STATISTICAL THEORY AND METHOD ABSTRACTS

A Journal of the International Statistical Institute

The object of this abstracting service is to cover published papers concerned with statistical theory, including relevant aspects of probability and mathematical methods, and new contributions to statistical method. These abstracts provide valuable information on new developments for studying problems in many fields: such as frequency distributions, estimating and testing problems, sampling and experimental designs, variance analysis, spectral theory and other methods in time-series analysis, queueing theory, reliability and acceptance inspection. Journals appearing in all parts of the world, on mathematics and statistics, or on other fields and possible contribution of interest are regularly scanned for suitable papers. Abstracts are also prepared from collections of papers such as reports of conferences, symposia

and seminars: technical reports of experiment and research stations are covered.

The abstracts do not exceed 400 words, with occasional "double abstracts" for papers where this size is not sufficient to represent the paper. The language is English; the language of the original paper is indicated. The headings give the name and address of the author together with the Journal in which the paper is published moreover a note is added on the

number of references, tables and figures.

The classification scheme which is used in this Journal supplies a division of all abstracts in twelve main sections. The pages of the Journal are colour-tinted in accordance with these main sections. Each section is further sub-divided to indicate the main topic of the paper; a secondary number denotes the most important additional topic referred to by the author. A special index in each part links together these two classifications. This scheme is arranged to facilitate transfer to punch cards. Papers containing new statistical tables are listed in a separate index.

The abstracts are numbered serially, the volume number being inserted as a prefix. The Journal is published four times a year and contains approximately 1,000 abstracts. An author index, the secondary classification index and the new statistical tables index are published in issue and combined in a yearly supplement which also contains a list of all Journals represented

in the volume by one or more abstracts.

Annual Subscription

Single Number Loose Leaf Binders for Single Abstract Sheets

£7. 10s. (U.S.A. \$24.00) £2. 5s. (U.S.A. \$ 7.00) 16s. 3d. including postage and packing.

OLIVER AND BOYD LTD.

Tweeddale Court, 14 High Street, Edinburgh, 1

TECHNOMETRICS

A Journal of Statistics for the Physical, Chemical and Engineering Sciences

CONTENTS

TECHNOMETRICS, Vol. 9, No. 2, MAY 1967

S. D. Dubey Comparison of Sample Sizes in Inverse Binomial Sampling. D. E. Barton Residual Analysis. J. E. Jackson and W. H. Lauton BOOK REVIEWS LETTERS TO THE EDITOR
NOTICES ERRATA

The purpose of TECHNOMETRICS is to contribute to the development and use of statistical methods in the physical, chemical and engineering sciences. This objective places a high premium on succinct communication among the physical scientist, engineer, statistician and mathematician. The journal will accept for publication papers describing new statistical techniques expected to be useful in these sciences, papers illustrating the application of known statistical methods to new or novel environments, expository or tutorial papers on particular statistical methods, and papers dealing with the philosophy and problems of applying statistical methods to research, development, design and performance. Brief descriptions of problems requiring solution and short technical notes will also be accepted for publication.

For further information please contact TECHNOMETRICS Post Office Box 587 Benjamin Franklin Station Washington 4, D. C.

BIOMETRIKA

Volume 54, Parts 1 & 2

Contents

June 1967

M. L. Seal. Studies in the History of Probability and Statistics. XV. The historical development of the Gauss linear model. M. S. Bartlett. Some remarks on the analysis of time-series. A. M. Walker. Some tests of separate families of hypotheses in time series analysis. J. A. Hartigan. Distribution of the residual sum of squares in fitting inequalities. M. B. Brown. The two-means problem—a secondarily Bayes approach. H. O. Hartley and J. N. K. Rao. Maximum-likelihood estimation for the mixed analysis of variance model. G. C. Tlao and G. E. P. Box. Bayesian analysis of a three-component hierarchical design model. M. G. Mostafa. Designs for the simultaneous estimation of functions of variance components from two-way crossed classifications. G. J. Lieberman, R. G. Miller, Jr., and M. A. Hamilton. Unlimited simultaneous discrimination intervals in regression. N. R. Draper and W. G. Hunter. The use of prior distributions in the design of experiments for parameter estimation in non-linear situations. M. L. Tiku. Estimating the mean and standard deviation from a censored normal sample. S. H. Walker and D. B. Duncan. Estimation of the probability of an event as a function of several independent variables. J. J. Gart and J. R. Zweifel. On the bias of various estimators of the logit and its variance with application to quantal bioassay. K. C. S. Pillai. Upper percentage points of the largest root of a matrix in multivariate analysis. K. C. S. Pillai and K. Jayachandran. Power comparisons of tests of two multivariate hypotheses based on four criteria. M. A. Stephens. Tests for the dispersion and for the modal vector of a distribution on a sphere. C. Chambers. Extension of tables of percentage points of the largest variance ratio, s²max/s²0. P. Whittile and R. O. D. Lane. A class of situations in which a sequential estimation procedure is non-sequential. K. V. Mardia. Some contributions to contingency type bivariate distributions. A. H. Marcus. A multivariate immigration with multiple death process and applications to l

Correction. Acknowledgement of Priority.

