Notices

LIFE TESTING AND SYSTEMS RELIABILITY AND MAINTAINABILITY

October 18–29, 1965

A two-week course in Life Testing and Systems Reliability and Maintainability will be conducted by New York University on October 18–29, 1965. The principal lecturers will be Dr. Benjamin Epstein, a leading statistical consultant associated with the theory and application of life testing and reliability; Dr. Frank Proschan, a member of the Mathematics Research Laboratory of Boeing Scientific Research Laboratories, long a researcher in the mathematical theory of reliability. Fee for the course is $300. For further information write: Office of Special Services to Business and Industry, New York University, New York, New York 10003.

Topics in Life Testing Include:
The Poisson process and probabilistic failure models
Life test sampling plans and estimation procedures when the life distribution is exponential. Truncated sequential life tests
Tests for exponentiality
Life test sampling plans and estimation procedures for non-exponential life distributions such as the Weibull and Gamma
Nonparametric life test procedures
Robustness considerations
Bayesian methods in life testing and reliability

Topics in Systems Reliability and Maintainability Include:
Failure distributions possessing a monotone hazard rate
Renewal theory and its application to the design of optimum maintenance, repair, and checking policies
Markov and semi-Markov processes and their applications to the reliability and availability of repairable systems
Spares provisioning
Redundancy optimization and related topics
An Index of Volumes 1 through 7 of TECHNOMETRICS is presently being prepared under the direction of the Editorial Board. This Index will be available in February 1966 and will be sent to all subscribers.

TWO-DAY COURSE—CHEMICAL DIVISION OF ASQC

"Multiple Regression in the Analysis of Plant Data" is the name of a two-day course sponsored by the Chemical Division of ASQC at the Conway Hotel in Appleton, Wisconsin on September 17 and 18. Some basic knowledge of statistics is desirable. The course is designed to benefit company personnel at every level. Contact Mr. Keith Damrow, Fox River Paper Company, Appleton, Wisconsin.
Letter to the Editor

The Editor,
Technometrics

Dear Sir,

In a recent paper by Halperin [1], the equation (3.1.22) has been established by using the method of induction. In what follows, I shall show, by using the notations in [1], that there exists a more direct approach for establishing this equality.

Let \( \tau_n \) be the time separating \( t_{n-1} \) and the epoch at which the first completed repair after \( t_{n-1}(N \geq n \geq 1; t_0 = 0) \) is achieved, and \( y_n \) be the time separating \( t_{n-1} \) and the epoch at which the first failure after \( t_{n-1} \) takes place. Then writing

\[
(1) \quad t_n - t_{n-1} = y_n + \xi_n \quad (1 \leq n \leq N),
\]

we see, for the models A and B, that

(i) \( \xi_n = 0 \) when \( y_n < z_{n+1} \)

(ii) \( \xi_n - z_n + y_n (2 \leq n \leq N) \) has the same distribution as \( t_n - t_{n-1} \) when \( y_n > z_n \). Hence, for the model A,

\[
(2) \quad E \{ \exp \left( is(t_n - t_{n-1}) \right) \} = \begin{cases} 
(\lambda N - is)^{-1}N & (n = 1) \\
(\lambda(N - n + 1) + \mu(n - 1) - is)^{-1} & (2 \leq n \leq N),
\end{cases}
\]

For the present case, it can be seen that

\[
(3) \quad E \{ \exp \left( is(t_r - t_t) \right) \} = \varphi_n(s) \varphi_r(s)^{-1} \quad (1 \leq r < N; r \leq n \leq N).
\]

(2) and (3) establish (3.1.22) in [1]. This procedure also establishes (3.2.1), since in that case only (2) is to be modified by replacing \( \mu(n - 1) \) by \( \mu \mu \) when \( n \geq m + 2 \).

Sincerely yours,

D. N. Shanbhag*
Department of Statistics,
Karnatak University,
Dharwar, Mysore State, India

References


* A Junior Research Fellow of the Council of Scientific and Industrial Research, New Delhi.
Errata

"Estimation of a Component of a Convolution, when the other Component is of Exponential Type"

Perry A. Scheinok

Technometrics, Vol. 6, No. 2, May 1964

Professor R. H. Rodine of the State University of New York at Buffalo was kind enough to point out to Dr. Scheinok an omission in the above note. The second sentence in the second paragraph should read

"One observes a random variable X which is the sum of two independent random variables Z and Y, etc."

