshop is \$45.00, which includes the cost of lunch (for the first 110 registrants). Registration forms were sent with the last Newsletter. Further information can be obtained from the Workshop registrar:

Dr. Noel Wheeler
Department of Biomathematics
AV-617, CHS
University of California
Los Angeles, CA 90024
213-825-3296

COMPUTER GRAPHICS '84

The National Computer Graphics Association's 5th annual Conference and Exposition will be held in the Anaheim Convention Center, Anaheim, California, May 13-17, 1984. Of particular interest to statisticians is the special program track at COMPUTER GRAPHICS '84 devoted entirely to statistical computer graphics. For more information regarding this conference and exposition, contact Bob Newcomb at 714-856-5366.

SOUTHERN CALIFORNIA CHAPTER

American Statistical Association

Program in Social Ecology
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26TH INTERNATIONAL MEETING
INSTITUTE OF MANAGEMENT SCIENCES
Copenhagen, Denmark
June 17-21, 1984

People planning to attend this meeting can contact Beverly Blischke for information regarding travel arrangements to the convention, side tours, and other services. Beverly is representing Pearson Travel, the official agency for the conference. She can be reached at:

5401 Katherine Avenue
Van Nuys, California 91401
[818] 994-4732

Position Announcements

Part-time Faculty Position: Experienced instructor needed to teach a required undergraduate course in business statistics during the fall semester, 1984. Salary commensurate with experience. Contact: Wally Blischke, USC School of Business, Decision Systems Department, Los Angeles, CA 90089-1421. (213) 743-2446.

Two Positions in Biostatistics at UCLA:
Director of Biostatistics Core Laboratory: Directs clinical studies on antiepileptic drugs and in research on genetics, epidemiology, and basic mechanisms of epilepsy. PhD in biostatistics, applied statistics, or biomathematics and three years of professional statistical experience required.

Statistician: To provide statistical consultation in planning and analyzing CEP research studies. Master's degree in statistics, biostatistics or a related field and at least one year of experience in an applied research setting. Good verbal and written communication skills. PDP-11 (UNIX) experience.

Contact: Dr. Noel Wheeler, Department of Biomathematics, AV-167, Center for the Health Sciences, University of California, Los Angeles, CA 90024. (213) 825-3296.

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SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION

Volume 21, No. 5

April, 1984

RIVERSIDE AREA CHAPTER MEETING

- WHO:** PROFESSOR ROD LITTLE
Department of Biomathematics
School of Medicine, UCLA
- TOPIC:** Income Imputation in the Current
Population Survey (CPS)
- WHEN:** Thursday, April 19, 1984
6:00 p.m. - Social Hour
7:00 p.m. - Dinner
8:00 p.m. - Speaker
- WHERE:** The University Club
University of California
RIVERSIDE
- Directions: The UCR University Club is located on the Riverside campus. From Riverside, take the 91 Freeway toward Indio. Exit the Freeway at University Avenue. Turn left onto University to reach the campus. Parking is available at no charge. The University Club telephone number is 714-787-5844.
- PRICE:** Dinner will cost \$11.00 (\$8.00 for full-time students). There is no charge for the after-dinner program.
- RESERVATIONS:** Please place your dinner reservations by TUESDAY, APRIL 17 at one of the following numbers:
- Riverside Area
Barbara McNitt [714] 787-3776
(Statistics Department, UCR)
- Orange County Area:
Bob Newcomb [714] 856-5366
[714] 856-6806
(Social Sciences, UCI)
- Los Angeles Area:
Marge Lebsack [213] 475-5700
(BMDP Statistical Software)

THE SPEAKER

Professor Little spent last year at the Census Bureau as an ASA Fellow. His talk is derived, in large measure, from that experience. He previously served for four years as a research statistician with the World Fertility Survey Project and for two years as a member of the faculty of the Department of Statistics at the University of Chicago. His PhD in Statistics, from Imperial College, was received in 1974.

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Dr. Noel Wheeler
Department of Biomathematics
AV-617, CHS
University of California
Los Angeles, CA 90024
213-825-3296

The Topic

The U.S. Census Bureau's method for imputing for missing income values in the Current Population Survey has been subject to considerable criticism by mathematical statisticians and economists. Our speaker will discuss some theoretical limitations of the Bureau's current imputation methodology and then present the results of an empirical comparison of that method with some model-based alternatives.

