

Springer-Verlag New York Inc.

175 Fifth Avenue • New York/N.Y. 10010

Published by Springer-Verlag Berlin · Heidelberg · New York: Ergebnisse der Mathematik und ihrer Grenzgebiete

Edited by P. R. Halmos, P. J. Hilton, R. Remmert, B. Szökefalvi-Nagy. In cooperation with L. V. Ahlfors, R. Baer, F. L. Bauer, R. Courant, A. Dold, J. L. Doob, S. Eilenberg, M. Kneser, G. H. Müller, M. M. Postnikov, H. Rademacher, B. Segre, E. Sperner

Managing Editor: P. J. Hilton

volume 8 Neuere Untersuchungen

über eindeutige

analytische Funktionen

By Professor Dr. Hans Wittich, Mathematisches Institut

der Universität Karlsruhe

Second edition, corrected. With 31 figures. VIII,

163 pages. 1968. (In German) Cloth DM 28, —; US \$ 7.00

Contents: Einleitung. Theorie des Maximalgliedes von

WIMAN-VALIRON. Die beiden Hauptsätze der Wertverteilungslehre. Weitere Folgerungen aus den Hauptsätzen; Ergänzungen. Umkehrung des zweiten Hauptsatzes. Anwendungen auf gewöhnliche

Hauptsatzes. Anwendungen auf gewöhnliche Differentialgleichungen. Konforme und quasikonforme Abbildungen von Ringgebieten. Über das Typenproblem. Das Umkehrproblem der Wertverteilung. Funktionen mit beschränktem DIRICHLET-

Integral. Literaturverzeichnis.

Volume 44 Finite Geometries

By Dr. phil. nat. Peter Dembowski, Wissenschaftlicher Rat und Professor,

Johann Wolfgang Goethe-Universität Frankfurt/Main

With 9 figures. XI, 375 pages. 1968 Cloth DM 68,—; US \$ 17.00

Contents: Introduction. No

Introduction. Note on exposition. Basic concepts. Designs. Projective and affine planes. Collineations of finite planes. Construction of finite planes. Inversive planes. – Appendices. Bibliography.

Dictionary. Special notations. Index.

Prospectus on request. Standing Orders for this Series are invited.

JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION
Volume 63 The Analysis of Cross-Classification Data: Independence, Quasi-Independence and Interactions in Contingency The Analysis of Cross-Classification Data: Independence, Quasi-Independence and Interactions in Contingency
The Analysis of Cross-Classification Data: Independence, Quasi-Independence and Interactions in Contingency
Tables with or without Missing Entries. Leo A. Goodman Dividend Policy: An Empirical Analysis Eugene F. Fama and Harvey Babiak Maximum Likelihood and Bayesian Estimation of Transition Probabilities
Marienum Lilelihadi and Harvey Babiak
Maximum Likelihood and Bayesian Estimation of Transition Probabilities
Small Sample Properties of Alternative Estimators of Seemingly Unrelated Regressions
Estimation and Inference for Linear Models in which Subsets of the Dependent Variable are Constrained
Timothy W. McGuire, John U. Farley, R. E. Lucas, Jr. and L. W. Ring The Exact Distribution of a Structural Coefficient Estimator. David H. Richardson On the Power of the Blus Procedure. J. Koerts and A. P. J. Abrahamse Efficiency of the Sample Mean when Residuals Follow a First-Order Stationery Markoff Process
On the Power of the Blus Procedure
Efficiency of the Sample Mean when Residuals Follow a First-Order Stationary Market Process
A Life Table that Agrees with the Data II. Nathan Keyfitz
An Old Approach to Finite Population Sampling Theory. Richard M. Royall
A Life Table that Agrees with the Data II. A Life Table that Agrees with the Data II. Nathan Keysitz An Old Approach to Finite Population Sampling Theory. Richard M. Royall Several Methods of Re-Designing Area Samples Utilizing Probability Proportional to Size When the Sizes Change Significantly. Gerald B. Gray and R. Platek
Approximately Optimal Stratification
The Use of a Stratification Variable in Estimating by Proportional Stratified Sampling Carl-Erik Samdal
A Model for Optimum Linkage of Records. Banjamin J. Tepping
On Pooling Means When Variance is Unknown
A Model for Optimum Linkage of Records. On Pooling Means When Variance is Unknown. Chien-Pai Han and T. A. Bancroft A Comparative Study of Various Tests for Normality. M. B. Wilk, S. S. Shapiro and Mrs. H. J. Chen
Estimates of the Regression Coefficient Based on Kendall's Tau. P. K. Sen Order Statistics for Discrete Populations and for Grouped Samples. H. A. David and R. S. Mishriky Or Discreptification of the Computation of the C
On Discrimination Using Qualitative Veriables
On Discrimination Using Qualitative Variables. A Davia and R. S. Mishries On Discrimination Using Qualitative Variables. Ethel S. Gilbert Approximating the Lower Binomial Confidence Limit. Herman Burslein and T. W. Anderson A Normal Approximation for Binomial F. Beta, and Other Common Related Tail Probabilities, I.
A Normal Approximation for Ringmial F. Reta and Other Common Related Tril Probabilities. I
David B. Peizer and John W. Pratt
A Normal Approximation for Binomial, F, Beta and Other Common Related Tail Probabilities, II.
Iohn W. Pratt
Statistical Dependence between Subclass Means and the Numbers of Observations in the Subclass for the Two
Way Completely-Random Classification
Way Completely-Random Classification. David A. Harville Cubical and Spherical Estimation of Multivariate Probability. Thomas A. Elkins
On the Inverse Gaussian Distribution Function. Jonathan Shuster Estimating Finite-Time Maxima and Minima of a Stationary Gaussian O Ornstein-Uhlenbeck Process by Monte
Estimating Finite-Time Maxima and Minima of a Stationary Gaussian O Ornstein-Uhlenbeck Process by Monte
Carlo Simulation. Irving I. Gringorten
How Deviant Can You Be? Paul A. Samuelson Constructing an Unbiased Random Sequence. Paul A. Samuelson
Constituting an Unbiased Kandoni Sequence. Paul A. Samuelson
For further information, please contact:
AMERICAN STATISTICAL ASSOCIATION
810 18th Street, N.W. Washington, D. C. 20006

