



The Southern California STATISTICIAN

❖ Meeting Memo and Newsletter ❖

SOUTHERN CALIFORNIA CHAPTER AMERICAN STATISTICAL ASSOCIATION

Volume 22, No. 1

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CHAPTER MEETING

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 Lebsock [213] 475-5700

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.

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, 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

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.

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