Upcoming Chapter Events

- May 4: San Diego Area Chapter Meeting
- May 24: Los Angeles Area Chapter Meeting
- June 28: Orange County Area Chapter Meeting

CALL FOR PAPERS

On October 22-24 in Boston, ASA, IASC, and SIAM will sponsor an interdisciplinary conference on the new Frontiers in Computational Statistics prompted by recent advances in numerical analysis, computational mathematics, computer sciences (including hardware and software), and statistics. Contributed papers and poster presentations are solicited. Deadline for abstracts for either contribution is June 1, 1984. To obtain more information, write to SIAM, 117 South 17th Street, Philadelphia, PA 19103 or call (215) 564-2929.

NINTH ANNUAL SUMMER INSTITUTE OF APPLIED STATISTICS

This Institute will feature Paul A. Tukey, a member of the technical staff of Bell Communications Research. He will discuss a wide variety of graphical methods for exploring data. His presentation will be based upon his recent text, Graphical Methods for Data Analysis. The Conference will be held June 25-29, 1984 at Brigham Young University. Inquiries about the conference should be addressed to:

Statistics Department
222 TMCB, BYU
Provo, UT 84602
(801) 378-4505

COMPUTER GRAPHICS '84

The National Computer Graphics Association's 5th annual Conference and Exposition will be held in the Anaheim Convention Center, Anaheim, California, May 13-17, 1984. Of particular interest to statisticians is the special program track at COMPUTER GRAPHICS '84 devoted entirely to statistical computer graphics. For more information regarding this conference and exposition, contact Robert Scheller, Volunteer Coordinator, at (714) 831-5215.

POSITIONS

California State University, Northridge, has vacancies for fall, 1984. Instructors are needed to teach undergraduate courses in Business Statistics, Quantitative Business Analysis, and Production Management. Send resumes to Gordon Johnson, Chair, Department of Management Science, School of Business, California State University, Northridge, CA 91330. No later than April 15, 1984.

POSITION

Part-time Faculty Position: Experienced instructor needed to teach a required undergraduate course in business statistics during the fall semester, 1984. Salary commensurate with experience. Contact: Wally Blischke, USC School of Business, Decision Systems Department, Los Angeles, CA 90089-1421. (213) 743-2446.

POSITIONS

Two Positions in Biostatistics at UCLA:

Director of Biostatistics Core Laboratory: Directs clinical studies on antiepileptic drugs and in research on genetics, epidemiology, and basic mechanisms of epilepsy. PhD in biostatistics, applied statistics, or biomathematics and three years of professional statistical experience required.

Statistician: To provide statistical consultation in planning and analyzing CEP research studies. Master's degree in statistics, biostatistics or a related field and at least one year of experience in an applied research setting. Good verbal and written communication skills. PDP-11 (UNIX) experience.

Contact: Dr. Noel Wheeler, Department of Biomathematics, AV-167, Center for the Health Sciences, University of California, Los Angeles, CA 90024. (213) 825-3296.

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SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION

Volume 21, No. 6

May, 1984

POMONA AREA CHAPTER MEETING

THE TOPIC

WHO: PROFESSOR DAVID ABBEY
Department of Biostatistics and Epidemiology
Loma Linda University

TOPIC: Statistical Methods for Assessing the Long-Term
Health Effects of Ambient Exposure to Air Pollutants

WHEN: Thursday, May 24, 1984
6:00 p.m. - Social Hour
7:00 p.m. - Dinner
8:00 p.m. - Speaker

WHERE: The University House
Calif. Polytechnic State University, POMONA
Directions: The University House is located on
the Cal Poly, Pomona campus. Campus exits are
marked on both the San Bernardino Freeway
(Kellogg Drive) and the 57 Freeway (Temple
exit). Once on campus, proceed to the
Administration Building which is located at the
corner of University Drive and Mansion Lane.
Take Mansion Lane to the top of the hill where
there is parking for the University House (the
old Kellogg Mansion)

PRICE: Dinner will cost \$10.00 (\$7.00 for full-time
students). There is no charge for the
after-dinner program.

RESERVATIONS: Please place your dinner reservations by
TUESDAY, MAY 22 at one of the following numbers:

Pomona Area: [714] 598-4421
Lydia Gans (Cal Poly Pomona)

Riverside Area: [714] 787-3776
Barbara McNitt (UCR)

Orange County Area: [714] 856-5366
Bob Newcomb (UCI)

Los Angeles Area: [213] 475-5700
Marge Lebsack (BMDP)

The speaker will describe a multivariate analysis of the relationship between air pollution and health. Indices have been developed which utilize the existing computerized data collected by California Air Resources Board monitoring stations to estimate cumulative exposure to air pollutants according to zip code/month residence histories for individuals in the study. The indices reflect accumulated exposure (in excess of specified thresholds) for specific pollutants. A sub-population of the Adventist Health Study consisting of 6,496 non-smokers who have lived 11 years or longer in the South Coast Air Basin or in lower pollution control areas in California, is used to illustrate how these indices can be utilized to assess the relationship of air pollution to health problems. Multivariate methods are used to isolate this primary relationship from other confounding lifestyle factors. The health outcome variable in this study is derived from subject reports of symptoms of chronic obstructive pulmonary disease as ascertained by the National Heart, Lung and Blood Institute questionnaire. Multiple logistic regression analyses of the indices revealed statistically significant relationships for years worked with a smoker, years lived with a smoker, oxidant exposure, total suspended particulate exposure, and SO₂ exposure. How these statistical techniques and indices might be used in other health effect studies will be discussed.