Reviews: M. S. Bartlett; F. N. David, M. G. Kendall and D. E. Barton; W. Feller; J. F. C. Kingman and S. J. Taylor.

New Publications in Statistics and Probability.

The subscription, payable in advance is £3.10.0. (or \$10.00) per volume (including postage). Cheques should be made payable to Biometrika crossed 'a/c Biometrika Trust' and sent to: The Secretary, Biometrika Office, University College, Gower Street, London, W.C.1. All foreign cheques must be drawn on a Bank having a London

Issued by THE BIOMETRIKA OFFICE, University College, London

SANKHYĀ

The Indian Journal of Statistics

CONTENTS OF SERIES A, VOL. 29, PARTS 1, 1967

Structured multivariate Behrens-Fisher problems. S. James Press
Inadmissibility of customary estimators in sampling over two occasions. P. K. Pathak and T. J. Rao
Unbiased estimators of the variance of the Narain, Horvitz and Thompson estimator
S. G. Prabhu Ajgaonkar
On the distribution of sum of two independent Kolmogorov statistics. Z. Govindarajulu Haruki Morimoto and Massaki Sibuya NOTES A note on asymptotically distribution-free confidence bound for $P\{X < Y\}$, based on two independent samples

Pranab Kumar Sen

Corrigendum

Abstracts of Technical Reports

Orders for the Journal for distribution outside India are to be sent to:

Pergamon Press Ltd., Pergamon Press Inc., Headington Hill Hall, or 122 East 55th Street, Oxford, England New York 22, USA

Orders for the Journal for distribution within India are to be sent to:

Statistical Publishing Society, 204/1 Barrackpore Trunk Road, Calcutta-35, India

REVIEW OF THE INTERNATIONAL STATISTICAL INSTITUTE

Contents of Vol. 35, No. 2

Articles

Masuyama, M.—Construction cyclique de blocs incomplets partiellement équilibrés. Parzen, E.—The role of spectral analysis in time series analysis. Cornfield, J.—Discriminant functions. Scott, C.—Sampling for demographic and morbidity surveys in Africa.

Communications

Statistical organization and administration Statistical research Statistical societies

Calendar of meetings

International Statistical Bibliography

Book Reviews

Vol. XXIV. No. 93

The REVIEW OF THE ISI is published three times per year. The annual subscription is \$11.50 post free.

Orders should be sent to: International Statistical Institute, 2, Oostduinlaan, The Hague, Netherlands.

ESTADÍSTICA

Journal of the Inter American Statistical Institute

CONTENTS

December 1966

Métodos para Estimar la Población por Areas GeográficasDirección del Censo Estados Unidos
Aplicación del Análisis Discriminante a Problemas de Predicción de Rendimiento Académico en la Universidad de Costa Rica
Una Tabla de Vida que Guarda Conformidad con los Datos ObservadosNathan Keyfitz
Un Posible Método para Construir Indices de Morbilidad
Algunos Estimadores Alternativos para la Media de una Población
La Medición de la Fecundidad en los Estados Unidos
Special Features. Legal Provisions. Institute Affairs. Statistical News. Publications.

Published quarterly Annual subscription price \$3.00 (U.S.)
INTER AMERICAN STATISTICAL INSTITUTE
Pan American Union
Washington, D. C. 20006

JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION

Volume 62	June 19 <i>67</i>	Number 318
-----------	-------------------	------------

. 0.0	30.10 17 07	Tromber 616
A Procedure for Automatic Data Robust Estimation of Location Goodness of Fit On the Kolmogorov-Smirnov Test Linear Segment Confidence Bands On the Question of Whether a Dis The New Design of the Canadian Outcome Probabilities for a Recor Data Revisions and Economic For Discrete Samples and Moving Sun Efficient Estimation of a System of neously Correlated Reducing a Random Sample to a On Iterated Tests of Hypotheses Tables of the Power of the F-Test	k Price Generating Models and Trading Fo Editing	R. J. Freund and H. O. Harlley dwin L. Crow and M. M. Siddiqui dwin L. Crow and M. M. Siddiqui dwin L. Hans Riedwyl hknown. Habert W. Lilliefors A. Graybill and David C. Bowden man, Ruth Gold, and Agnes Berger Fellegi G. B. Gray, and R. Platek ant Information. Gad Nathan H. O. Stekler Lester G. Telser re Both Serially and Contempora- Richard W. Parks Lee J. Bain Chandan K. Mustafi M. L. Tikh
Exponential Life Test Procedures	When the Distribution has Monotone Failure	e Rate
A Bivariate Warning-Time/Failur On the Fixed Point Probability V	iance	. A. Mihram and Robert Hultquist trices
Rectangular Confidence Regions for	dent's "#" Distribution	ibutionZbynek Sidak on Partial Observations
Multivariate Logarithmic Series Dome of its Statistical Propertie Maximum Likelihood Estimation f	mators in Factorial Arrangements with Confon-region B istribution as a Probability Model in Populates. from Censored Samples of the Parameters of	tion and Community Ecology and G. P. Patil and Sheela Bildikar a Logistic Distribution
Book Reviews	Н.	

