



The Southern California STATISTICIAN

❖ Meeting Memo and Newsletter ❖

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March 1982

MARCH MEETING ANNOUNCEMENT

JOINT ORSA/TIMS MEETING

WHO: Michael R. Chernick
The Aerospace Corporation
El Segundo, CA

TOPIC: Outlier Detection, Data Editing
and Influence Functions

WHEN: Thursday, March 25, 1982
6:00 P.M. - Social Hour
7:00 P.M. - Dinner
8:00 P.M. - Speaker

WHERE: USC Faculty Club
USC Campus

PRICE: \$10.00 - Regular members
\$ 8.50 - Full time students &
Retired persons

DINNER RESERVATIONS: Please place your
reservations by Tuesday,
March 23 at one of the following
numbers:
LOS ANGELES (213) 741-4370
(Bruce Hodge)
ORANGE COUNTY (714) 833-5979
(Bob Newcomb)

THE SPEAKER AND HIS TOPIC

MICHAEL CHERNICK received his Ph.D. in Statistics from Stanford in 1978. He is currently employed as a mathematical statistician with The Aerospace Corporation. An abstract of his talk follows:

In this presentation the problems of outlier detection and data editing are addressed for univariate and multivariate data sets. Hampel's influence function, which has been used in recent years for evaluating robust estimators, detecting outliers, computing asymptotic variances for estimators and for hypothesis testing, is applied in the case of bivariate correlation, the autocorrelation function of a time series, the multiple correlation coefficient, and regression parameters for the purpose of detecting outliers. These influence functions can also be used for the purpose of replacing outliers or missing observations. This approach is illustrated on the estimation for the mean and variance of a distribution.

The detection and removal or replacement of outliers is particularly important in estimation problems where least squares procedures are used. Consequently it has potential applications in state estimation for satellites, regression problems and Box Jenkins time series modelling. Applications to the validation of energy data and the detection of potential thefts of nuclear materials are also given.

TIMS Meeting Announcement

Stephen R. Childs will speak on April 15 at the TIMS meeting at the Lobster House, Marina Del Rey, 7:30 P.M. His talk will be on the specification and estimation of equations to forecast the future costs of commodities. Mr. Childs is a senior product consultant with Data Resources. The cost of dinner is \$12.50. For more information contact Rich Gunther-885-2470.