THE SPEAKER

Professor David Abbey received his PhD in Biostatistics from UCLA in 1972. Since that time he has been serving as Associate Director of the Survey Research Service at Loma Linda University where he is an Associate Professor in the Department of Biostatistics. He has served as principle investigator or co-investigator for many health-effect studies. The material for his talk is derived from such a study: The Incidence of Chronic Diseases in the Human Population as a Function of Long-term Cumulative Exposure to Photo-chemical Air Pollution (begun in 1977; funded by EPA and the California Air Resources Board). Past research activities include Small Area Estimation and Lattice Sampling.

UPCOMING CHAPTER MEETING:

June 28: Orange County Area.

CALL FOR PAPERS

On October 22-24 in Boston, ASA, IASC, and SIAM will sponsor an interdisciplinary conference on the new Frontiers in Computational Statistics prompted by recent advances in numerical analysis, computational mathematics, computer sciences (including hardware and software), and statistics. Contributed papers and poster presentations are solicited. Deadline for abstracts for either contribution is June 1, 1984. To obtain more information, write to SIAM, 117 South 17th Street, Philadelphia, PA 19103 or call (215) 564-2929.

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This Institute will feature Paul A. Tukey, a member of the technical staff of Bell Communications Research. He will discuss a wide variety of graphical methods for exploring data. His presentation will be based upon his recent text, Graphical Methods for Data Analysis. The Conference will be held June 25-29, 1984 at Brigham Young University. Inquiries about the conference should be addressed to: Statistics Department, 222 TMCB, BYU, Provo, UT 84602 (801) 378-4505

1984 NATIONAL COMPUTER CONFERENCE

The 1984 National Computer Conference will be held July 9-12 in Las Vegas. Thirteen guest tickets have been sent from National for distribution to Chapter members. The first six chapter members who call Bob Newcomb (at [714] 856-5366) can obtain two free NCC Guest Tickets (a \$35.00 value). The offer remains in effect until the supply runs out.

POSITION

Statistician/Programmer: M.S. in Statistics plus 1-3 years experience using computer tools (for statistical analysis) in the semiconductor industry. Will play a key role in the development of Analysis Sub-System. Will gather user requirements, program, implement and support all Analysis routines. Heavy user involvement/training duties.

Contact: Janet L. Williams, PhD., Signetics Corp., 811 E. Arques Avenue, P.O. Box 3409, Sunnyvale, CA 94088-3409. [408] 746-1535.

AAAS MEETING: JULY, 1985

If you are a member of AAAS and would like to help plan a symposium for the 1985 meeting of AAAS to be held in Los Angeles, then please contact Bob Newcomb, [714] 856-5366, as soon as possible.

Program in Social Ecology
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1984 CANDIDATES FOR NATIONAL OFFICE

Four Southern Californians have been nominated for national office in ASA Sections and Subsections. The officers of the Southern California Chapter encourage you to vote for these candidates. They are:

BUSINESS AND ECONOMICS SECTION:

Publications Chair: Clive W.J. Granger, UCSD

SOCIAL STATISTICS SECTION:

Publications Liaison Officer: William T Bielby, UCSB

SUBSECTION ON TEACHING STATISTICS IN THE HEALTH SCIENCES:

Chair-Elect: Girma Wolde-Tsadik, Drew Medical School

Secretary: Roberta E. Madison, CSUN.

POSITION

Senior Statistician: Under supervision of Director, Statistical Biomathematical Consulting Clinic, provide statistical consultation to medical researchers and other investigators. Design and develop protocols. Choose appropriate statistical methods. Prepare summary reports and documentation. PhD in statistics or biostatistics required. Salary commensurate with experience.

Contact: Dr. Noel Wheeler, Department of Biomathematics, AV-617, Center for Health Sciences, University of California, Los Angeles, CA 90024. [213] 825-3296

POSITION

Senior Statistician: Experience in statistical consulting, especially in the environmental field, is preferred. In addition to statistical expertise, candidates should possess the verbal and written communication skills needed to direct projects and present results to clients. FORTRAN and some familiarity with MINITAB, BMDP, and/or other statistical packages is preferred. M.A. or M.S. degree in statistics or a related area. Individual possessing a PhD are also encouraged to apply.

