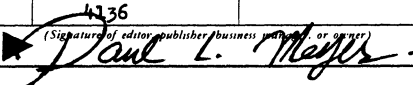


STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION <i>(Act of October 23, 1962; Section 4369, Title 39, United States Code)</i>		Publisher: File two copies of this form with your postmaster.
1 DATE OF FILING	2 TITLE OF PUBLICATION ANNALS OF MATHEMATICAL STATISTICS	
3 FREQUENCY OF ISSUE Bi-Monthly		
4 LOCATION OF KNOWN OFFICE OF PUBLICATION <i>(Street, city, county, state, zip code)</i> Waverly Press, Mount Royal and Guilford Avenues, Baltimore, Md. 21202		
5 LOCATION OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS <i>(Not printers)</i> Dept. of Mathematics, Washington State University, Pullman, Wash. 99163		
6. NAMES AND ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR		
PUBLISHER <i>(Name and address)</i> None		
EDITOR <i>(Name and address)</i> Don Burkholder, Dept. of Mathematics, Univ. of Illinois, Urbana, Illinois		
MANAGING EDITOR <i>(Name and address)</i> Paul Myer, Dept. of Mathematics, Washington State Univ., Pullman, Wash. 99163		
7. OWNER <i>(If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)</i>		
NAME	ADDRESS	
Institute of Mathematical Statistics	Treasurer's Office: George Resnikoff, Dept. of Statistics, California State College, Hayward, California	
8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES <i>(If there are none, so state)</i>		
NAME	ADDRESS	
None		
9. Paragraphs 7 and 8 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner. Names and addresses of individuals who are stockholders of a corporation which itself is a stockholder or holder of bonds, mortgages or other securities of the publishing corporation have been included in paragraphs 7 and 8 when the interests of such individuals are equivalent to 1 percent or more of the total amount of the stock or securities of the publishing corporation.		
10 THIS ITEM MUST BE COMPLETED FOR ALL PUBLICATIONS EXCEPT THOSE WHICH DO NOT CARRY ADVERTISING OTHER THAN THE PUBLISHER'S OWN AND WHICH ARE NAMED IN SECTIONS 132 231, 132 232, AND 132 233, POSTAL MANUAL <i>(Sections 4355a, 4355b, and 4356 of Title 39, United States Code)</i>		
	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	SINGLE ISSUE NEAREST TO FILING DATE
A TOTAL NO. COPIES PRINTED <i>(Net Press Run)</i>	4000 4136	4798
B PAID CIRCULATION		
1 SALES THROUGH DEALERS AND CARRIERS, STREET VENDORS AND COUNTER SALES	None	None
2 MAIL SUBSCRIPTIONS	1526	127
C. TOTAL PAID CIRCULATION	3984	332
D FREE DISTRIBUTION <i>(including samples)</i> BY MAIL, CARRIER OR OTHER MEANS	84	7
E TOTAL DISTRIBUTION <i>(Sum of C and D)</i>	4068	339
F OFFICE USE, LEFT-OVER, UNACCOUNTED, SPOILED AFTER PRINTING	68	6
G. TOTAL <i>(Sum of E & F—should equal net press run shown in A)</i>	4136	
I certify that the statements made by me above are correct and complete.		
<i>(Signature of editor, publisher, business manager, or owner)</i> 		

POD Form 3526 Jan. 1965



From the HOLDEN-DAY Library of Pure and Applied Science

Probability and Statistics in Psychological Research and Theory by *Donald Stilson*, University of Colorado

Assuming no mathematics beyond college algebra, this text covers numerous non-trivial applications of both probability and statistics to psychological theory, including a few applications of interest to clinical psychologists. It provides particularly important training in the use of statistical terms that permits the student to communicate with mathematical statisticians. Gives an excellent grounding in the fundamentals of probability and statistics for senior-graduate students of psychology. **\$11.50**

Stochastic Processes by *Emanuel Parzen*, Stanford University

Provides an invaluable understanding of the use of stochastic processes for readers possessing a background of elementary calculus and some knowledge of the concepts of continuous probability theory. The book contains examples of a wide variety of empirical phenomena for which stochastic processes provide mathematical models, and introduces the methods of probability model building, emphasizing applications of stochastic processes. **\$10.95**

Mathematical Foundations of the Calculus of Probability by *Jacques Neveu*, Faculté des Sciences de Paris; trans. by *Amiel Feinstein*

Develops the mathematical foundations of the theory of random processes to the point where the reader should have no difficulty in further pursuing the subject in any direction he chooses. The book would serve admirably for a course in advanced probability theory, as a textbook for a high-level course on measure theory, and as a self-study course for anyone who has had an elementary course in probability theory. **\$9.50**

For the catalog, write to:

HOLDEN-DAY, INC. 728 Montgomery Street, San Francisco, California 94111

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; for example, reliability, quality control, experiments, surveys, queuing, congestion and forecasting. Approximately 500 journals are 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.

