BIOMETRIKA

Volume 45, Parts 3 and 4

Contents

December 1958

Memoirs:

Bayes, Thomas. Essay towards solving a problem in the doctrine of chances. [Reproduced from Phil. Trans. Roy. Soc. 1763, 53, 370-418]. Studies in the history of probability and statistics. IX. With a biographical note by G. A. Barnard. Leslie, P. H. And Gower, J. C. The properties of a stochastic model for two competing species. Tanner, J. C. A problem in the combination of accident frequencies. Darroch, J. N. The multiple-recapture census. I. Estimation of a closed population. Bulmer, M. G. Confidence intervals for distance in the analysis of variance. Finner, D. J. The efficiencies of alternative estimators for an asymptotic regression equation. Patterson, H. D. The use of autoregression in fitting an exponential curve. Hatght, Frank A. Two queues in parallel. Stenton, L. R. Moment estimators and maximum likelihood. Srivastava, A. B. L. Effect of non-normality on the power function of t-test. Pearson, E. S. Note on Mr. Srivastava's paper on the power function of Student's test. Barton, D. E. And Casley, D. J. A quick estimate of the regression coefficient. Zinger, A. And St-Pierre, J. On the choice of the best amongst three normal populations with known variances. Dronkers, J. J. Approximate formulae for the statistical distributions of extreme values. Hooper, J. W. The sampling variance of correlation coefficients under assumptions of fixed and mixed variates. Johnson, N. L. The mean deviation, with special reference to samples from a Pearson Type III population. Merrinatoro, Maxine and Pearson, E. S. An approximation to the distribution of non-central t. Foster, F. G. Upper percentage points of the generalized beta distribution. III. Mendenhall, William and Hader, R. J. Estimation of parameters of mixed exponentially distributed failure time distributions from censored life test data. Mendenhall, William A. bibliography on life testing and related topics. Miscellanca: Contributions by D. E. Barton & F. N. David, D. R. Cox, Edwin L. Crow, H. E. Daniels & M. G. Kendall, Iwwin Guttman, D. G. Kabe, R.

Corrigenda: N. L. JOHNSON, A. R. KAMAT, J. SAW

Other Books received

The subscription, payable in advance, is now 54s (or \$8.00), per volume (including postage). Cheques should be made payable to Biometrika. crossed "a/c Biometrika Trust" and sent to the Secretary, Biometrika Office Department of Statistics, University College, London, W.C.1. All foreign cheques must be drawn on a bank having a London agency.

Issued by THE BIOMETRIKA OFFICE, University College, London

ECONOMETRICA

Journal of the Econometric Society Contents of Vol. 26, No. 4 - October 1958

Hollis B. Chenery and Tsunehiko Watanabe. International Comparison of the Structure of Production Kenneth J. Arrow and Leonid Hurwicz... On the Stability of the Competitive Equilibrium, I. R. Klein... The Estimation of Distributed Lags Irving Hoch... Simultaneous Equation Bias in the Context of the Cobb-Douglas Production Function Jan Tinbergen... L'apport de Bernard Chait à l'économétrie Harold T. Davis... Charles Frederick Roos Maurice Frechet... Letter to the Editor Report of the Philadelphia Meeting

BOOK REVIEWS:

Book Reviews:

The Accumulation of Capital (Joan Robinson). Review by L. R. Klein International Economic Papers, No. 6 (International Economic Association). Review by Abba P. Lerner Insurance and Economic Theory (Irving Pfeffer). Review by Paul Boschan Essai sur la théorie générale de la monnaie: économigue rationelle (A. Aupetit). Review by Léon Dupriez Tables of the Non-Central t-Distribution function and Percentage Points) (George J. Reskinoff and Gerald J. Lieberman). Review by N. L. Johnson The United States Capital Position and the Structure of Its Foreign Trade (M. A. Diab). Review by R. E. Caves Numerical Analysis (Zdenek Kopal). Review by H. E. Goheen Economic Policy: Principles and Design (J. Tinbergen). Review by Arthur Smithies Second Symposium in Linear Programming, Volumes I and II (H. A. Antosiewicz, ed.). Review by Robert Dorfman Structures et Cycles Economiques, Tome II (Johan Åkerman). Review by Henri Guitton Théories des fonctions aléatoires (A. Blanc-Lapierre and R. Fortet). Review by L. Schmetterer Selected Papers in Statistics and Probability by Abraham Wald. Review by Angel Alcaide Inchausti Geographic Differentials of Agricultural Wages in the United States (Willis D. Weatherford). Review by H. Gollnick Price, Cost, and Output (P. J. D. Wiles). Review by J. A. Nordin Mathematische Statistik (van der Waerden). Review by J. Planzagl Fondements d'une théorie positive des choiz comportant un risque et critique des postulats et axiomes de l'école americaine (M. Allais). Review by Eberhard Fels

Announcements and Notes

JOURNAL OF THE

ROYAL STATISTICAL SOCIETY

Series B (Methodological)