Contact: Mary Ann Rutowski, Systems Applications, Inc. 101 Lucas Valley Road, San Rafael, CA 94903. [415] 472-4011.

SOUTHERN CALIFORNIA CHAPTER

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vol. 21 no. 7 SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION June 1984

JUNE MEETING ANNOUNCEMENT

Los Angeles Area Meeting

Who: Professor Bengt Muthen
Graduate School of Education, UCLA

Topic: Structural Equation Modeling with Non-Normal Data

When: Thursday, June 28, 1984
6:00 - Social Hour
7:00 - Dinner
8:00 - Speaker

Price: \$10.00 - Regular Members
\$8.00 - Full-time Students

Where: The Terrace Room, located in the Dining Commons at the University of California, Irvine.

Directions: The UCI Commons is located next to the Main Library and near the Administration Building. Parking lots 1, 2, 3, and 4 are close to the commons. If you arrive before 5 pm visitors must park in a metered parking stall or pick up a parking permit from dispensers on Bridge Road.

Dinner Reservations: Please place your dinner reservations by Tuesday, June 26 at one of the following numbers:

Orange County Area:

Bob Newcomb (714) 856-5366
856-6807

Los Angeles Area:

Marge Lebsock (213) 475-5700
(BMDP Stat Software)

THE TOPIC

Structural equation (causal) modeling with multiple indicators of latent variables has proven extremely useful for social and behavioral science data. In this type of modeling we will also include exploratory and confirmatory factor analysis and covariance/correlation structure analysis, such as multi-trait multi-method analysis and random effects analysis of variance. However, to a large extent, the latent variable methodology available to date is only suitable for the case of continuous (interval scale) observed variables, most often with the further requirement of multivariate normality, as in the so called LISREL analysis of Joreskog. In many applications, variables are not observed in this form. Continuous variables frequently have limited variability and/or are skewed or kurtotic. Often variables are not even continuous, but have a small number of ordered categories with non-equidistant scale steps (ordinal variables; e.g., Likert scales), and often they are dichotomous (binary). In practice, such cases of non-normality are usually ignored, leading to more or less distorted results.

Recently, however, methodology has been developed to deal with categorical and non-normal continuous data. This talk gives a brief overview of what the state of the art is and describes a small simulation experiment designed to investigate the robustness to non-normality of earlier, normal theory approaches, and the behavior of the more recent alternatives.

THE SPEAKER

Dr. Bengt Muthen obtained his Ph.D. in Statistics at the University of Uppsala, Sweden, in 1977 and is currently a professor at the Graduate school of Education, UCLA. His research interests include

factor analysis and structural equation modeling involving categorical and non-normal continuous data. He is currently the Principal Investigator of an NSF sponsored project with this theme.

BUILDING DEVELOPMENT FUND

The American Statistical Association has established a Building Development Fund for a permanent headquarters in Alexandria, Virginia. An economic analysis of this project, written by President-elect John Neter, is to be published in the June issue of AMSTAT News. Chapter members should be informed of these Association plans and consider donating to the Fund.

FALL MEETING

The first meeting for fall 1984 will be September 28. Mark your calendars in advance!

ADDRESS CHANGES

Anyone moving or changing their mailing address before this fall please send notice of your new address to the editor of the Chapter Newsletter.

STATISTICAL LECTURES

The American Statistical Association has a Visiting Lecturer Program in Statistics. The program is designed for colleges or universities that do not have well established graduate programs in statistics. The two visiting lecturers from Southern California are C. B. Bell, Professor of Biostatistics and Mathematics, San Diego State University and Robert Bell, Associate Statistician, Rand Corporation. For more information on this program contact:

Bob Newcomb
(714) 856-5366

Program in Social Ecology
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Steve Colome

SOUTHERN CALIFORNIA CHAPTER

**American
Statistical
Association**

NEWCOMB, ROBERT L.
SOCIAL SCIENCES
UNIVERSITY OF CALIFORNIA
IRVINE CA 92717

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The Southern California STATISTICIAN

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SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION

Volume 22, No. 1

October, 1984

CHAPTER MEETING

THE SPEAKER

WHO: MICHAEL R. CHERNICK
The Aerospace Corporation
Los Angeles

TOPIC: Time Series Analysis of Strategic
Petroleum Reserve Brine Pipeline
Test Data

WHEN: October 25, 1984
6:00 p.m. - Social Hour
7:00 p.m. - Dinner
8:00 p.m. - Speaker

WHERE: Ramada Inn
850 East Dominguez
CARSON

Directions: off the San Diego Freeway

PRICE: Dinner will cost \$13.00 (\$10.00 for
full-time students).