Approximately 400 words long, these literary informative abstracts are written in English; the language of the original paper is indicated. The heading not only gives the name and address of the author together with the journal in which the paper was published, but a note is given of references, tables, etc.

The revised classification scheme consists of three parts. The pages of the journal are colour-tinted in groups to provide visual indication of twelve 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 table in each part links together these two classifications. This scheme is arranged to facilitate transfer to punch cards. When papers are concerned with new statistical tables the relevant classification for the Greenwood/Hartley Guide (1962) is indicated in a special section.

The abstracts are numbered serially, the volume number being inserted as a prefix. The journal is published four times a year and contains approximately 1,250 abstracts. Relevant indexes are published in each issue and combined in a yearly supplement.

<i>Annual Subscription</i>	£7.10s. (U. S. A. \$24.00)
<i>Single Number</i>	£2.5s. (U. S. A. \$4.00)
<i>Loose Leaf Binders for Single Abstract Sheets</i>	16s.3d including postage and packing.

OLIVER AND BOYD LTD.

Tweeddale Court, 14 High Street, Edinburgh, 1

REVIEW OF THE INTERNATIONAL STATISTICAL INSTITUTE

Contents of Vol. 33, No. 2

Articles

- Grenander, U.—Stochastic models in the theory of pursuit.
Godambe, V. P.—A review of the contributions towards a unified theory of sampling from finite populations.
Puri, M. L.—On the combination of independent two sample tests of a general class.
Tekes, K.—Describing the geographical distribution of the population.

Communications

- Statistical organization and administration
Statistical research
Statistical societies

Calendar of meetings

International Statistical Bibliography

Book Reviews

The REVIEW OF THE ISI is published three times per year. The annual subscription is \$8.50 post free.
Orders should be sent to: *International Statistical Institute, 2 Oostduinlaan, The Hague, Netherlands.*

BIOMETRIKA

Volume 52, Parts 3 & 4

Contents

December 1965

Memoirs

M. A. STEPHENS. The goodness-of-fit statistic V_N : distribution and significance points. E. N. GILBERT. The probability of covering a sphere with N circular caps. BRADLEY EFRON. The convex hull of a random set of points. P. HOLGATE. Tests of randomness based on distance methods. GEORGE E. P. BOX AND NORMAN R. DRAPER. The Bayesian estimation of common parameters from several responses. SHANTI S. GUPTA AND K. C. SREEDHARAN PILLAI. On linear functions of ordered correlated normal random variables. C. D. KEMP AND ADRIENNE W. KEMP. Some properties of the 'Hermite' distribution. FRANK A. HAIGHT. Counting distributions for renewal processes. K. C. SREEDHARAN PILLAI. On the distribution of the largest characteristic root of a matrix in multivariate analysis. M. L. TIKU. Laguerre series forms of non-central χ^2 and F distributions. H. A. DAVID AND A. S. PAULSON. The performance of several tests for outliers. D. B. OWEN. A special case of a bivariate non-central t -distribution. C. RADHAKRISHNA RAO. The theory of least squares when the parameters are stochastic and its application to the analysis of growth curves. B. R. BHAT AND B. N. NAGBUR. Locally asymptotically most stringent tests and Lagrangian multiplier tests of linear hypotheses. J. AITCHISON AND DIANE SCULTHORPE. Some problems of statistical prediction. T. E. KURTZ, R. F. LINK, J. W. TUKEY AND D. L. WALLACE. Short analyses for balanced single and double classifications. Part 2. Derivations and approximations. K. C. SREEDHARAN PILLAI. On elementary symmetric functions of the roots of two matrices in multivariate analysis. D. V. LINDLEY AND B. N. BARNETT. Sequential sampling: two decision problems with linear losses for binomial and normal random variables. E. S. PEARSON AND J. W. TUKEY. Approximate means and standard deviations based on distance between percentage points of frequency curves. N. L. JOHNSON. Tables to facilitate fitting S_U frequency curves. G. BENNETT. Upper bounds on the moments and probability inequalities for the sum of independent, bounded random variables. TREVOR WILLIAMS. The simple stochastic epidemic curve for large populations of susceptibles. TREVOR WILLIAMS. The distribution of response times in a birth-death process. B. D. SINGH AND D. SINGH. Some remarks on double sampling for stratification. S. S. SHAPIRO AND M. B. WILK. An analysis of variance test for normality (complete samples). *Miscellaneous.*
M. A. AITKIN AND M. W. HUME; K. S. BANERJEE AND L. F. MARCUS; J. GANI; EDMUND A. GEHAN; G. GREGORY AND P. R. SATYAMURTY; J. F. HANNAN AND R. F. TATE; G. E. HAYNAM AND F. C. LEONE; J. A. JOHN; R. E. MILES; K. S. MILLER; J. N. K. RAO; B. SELBY; V. SISKIND; M. A. STEPHENS; M. STONE AND B. G. F. SPRINGER; M. L. TIKU.