For further information, please contact:

AMERICAN STATISTICAL ASSOCIATION

810 18th Street, N.W.

Washington, D. C. 20006

METRON

Vol. XXV, n. 1-4

1966

SOMMARIO-SUMMAIRE-CONTENTS-INHALT-SUMARIO

Contributi alla metodologia generale

VITTORIO CASTELLANO. Sciences, Method and Statistics

DIEGO DE CASTRO. La riforma delle statistiche giudiziarie

BRUNO DE FINETTI. La probabilità secondo Gini nei rapporti con la concezione soggettivista

PAOLO FORTUNATI. Spunti sui «modelli statistici» e, in particolare, sullo schema di concentrazione

A. A. KONUS. The Single Regression Line

TOMMASO SALVEMINI. Indici di dissomiglianza tra mutabili statistiche cicliche

GIUSEPPE LETI. On the Independence Table for Two Distributions and the Mean Difference between them

AMATO HERZEL, Sulla stima delle frequenze e delle probabilità a priori

GIORGIO DALL'AGLIO. Su una classe di indici con distribuzione asintotica del tipo χ^2

MARIO BADALONI. Sulla distribuzione di una caratteristica in un universo campionario ALFREDO RIZZI, Considerazioni sulle distribuzioni delle cifre iniziali dei numeri statistici

Contributi all'economia

NICHOLAS GEORGESCU-ROEGEN, Further Thoughts on Corrado Gini's Delusioni dell'econometria RENÉ ROY. Réflexions inspirees par quelques recherches de Corrado Gini

CARLO BENEDETTI. Sulla «identità di Gini» e l'omogeneità della funzione di utilità e di produzione

MAURICE ALLAIS. Produit national brut reel, revenu national reel et fonction de Cobb-Douglas

ANTONINO GIANNONE. La ricchezza e il reddito nazionale nel pensiero scientifico del Gini e nei conti nazionali

CAMILO DAGUM. Bases y principios para la elaboración de modelos en la ciencia económica AGOSTINO DE VITA. I gradi di preferenza nelle direzioni delle correnti commerciali

THE INSTITUTE OF MATHEMATICAL STATISTICS

(Organized September 12, 1935)

OFFICERS

President:

Theodore E. Harris, Department of Mathematics, University of Southern California, Los Angeles, California 90007

President-Elect:

Herman Chernoff, Department of Statistics, Stanford University, Stanford, California 94305

Executive Secretary:

G. E. Nicholson, Jr., Department of Statistics, University of North Carolina, Chapel Hill, North Carolina 27515

Program Secretary:

Joan Raup Rosenblatt, National Bureau of Standards, Washington, D.C. 20234

Treasurer:

George J. Resnikoff, Department of Statistics, California State College, Hayward, California 94542

Editor:

D. L. Burkholder, Department of Mathematics, University of Illinois, Urbana, Illinois 61803

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 \$20.00 per year for residents of the United States or Canada and \$12.00 per year for residents of other countries. Special student rates of \$10.00 per year are available to students residing in the U.S. and Canada. Inquiries regarding membership in the Institute should be sent to the Treasurer of the Institute.

Membership in the Institute of Mathematical Statistics is not required of authors of papers in the Annals of Mathematical Statistics, and the fact of membership or non-membership is given no weight in the consideration of submitted manuscripts.

Contents (Continued)

Asymptotic efficiency of a class of non-parametric tests for regression parameters J. N. Adichie	884
Estimates of regression parameters based on rank testsJ. N. Adichie	894
On the large sample properties of a generalized Wilcoxon-Mann-Whitney statistic A. P. Basu	
Notes	
Cauchy-distributed functions of Cauchy variates E. J. G. Pitman and E. J. Williams	916
Slowly branching processes	919
A note on the Birkhoff ergodic theorem	922
An oscillating semigroup	924
Realization of stochastic systems	927
An intrinsically determined Markov chainJ. Mac Queen	934
The relative efficiency of some two-phase sampling schemes M. P. Singh	937
The generalized variance: testing and ranking problem Morris L. Eaton	941
Some distribution problems connected with the characteristic roots of $S_1S_2^{-1}$ C. G. Khatri	944
An the non-existence of a fixed sample estimator of the mean of a log-normal distribution having a prescribed proportional closenessS. Zacks	949
Correction Note	950
Book Review	
WILLIAM FELLER: An Introduction to Probability Theory and Its Applications FRANK SPITZER	951
Abstracts of Papers	953
News and Notices	972
Report of the Columbus Meeting	973
Publications Received	976

MEETINGS OF THE INSTITUTE

WESTERN REGIONAL - Missoula, Montana - June 15-17, 1967 ANNUAL MEETING - Washington, D. C. - December 27-30, 1967

Abstracts should be submitted in duplicate to the Managing Editor, P. L. Meyer, Department of Mathematics, Washington State University, Pullman, Washington, on abstract blanks which may be obtained from him or from any Secretary or Associate 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. Ordinarily, each issue will contain those abstracts received at least 75 days before it appears. 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 introduced by members. Abstracts must follow the stylistic requests on the abstract blank, or they may be returned.