RESERVATIONS: Please place your dinner reservations
by TUESDAY, OCTOBER 23 at one of the
following numbers:

Riverside Area:
Barbara McNitt [714] 787-3776
(Statistics Department, UCR)

Orange County Area:
Bob Newcomb [714] 856-5366
[714] 856-6806
(Social Sciences, UCI)

Los Angeles Area:
Marge Lebsack [213] 475-5700

Dr. Chernick received his M.S. and Ph.D. degrees from Stanford University. He is currently a Member of the Technical Staff at the Aerospace Corporation in El Segundo, California and is also a part time Lecturer in the Department of Management Science at California State University at Fullerton and at the Mathematics Department at California State University Dominguez Hills. His main interest is in applied statistics particularly applications to time series and classification problems. Dr. Chernick, who holds his advanced degrees (M.S. and Ph.D.) from Stanford University, recently received the Jacob Wolfowitz Prize for the best theoretical paper in the American Journal of Mathematical and Management Sciences in 1982.

THE FORTIETH ANNUAL CONFERENCE ON APPLIED STATISTICS (Biopharmaceutical Division)

The Annual Conference on Applied Statistics sponsored by the American Society for Quality Control and the American Statistical Association will be held December 5 thru 7, 1984 at the Holiday Inn North, Newark Airport, Newark, NJ. Topics include: The Design and Analysis of Clinical Trials, The Estimation of Potency, Sequential Clinical Trials, Statistical Analyses of Tumorigenicity Experiments, Software Quality Assurance, Statistical Analysis of DNA Sequence Data, The Elements of Graphing Data, Design and Analysis of Chronic Toxicity Studies, etc. The conference speakers include Dr. W. Edwards Denning, Professor S. Lagakos and other eminent members of the Quality Control and Biopharmaceutical Statistical fields.

Conference registration is \$125.00, speaker's banquet is \$35.00 extra. For further information write to:

Jenny Wong
Schering Corporation
1011 Morris Avenue
Union, NJ 07083
(201) 558-5594

THE TOPIC

Ability to detect leaks in the Strategic Petroleum Reserve's brine pipeline depends on ability to observe small drops in pressure, e.g., changes of the order of 013 psi (pounds per square inch). Typical pressure variation includes a random component (referred to as measurement noise) due primarily to measurement error and a systematic component (referred to as process noise) due to various internal and external disturbances such as offshore tides, temperature changes, and pump action. Much of the systematic component can be removed through time series modeling, with residuals from the model representing the random component. Effectiveness of lead-detection algorithms based on test statistics (e.g., two-minute averages of pressure readings) can be determined from known or estimated standard deviations of the process and measurement noise components. The U.S. Department of Energy (operator of the Strategic Petroleum Reserve) plans to use the results of the time series analysis, together with hydraulic models, in order to establish lead-detection procedures that will meet Environmental Protection Agency requirements. Note: Before explaining how the technique applies to the pipeline leak problem, Dr. Chernick will introduce Box Jenkins Time Series models and describe how the appropriate model components are modified.

IMPORTANT NOTICE

The enclosed page shows the information about you that is stored in our computerized chapter directory. We are sending this to solicit your help in bringing the directory up to date and, if you are in arrears, to request payment of chapter dues (\$8.00 for regular members, \$3.00 for student members, \$3.00 for retired members; payment should be made to SCASA and sent to Randy Hamlin, Treasurer, SCASA, 9752-11th Street, Garden Grove, CA 92644). If you are in arrears, this is the last Newsletter you will receive until a dues payment is received.

We sincerely want to retain every one of you as a dues-paying chapter member, so please take a moment to return the enclosed page if corrections or dues are called for. Finally, notice that the year and month in which your most recent dues payment was received appears in parentheses following your name on the Newsletter mailing label. This provides a convenient, regular reminder of when your Chapter dues are due.

SHORT COURSE ON DATA ANALYSIS
WITH BMDP PROGRAM

On November 8-9, 1984, participants will learn how to apply BMDP to real world problems and interpret statistics and supplemental displays in the output, as well as how to specify BMDP instruction. Previous experience in BMDP is not necessary.

Topics include Scatterplots, Cell-wise histograms, Analysis of variance (including contrasts, multiple-comparisons and repeated measures), Multiple linear regression with the new regression diagnostics, Data screening and missing values, Log linear models, Factor analysis and Discriminant analysis.