The word "independent" which is quite crucial to the ensuing development was inadvertently omitted.
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On a Class of Linear Estimators in Sampling with Varying Probabilities without Replacement .................. S. G. Prabhu Aigaonkar
Some Tests for Homoscedasticity ........ Richard E. Quandt and Stephen Goldfeld
Appropriations Data and the Investment Decision ........ Edward Greenberg
Distribution of the Size of the Maximum Cluster of Points on a Line .................. Josep h Irwin Naus
The Asymptotic Relative Efficiency of Goodness-of-Fit Tests Against Scalar Alternatives ........ Ronald Pyke and Joseph Gelser
Fourier Methods for Evolving Seasonal Patterns .................. Nigel F. Nettheim
The Metropolitan Area Concept: An Evaluation of the 1950 SMA’s .... Allan G. Feldt
A Bayes Approach for Combining Correlated Estimates ........ Seymour Geisser
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Bayes Decision Theory: Insensitivity To Non-Optimal Design .... Gordon R. Antelman
A Class of Bivariate Distributions .................. R. L. Plackett
R. A. Fisher and the Last Fifty Years of Statistical Methodology Maurice S. Bartlett
Prediction and Decision Problems in Regression Models from the Bayesian Point of View ........ Arnold Zellner and V. Karuppan Chetty
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A Comparison of a Modified “Hannan” and the BLS Seasonal Adjustment Filters .................. Marc Nerlove

Book Reviews

For further information, please contact

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THE ANNALS OF MATHEMATICAL STATISTICS

Vol. 36, No. 4, August 1965

CONTENTS

Minimax Designs in Two Dimensional Regression ......................................... Paul G. Hoel
Distinguishing A Sequence of Random Variables From a Translate of Itself .............. L. A. Shepp
Some Smirnov Type Theorems of Probability ............................................. Miklós Csörgő
Estimation of the Bispectrum ................................................................. M. Rosenblatt and J. S. Van Ness
The Asymptotically Unbiased Prior Distribution ......................................... J. A. Hartigan
An Asymptotic Expansion for the Distribution of the Latent Roots of the Estimated Covariance Matrix ................................................................. George A. Anderson
Optimum Classification Rules for Classification into Two Multivariate Normal Populations ................................................................. S. Das Gupta
A Hybrid Problem on the Exponential Family ................................................ Arthur Cohen
Optimal Invariant Rank Tests for the k-Sample Problem .................................. T. K. Mothos and D. R. Truax
A k-Sample Model in Order Statistics ......................................................... W. J. Conover
The Two-Sample Scale Problem When Locations are Unknown .............................. M. Raghavachari
Asymptotically Most Powerful Rank Tests for the Two-Sample Problem With Censored Data ................................................................. Joseph L. Gastwirth
Student's t in a Two-Way Classification With Unequal Variances ........................ Kay Knight Mazuy and W. S. Connor
Construction of Confounding Plans for Mixed Factorial Designs ........................... David White and Robert A. Hultquist
On the Number of Successes in Independent Trials ....................................... Stephen M. Samuels
On Stochastic Processes Derived From Markov Chains ...................................... Alex Heller

Notes

Generalizations of the Maximal Ergodic Theorem .......................................... Glen Baxter
A Simple Probabilistic Proof of the Discrete Generalized Renewal Theorem ............. Sidney C. Port
On Moment Generating Functions and Renewal Theory .................................... Charles Stone
A Note on the Reciprocal of the Conditional Expectation of a Positive Random Variable ................................................................. Tim Robertson
On the Efficiency of the Normal Scores Test Relative to the F-Test .................... M. Raghavachari
A Note on Wilks' Internal Scatter ............................................................... Robert Van der Vaar
Pairwise Statistical Independence ................................................................. H. O. Lancaster

Correction Notes

Book Review

Principles of Random Walk by Frank Spitzer ................................................. D. A. Darling

Abstracts of Papers

News and Notices

Publications Received
Factor Analysis: An introduction to essentials.  
Raymond B. Cattell

