

January 1993

Joint Biostatistics and ASQC Program

TITLE

Analysis of Survival and Recurrence Data with Product Reliability Engineering and Biomedical Applications.

SPEAKER

Wayne Nelson, ASA/NSF/NIST Senior Research Fellow
Statistical Engineering Division
National Institute of Standards and Technology

Dr. Wayne Nelson privately consults on and teaches engineering applications of statistics for General Electric and other companies. He is a Fellow of the Institute for Electrical and Electronics Engineering, the American Society for Quality Control and the American Statistical Association for his contributions to Reliability and Accelerated Testing. He is the author of Accelerated Testing and of Applied Life Data Analysis.

ABSTRACT

This talk presents simple and informative graphical methods for analyzing survival and recurrence data on product and diseases. A hazard plot of censored life data is a nonparametric estimate of a life distribution. Like the Kaplan-Meier estimate, it gives the percent surviving. In addition, it depicts the failure rate, behavior and other information that is important in product reliability engineering. The hazard plot is extended to recurrence data, for example, repairs of products of recurrent disease such as bladder tumor. The extended plot is a nonparametric estimate of the mean cumulative function of recurrences. This informative function depicts the repair behavior of products and yields predictions of future numbers of repairs and other information. For example, it also provides a comparison of two treatments for a recurrent disease. The methods are illustrated with a number of examples of product reliability and disease data.

PLACE

Sophia's Restaurant
2121 S. El Camino
San Mateo

DATE

Wednesday, January 13, 1993

TIME

6:00 - 6:30 - Social
6:30 - 7:30 - Dinner
7:30 - 8:30 - Speaker

ARRANGEMENTS

Dinner is \$17 in advance and \$19 at the door. To make advance reservation, please call (408) 929-3041 by January 7, 1993. Parking is available off 21st Street at the Bayview Federal building.