SANKHYĀ The Indian Journal of Statistics

CONTENTS OF SERIES A, VOL. 30, PART 4, 1968

Weakly stable families of transformations	
On almost sure convergence for sums of independent random variables	
Seidel-equivalence of strongly regular graphs	
Parametric confidence bands of cumulative distribution functions	
Derivation of simultaneous confidence intervals for parametric functions from a parametric confidence region Paul Kanofsky	
Some aspects of discrimination function coefficients	
A wide class of discrete distributions and the associated differential equations	
Some contributions to the theory of nonnormality-II. K. Subrahmaniam	
An avariance principle for random partial sums	
On the convergence of measures in a reflexive, separable, banach space	
Book Reviews	
Abstracts of technical reports	
Acknowledgment	
Publications received	
Orders for the Journal for distribution outside India are to be sent to:	

Pergamon Press Ltd., 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

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, estimative contributions, and the statistical methods are such as frequency distributions, estimative contributions. 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.

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

for the Physical, Chemical and Engineering Sciences
CONTENTS
TECHNOMETRICS, Vol. 11, No. 1, FEBRUARY 1969
Procedures for Detecting Outlying Observations in Samples. Frank E. Grubbs
Transformations: Some Examples Revisited. Norman R. Draper and W. G. Hunter
Information and Sampling from the Exponential Distribution. G. M. El-Sayyad
Half-Rectified Truncated Distributions: Sampling Theory and Hypothesis Testing. Robert H. Riffenburgh
Sequential Reliability Assurance in Finite Lots. K. T. Wallemius
Comparison of ANOVA and Harmonic Components of Variance. J. Edward Jackson and W. H. Lawton
The Spectrum of a Model II Nested ANOVA and its Applications. J. Edward Jackson and W. H. Lawton
Fourier Methods in the Study of Variance Fluctuations in Time Series Analysis
Controlling Dimension in Centerless-Grinding With Automatic Reset Device. R. Mohan
Computer Aided Design of Experiments. R. Mohan
Computer Aided Design of Experiments. R. W. Kennard and L. A. Stone
On the Distribution of Statistics Suitable for Evaluating Rainfall Stimulation Experiments
K. R. Gabriel and Paul Feder
C. Roberts
H. Lean Harter

Notes

NOTICES Abstracts of Papers Presented at SPES Session of the 128th Annual Meeting of the American Statistical Association

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, D. C. 20004.

BOOK REVIEWS—10 Year Index (1959-1968).

THE INSTITUTE OF MATHEMATICAL STATISTICS

(Organized September 12, 1935)

OFFICERS

President:

Wassily Hoeffding, Department of Statistics, University of North Carolina, Chapel Hill, North Carolina 27514

President-Elect:

Jack C. Kiefer, Department of Mathematics, Cornell University, Ithaca, New York 14850

Executive Secretary:

Leo Katz, Statistical Laboratory, Michigan State University, East Lansing, Michigan 48823

Program Secretary:

R. V. Hogg, Department of Statistics, University of Iowa, Iowa City, Iowa 52240

Treasurer:

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

Editor:

Z. W. Birnbaum, Department of Mathematics, University of Washington, Seattle, Washington 98105

Managing Editor:

Paul L. Meyer, Department of Mathematics, Washington State University, Pullman, Washington 99163

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 on weight in the consideration of submitted manuscripts.

Contents (Continued)

Notes	
Stochastic approximation for smooth functions	29 9
A note on characteristic functionsK. G. BINMORE AND H. H. STRATTON	303
Domains of optimality of tests in simple random sampling	
DAVID K. HILDEBRAND	308
A second-order approximation to optimal sampling regionsGideon Schwarz	313
A note on positive dynamic programming	316
New conditions for central limit theorems	319
An example of the difference between the Lévy and Lévy-Prokhorov metrics	
LLOYD FISHER AND D. W. WALKUP	322
Correction Note	325
Book Reviews	
Frank A. Haight: Handbook of the Poisson DistributionNorman L. Johnson	326
K. R. Parthasarathy: Probability Measures on Metric SpacesR. M. Dudley	328
Abstracts	329
News and Notices	333
Publications Received	337

MEETINGS OF THE INSTITUTE

ANNUAL MEETING—New York, New York, August 19-22, 1969
Laramie, Wyoming, late August, 1970
CENTRAL REGIONAL—Iowa City, Iowa, April 23-25, 1969
Dallas, Texas, Spring, 1970
WESTERN REGIONAL—Monterey, California, May 7-9, 1969

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.

١,