During workshop sessions, the procedures will be demonstrated on IBM PC.

Venue: to be announced
Course Fee: \$380 with a \$30 discount for members of SCASA
Further Information: call BMDP, (213) 475-5700

SHORT NOTES

U.S. Department of Energy Research Residencies for Graduate Students. Students in economics, operations research, statistics, energy policy, energy management, law, political science, and related fields can apply. Completed applications due by March 8, 1985. For particulars write to Argonne Division of Educational Programs, DOE Research Residencies Program, Argonne, Illinois 60439 or call (312) 972-3365.

.....Looking for job change or a new position in the statistical world. Contact (with no obligation) Robert Wilkinson Associates, Box 300, 500 Bradley Hill Road, Blauvelt, NY 10913 (914) 358-7200 and get free advice.

.....The Fortieth Annual Conference on Applied Statistics, sponsored by the American Society for Quality Control and the American Statistical Association will be held December 5 thru 7, 1984 at Holiday Inn North, Newark Airport, NJ. For details write to Jenny Wong, Schering Corporation, 1011 Morris Avenue, Union, NJ 07083 or call (201) 558-5594.

POSITION

Associate Biostatistician: Allergan Pharmaceuticals, eye and skin care division of SmithKline Beckman, has opening for one biostatistician due to an increase in staffing within our Clinical Department. We require a MS in Statistics. Challenges will be in the areas of applied statistics, experimental design and statistical software packages. For information call Ann C. Schneider, Human Resources Representative at (714) 752-4500, or write to Allergan, 2525 Dupont Drive, Irvine CA 92713.

POSITIONS

Research Assistant or Associate: A part time (50%) research assistant/associate position is available at Center for Health Sciences, UCLA. The position is open from November 1984 to June 1985 at a salary range of \$800 to \$1100 per month. The research area is Community Survey of South L.A. to determine the prevalence of epilepsy. Duties involve screen/clean data; analysis; documentation; report/manuscript writing. Preference will be given to an M.S. in Biostatistics or Epidemiology, good communication skills.

Senior Statistician: Under supervision of Director, Statistical-Biomathematical Consulting Clinic, provide statistical consultation to medical researchers and other investigators. Design and develop protocols. Choose appropriate statistical methods; perform analyses and interpret results. Prepare summary reports and documentation. Ph.D. in statistics or biostatistics required. Good verbal and written communication skills essential. Salary commensurate with experience.

Contact: Dr. Noel C. Wheeler, Dept of Biomathematics, AV-617, Center for Health Sciences, UCLA, Los Angeles, CA 90024 or call (213) 825-3296

FROM THE NEWSLETTER EDITOR

As the newly appointed newsletter editor I look forward to the challenges and opportunities of this exciting task. With your cooperation the job can become easier. Please write to me or call me if you have any information that you think will be of interest to our readers. Don't forget to give your address and telephone number.

Alladi Venkatesh
Graduate School of Management
University of California
Irvine, CA 92717
(714) 856-6625 or 856-5232

SOUTHERN CALIFORNIA CHAPTER

American Statistical Association

Alladi Venkatesh
Graduate School of Management
University of California
Irvine, CA 92717

TELLIER, JAMES []
GRADUATE SCHOOL OF MANAGEMENT
UNIVERSITY OF CALIFORNIA
IRVINE CA 92717



The Southern California STATISTICIAN

❖ Meeting Memo and Newsletter ❖

SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION

Volume 22, No. 2

November, 1984

POMONA AREA (CHAPTER MEETING)

WHO: ARTHUR DAVIDSON
South Coast Air Quality
Management District

TOPIC: Statistical Applications in
Air Quality Evaluation for
L. A. Olympics

WHEN: December 6, 1984
6:00 p.m. - Social Hour and
Refreshments
7:30 p.m. - Speaker

WHERE: The University House (The Old Kellogg
Mansion) Calif. Polytechnic State
University, POMONA

Directions: Campus exits are marked on
both the San Bernardino Freeway (Kellogg
Drive) and the 57 Freeway (Temple exit).
Once on campus, proceed to the Admin.
Bldg., which is located at the corner of
University Drive and Mansion Lane. Take
Mansion Lane to the top of the hill where
there is parking for the University
House.

PRICE: \$3.00 Members; \$2.00 Student Members
Dessert and refreshments (no dinner).