30s per part

Vol. 20 No. 2 1958

Ann. Sub. Incl. post £3 2s 0d

CONTENTS

THE REGRESSION ANALYSIS OF BINARY SEQUENCES. By D. R. Cox. (With Discussion.)
RENEWAL THEORY AND ITS RAMIFICATIONS. By WALTER L. SMITH. (With Discussion.)
ON ASYMPTOTICALLY EFFICIENT CONSISTENT ESTIMATES OF THE SPECTRAL DENSITY FUNCTION OF A STATIONARY TIME SERIES. By EMANUEL PARZEN.
THE ESTIMATION OF THE SPECTRAL DENSITY AFTER TREND REMOVAL. By E. J. HANNAN.
ON THE SMOOTHING OF PROBABILITY DENSITY FUNCTIONS. By P. WHITTLE.
EXPERIMENTS WITH MIXTURES. By HENRY SCHEFFÉ.
THE INTERACTION ALGORITHM AND PRACTICAL FOURIER ANALYSIS. By I. J. GOOD.
EQUALLY CORRELATED VARIATES AND THE MULTINORMAL INTEGRAL. BY ALAN STUART.
FORMULAE FOR CALCULATING THE OPERATING CHARACTERISTIC AND THE AVERAGE SAMPLE NUMBER OF SOME SEQUENTIAL TESTS. By K. W. KEMP.
ON CORRECTIONS TO THE CHI-SQUARED DISTRIBUTION. BY J. H. DARWIN.
SAMPLING WITHOUT REPLACEMENT WITH PROBABILITY PROPORTIONAL TO SIZE. By W. L. STEVENS.
MULTIVARIATE QUANTAL ANALYSIS. By P. J. CLARINGBOLD.

A Concise Debivation of General Orthogonal Polynomials. By C. P. Cox. A Simplified Model for Delays in Overtaking on a Two-Lane Road. By J. C. Tanner.

The Royal Statistical Society, 21, Bentinck Street, London, W. 1

METRON

Vol. XIX - N. 1-2

Contents

	PAGE
CORRADO GINI Logic in Statistics	. 1
CORRADO GINI Gerolamo Cardano ed i fondamenti del calcolo delle probabilità	78
A. R. KAMAT Contributions to the theory of statistics based on the first and second successive differences	97
C. Gini, C. Viterbo, C. Benedetti, A. Herzel Problemi di transvariazione inversa	119
Carlo Benedetti Il coefficiente di correlazione del Bravais come funzione non moltiplicativa	193
${\tt Amato Herzel } \textit{Influenza del raggruppamento in classi sulla probabilità e sull'intensità di transvariazione} .$	199
Z. W. BIRNBAUM On an inequality due to S. Gatti.	243
M. DB NOVELLIS Some applications and developments of Gatti-Birnbaum inequality	245

Manuscripts submitted for publication should be addressed to Prof. CORRADO GINI, Università di Roma (Italy), Via delle Terme di Diocleziano, 10. The Editors will not be responsible for the safe return of the original.

THE INSTITUTE OF MATHEMATICAL STATISTICS

(Organized September 12, 1935)

OFFICERS

President:

J. Wolfowitz, Department of Mathematics, Cornell University, Ithaca, New York

President-Elect:

John W. Tukey, Department of Mathematics, Princeton University, (mail to Box 708, Princeton, New Jersey), and Bell Telephone Laboratories, Inc., Murray Hill, New Jersey

Secretary:

G. E. Nicholson, Jr., Department of Statistics, University of North Carolina, Chapel Hill, North Carolina

Treasurer:

A. H. Bowker, Department of Statistics, Stanford University, Stanford, California

Editor:

William Kruskal, Department of Statistics, Eckhart Hall, University of Chicago, Chicago 37, Illinois

The purpose of the Institute of Mathematical Statistics is to encourage the development, dissemination, and application of mathematical statistics.

Membership dues including a subscription to the ANNALS OF MATHE-MATICAL STATISTICS are \$10.00 per year for residents of the United States or Canada and \$5.00 per year for residents of other countries. There are special rates for students and for some other classes of members. Inquiries regarding membership in the Institute should be sent to the Secretary of the Institute.

Contents (continued)

Notes:	
Bartlett Decomposition and Wishart Distribution	239
Some Bounds on the Distribution Functions of the Largest and Smallest Roots of Normal Determinantal Equations	242
Note on a Moving Single Server Problem S. Karlin, R. G. Miller, Jr., and N. U. Prabhu	243
Distribution of the "Blocks Adjusted for Treatments" Sum of Squares in Incomplete Block Designs	246
A Series of Symmetrical Group Divisible Incomplete Block Designs D. A. Sprott	249
Alternative Proof of a Theorem of Birnbaum and PykeNICOLAAS H. KUIPER	251
Quasi-Ranges of Samples from an Exponential Population PAUL R. RIDER	252
Acknowledgment of Priority	254
Correction to "Random Orthogonal Transformations and their Use in Some Classical Distribution Problems in Multivariate Analysis"	
Abstracts of Papers	255
News and Notices	
Report of the Monterey, California Meeting	267
Final Editorial Report	269
Publications Received	269

MEETINGS OF THE INSTITUTE TENTATIVE SCHEDULE

EASTERN REGIONAL MEETING—Pittsburgh, Pennsylvania, March 19-21, 1959.

CENTRAL REGIONAL MEETING-Cleveland, Ohio, April 2-4, 1959.

Abstracts should be submitted in duplicate to the Editor, preferably on abstract blanks, which can be obtained from the IMS Secretary. Abstracts must be received at least 50 days before the first day of the meeting at which they are to be presented, indicating whether presented by title or in person. (Only one contributed paper may be given in person at any one meeting.) They may be printed prior to the publication of the report of the meeting. Those received by April 30 will appear in the September Annals, by July 31 in December, etc. Abstracts should be limited to 200 words or the equivalent, and should avoid displayed expressions and complicated formulae. They can be accepted from non-members of the IMS only if transmitted by members.