II. The role of factor analysis in research  
Raymond B. Cattell

On the construction of an index for indirect selection  
F. E. Binet

Regression analysis with dependent variable censored  
M. Glasser

Two-way analysis of variance for the mixed model with disproportionate sub-class frequencies  
P. Mielke and R. B. McHugh

Composite designs based on irregular fractions of factorials  
W. J. Westlake

On inferring order relations in analysis of variance  
E. Peritt

L'étude des communautés végétales par l'analyse statistique des liaisons entre les espèces et les variables écologiques: principes fondamentaux  
P. Dagnelie

A method for cluster analysis  
A. W. F. Edwards and L. L. Cavalli-Sforza

An approximate method of analysis for a two-way layout  
A. M. Mathai

The adequacy of the diffusion approximation to certain distributions in genetics  
W. J. Ewens

Further evidence on the consistency of estimates of variance components  
W. A. Compton, C. O. Gardner and J. H. Lonnquist

The expected mean squares in genetic experiments when only one parent is identified  
B. B. Bohren, H. E. McKean and G. W. Friars

Expected effects on the inbreeding coefficient and rate of gene loss of four methods of reproducing finite diploid populations  
P. Robinson and D. F. Bray

Listing expected mean square components  
M. Lentner

The two-period change-over design and its use in clinical trials  
J. E. Grizzle

A model for the spread of epidemics by carriers  
G. H. Weiss

Harmonic analysis of the human face  
K. H. Lu

Note by B. Shah

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Contents of vol. 33, No. 1

Articles
A. Rényi: On the foundations of information theory (with discussion)
D. Dugué: L’équipe française de chercheurs sur le plan d’expériences
J. R. Barra: Carrés latins et Euleriens (with discussion)
R. Guérin: Vue d’ensemble sur les plans en blocs incomplets équilibrés et partiellement équilibrés
F. Freiberger & U. Grenander: On the formulation of statistical meteorology

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CONTENTS

Memoirs:
L. H. C. TIPPETS. Editorial arrangements.
E. S. PEARSON. Studies in the history of probability and statistics. XIV Some incidents in the early history of biometry and statistics, 1890-94.
D. J. BARTHOLOMEW. A comparison of some Bayesian and frequentist inferences.
D. A. S. FRASER. Fiducial consistency and group structure.
PETER A. W. LEWIS. Some results on tests for Poisson processes.
A. G. HAWKES. Queueing for gaps in traffic.
THEOPHILOS CAOUILLOS and INGRAM OLKIN. On the bias of functions of characteristic roots of a random matrix.
V. L. MOTE and R. L. ANDERSON. An investigation of the effect of misclassification on the properties of $\chi^2$-tests in the analysis of categorical data.
NORMAN R. DRAPER and WILLARD E. LAWRENCE. Designs which minimise model inadequacies; Cuboidal regions of interest.
L. R. SHENTON and J. A. CARPENTER. The Mills ratio and the probability integral for a Pearson Type IV distribution.
YINC YAO. An approximate degrees of freedom solution to the multivariate Behrens-Fisher problem.
N. N. MIKHAIL. A comparison of tests of the Wilks-Lawley hypothesis in multivariate analysis.
R. M. PRATARFOD. Sequential analysis of dependent observations. I
INGRAM OLKIN and MILTON SOBEL. Integral expressions for tail probabilities of the multinomial and negative multinomial distributions.
G. E. P. BOX and GEORGE C. TIAO. A change in level of a non-stationary time series.
G. S. WATSON. Equatorial distributions of a sphere.
EDMUND A. GEHAN. A generalized Wilcoxon test for comparing arbitrarily singly-censored samples.
G. M. JOLLY. Explicit estimates from capture-recapture data with both death and immigration-stochastic model.

Miscellanea:
DAVID R. BRILLINGER; W. J. CONOVER; FRANK A. HAIGHT; P. HOLGATE; A. R. KAMAT; IGNACY KOTLARSKI; J. R. MCGREGOR and U. M. BIELENSTEIN; R. W. MORGAN; E-R. MULLER; J. I. NAUS; V. H. PATIL; E. S. PEARSON; P. SPRENT; K SUBRAHMANIAM.

Corrigenda:
Books Received:

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