RESERVATIONS: Place reservations by TUESDAY, DECEMBER
4 by calling:

Riverside Area:
Barbara McNitt [714] 787-3776

Orange County Area:
Bob Newcomb [714] 856-5366
[714] 856-6806

Los Angeles Area:
Marge Lebsock [213] 475-5700

THE TOPIC

The speaker addresses three problems, (a) how previous temporal and spatial distribution of air quality information was used to schedule Olympic events and to recommend work out time of the athletes, (b) how the Air Quality Management District evaluated the influence of reduced traffic congestion during the Olympics on ozone and particulate concentration and (c) how multiple linear regression techniques are used to model which specific components of the particulate concentration impairs visibility.

THE SPEAKER

Mr. Davidson is a Senior Air Quality Specialist for the South Coast Air Quality Management District. In this capacity, his work has included trend analysis, monitoring network design and investigations into the relationships among emissions, meteorology and air quality. Mr. Davidson received his undergraduate and graduate training in Meteorology and Atmospheric sciences from the City University of New York.

SANTA BARBARA AREA (CHAPTER MEETING)

WHO: PROFESSOR OTIS DUDLEY DUNCAN
Department of Sociology, UCSB

TOPIC: Survey Measurement of Subjective Phenomena

WHEN: November 29, 1984
6:00 p.m. - Social Hour; 7:00 p.m. - Dinner
8:00 p.m. - Speaker

WHERE: Faculty Club, UCSB Campus, Santa Barbara

PRICE: Dinner - \$9.00 (\$7.00 for full-time students)

RESERVATIONS: Please place your reservations by
TUESDAY, NOVEMBER 27th by calling:

Santa Barbara Area:
S. Rao Jammalamadaka, UCSB
[805]961-3119, [805] 961-2171

San Luis Obispo:
James Daley, Cal Poly, [805] 546-2709

Los Angeles Area:
Marge Lebsock [213] 475-5700

THE TOPIC

Professor Duncan chaired the Panel on Survey Measurement of Subjective Phenomena at the National Research Council in 1980-81. The report, submitted to the Committee on National Statistics, considers the development and use of surveys and gives special attention to deviations from standards of practice and to misuses of surveys. A major section deals with measurement issues and another with the survey interview process. The recommendations are directed toward the improvement of public understanding of polls and surveys, upgrading of current practice of the survey art, and advancing scientific understanding of survey measurement and analysis. The talk will be devoted for the most part, to personal experiences, which include Professor Duncan's role in stimulating the practice of replication of survey questions over time, in disseminating the newer methods of survey analysis that derive from the log linear model, and in focusing attention on the problem of measurement models for survey research.

CONFERENCE ON "STATISTICAL RANKING AND SELECTION: THREE
DECADES OF DEVELOPMENT" as well as a BANQUET in the evening
of December 7, 1984 both at the Santa Barbara campus of the
University of California. The banquet will honor Robert E.
Bechhofer, Shanti S. Gupta, and Milton Sobel on the 65th,
60th(forthcoming), and 65th birthdays respectively. The
structure will be as follows.

Friday, December 7 1:00-4:00 p.m. Talks
Friday, December 7 6:30-9:00 p.m. Banquet/Speaker
Saturday, December 8 9:00-12:00 noon Talks

This will be an open conference. Papers in the area of statistical ranking and selection will be presented at the two sessions on December 7-8. A program listing titles of the talks and authors will be available in mid-November from Dr. M. Haseeb Rizvi, c/o Sysorex International Inc., 10590 North Tantau Avenue, Cupertino, CA 95014; [408]996-9363.

Each person who wishes to attend the Banquet should send the payment before November 23 (\$20 per person; checks made payable Mathematics Enrichment Fund) to:

Professor James Robertson
(RE: Ranking Conference and Banquet)
Department of Mathematics
UCSB
Santa Barbara, CA 93106

WHO: MICHAEL R. CHERNICK
The Aerospace Corporation-Los Angeles

TOPIC: Time Series Analysis of Strategic Petroleum Reserve Brine Pipeline test Data

WHEN: November 30, 1984
6:00 p.m. - Social Hour; 7:00 p.m. - Dinner
8:00 p.m. - Speaker

WHERE: University of San Diego, The Board Room

PRICE: Dinner - \$6.00

RESERVATIONS: Please place your reservations by SUNDAY, NOVEMBER 25nd by calling:
San Diego Area:
John S. Chambers (619) 260-4600, USD
Orange County Area:
Bob Newcomb, UCI, [714] 856-5366, 856-6806

THE TOPIC

Ability to detect leaks in the Strategic Petroleum Reserve's brine pipeline depends on ability to observe small drops in pressure, e.g., changes of the order of 0.3 pounds per square inch. Typical pressure variation includes a random component [referred to as measurement noise] due primarily to measurement error and a systematic component [referred to as process noise] due to various internal and external disturbances such as offshore tides, temperature changes, and pump action. Much of the systematic component can be removed through time series modeling, with residuals from the model representing the random component. Effectiveness of lead-detection algorithms based on test statistics [e.g., two-minute averages of pressure readings] can be determined from known or estimated standard deviations of the process and measurement noise components. The U.S. Department of Energy [Operator of the Strategic Petroleum Reserve] plans to use the results of the time series analysis, together with hydraulic models to establish lead-detection procedures that will meet Environmental Protection Agency requirements.

NOTE: Before explaining how the technique applies to the pipeline leak problem, Dr. Chernick will introduce Box Jenkins Time Series models and describe how the appropriate model components are identified.

THE SPEAKER

Dr. Chernick received his M.S. and Ph.D. degrees from Stanford University. He is currently a Member of the Technical Staff at the Aerospace Corporation in El Segundo. Also, he is a part time Lecturer in the Department of Management Science at CSU Fullerton and at the Mathematics Department of CSU Dominguez Hills. Dr. Chernick received the Jacob Wolfowitz Prize for the best theoretical paper in the American Journal of Mathematical and Management Sciences in 1982.

Statistical Process Control Engineer: Challenging opportunity for an engineer with a strong background in statistical process control. Duties include program design and identification of areas in which statistical process control/statistical methods can be applied. BS degree in mechanical engineering or industrial engineering preferred and five years of design, assembly, or manufacturing experience with statistical application. Please send your resume in strict confidence to: Cindy Stufkosky, Professional Placement, Divad Division, Ford Aerospace, 2801 Kelvin Avenue, Irvine, CA 92714 [714]863-3300.

Manager, Statistical Analysis: Yamaha International Corporation is a major wholesale distributor of quality musical products and sporting goods equipment. Qualified applicant must have an M.S. in statistics, quantitative business management or related areas and be familiar with computer application of statistical data. Responsibilities will include the design and development of statistical methods to present sales, marketing and inventory data in support of sales and marketing efforts. Send complete resumes to: Patty Glenn, Yamaha International Corporation, P. O. Box 6600, Buena Park, CA 90622.

Senior Statistician: Provide statistical expertise and project direction for measurement error analysis, reliability analysis and operations research analysis intensive projects. Experience in statistical consulting, particularly for engineering and physical disciplines, is preferred. Familiarity with computer languages (e.g., FORTRAN 77, APL, etc.) and statistical packages such as BMDP, SAS, etc. is desired. Ph.D. degree or equivalent in statistics or a related area. Contact: Dr. Howard Castrop, O/R and Reliability Department, Metrology Engineering Division, SAIC Comsystems, 300 S. Park Avenue, Suite 950, Pomona, CA 91766 [714]623-6711

PRESIDENT'S CORNER

Last month's Newsletter enclosed a page showing the recipient's directory data and last (known) date of payments of Chapter dues. For many members the page served as a reminder to send corrections or dues payment. I wish to thank each of you who so responded.

This month the Chapter begins a new policy: Newsletters will be mailed to those who have paid Chapter dues within the last two years. The extra year is to provide a cushion against administrative error. This should prove sufficient once members become accustomed to checking their mailing label for the Chapter's record of their most recent dues payment. The date of receipt of the most recent dues payment appears in brackets to the right of the addressee's name (e.g., SMITH, MARY E.[8403]). In the foregoing example, the Chapter received a dues payment from Mary in March of 1984. In case of any problems please feel free to contact me at: Robert L. Newcomb ([714]856-5366), c/o School of Social Sciences, University of California, Irvine, CA 92717.

This issue of our Newsletter marks the inauguration of Chapter meetings in the Santa Barbara/San Luis Obispo area. The first of these meetings is scheduled for Thursday, November 29, at UCSB. It has been organized by S. R. Jammalamadaka of UCSB and Jim Daly of Cal Poly, SLO. As a part of this first area meeting Chapter members will be asked to elect two area officers (Chair and Vice-Chair) who will be responsible for arranging two more programs during the ensuing year. I hope that all Chapter members from the Santa Barbara/San Luis Obispo area will attend this important meeting to insure its success. I welcome this new addition to our Chapter's calendar of activities and I anticipate a great future for Chapter activities in the Santa Barbara/San Luis Obispo area.

FROM THE NEWSLETTER EDITOR

Please take a minute to read the attached sheet "SCASA GRAPEVINE." Do keep us informed about your activities. If you have any suggestions for the newsletter, let me know.

Our president, Bob Newcomb has reminded you about the need to bring your membership to 'current' status. In case you are not sure, chapter dues are: Regular members, \$8.00; Retired, \$3.00; Students, \$3.00.