Corrigenda

Books Received

The subscription, payable in advance, is £3.10s. (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 agency.

Issued by THE BIOMETRIKA OFFICE, University College, London

TECHNOMETRICS

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

CONTENTS

TECHNOMETRICS, Vol. 7, No. 4, NOVEMBER 1965

Sequential Rank Tests I. Monte Carlo Studies of the Two-Sample Procedure	Ralph A. Bradley, Donald C. Martin, and Frank Wilcoxon
Product Test Planning for Repairable Systems	Betty J. Flehinger
Approximate Confidence Limits for the Reliability of Series and Parallel Systems	Albert Madansky
Estimation of Particle Size Distribution Based on Observed Weights of Groups of Particles	J. L. Jaech
The Application of Extreme-Value Theory to Error-Free Communication	Edward C. Fosner
A Reappraisal of the Periodogram in Spectral Analysis	Richard H. Jones
The Construction of Good Linear Unbiased Estimates from the Best Linear Estimates for a Smaller Sample Size	John I. McCool
Estimation of Power Spectra by a Wave Analyser	Maurice Priestley and C. H. Gibson
Balanced Sets of Balanced Incomplete Block Designs of Block Size Three	David H. Doehlert
Maximum Likelihood Estimation in the Weibull Distribution Based on Complete and on Censored Samples	A. Clifford Cohen, Jr.
Sampling Inspection Plans for Discriminating Between Two Weibull Processes	A. S. Qureishi, K. J. Nabavian, and J. D. Alanen
Patterns in Residuals: A Test for Regression Model Adequacy in Radionuclide Assay	Bernard Pasternack and Anthony Liuzzi
On Beale's Measures of Non-Linearity	Irwin Guttman and Duane A. Meeter
NOTES:	
Maximum Likelihood Estimation of the Parameters of Gamma and Weibull Populations from Complete and from Censored Samples	H. Leon Harter and Albert H. Moore
Complete Set of Leading Coefficients, $\lambda(r, n)$ for Orthogonal Polynomials up to $n = 26$.	D. Wilkie
QUERIES:	
Missing Values in Factorial Experiments	Answered by George Zyskind
BOOK REVIEWS	
NOTICES	

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.

THE INSTITUTE OF MATHEMATICAL STATISTICS

(Organized September 12, 1935)

OFFICERS

President:

Herbert E. Robbins, Department of Mathematical Statistics, Columbia University, New York, N.Y. 10027 (September 20, 1965-January 20, 1966: Department of Statistics, University of Minnesota, Minneapolis, Minnesota 55455)

President-Elect:

Theodore E. Harris, Mathematics Department, The RAND Corporation, Santa Monica, California 90406

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 MATHEMATICAL 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 are available at \$10.00 per year. 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)

A lemma for multiple inference.....	WILLIAM KNIGHT	1873
On the distribution of the latent vectors for principal component analysis T. SUGIYAMA		1875
A note on incomplete block designs with $b - v$	M. BHASKER RAO	1877
The limit of the n th power of a density.....	ROBERT J. BUEHLER	1878
Special Paper		
Principles of professional statistical practice.....	W. EDWARDS DEMING	1883
Correction Notes and Acknowledgment of Priority.....		1901
Book Review		
RICHARD E. BARLOW AND FRANK PROSCHAN (with contributions by LARRY C. HUNTER): <i>Mathematical Theory of Reliability</i>	J. J. McCALL	1902
Abstracts of Papers.....		1905
News and Notices.....		1908
Report of the President for 1965.....		1912
Report of the Treasurer for 1965.....		1914
Report of the Program Secretary for 1965.....		1918
Report of the Editor for 1965.....		1918
Report of the Managing Editor for 1965.....		1920
Report of the Philadelphia Meeting.....		1921
Publications Received.....		1926

MEETINGS OF THE INSTITUTE

TENTATIVE SCHEDULE

- CENTRAL REGIONAL - Lafayette, Indiana - March 23-25, 1966.
EASTERN REGIONAL - Upton, Long Island, N.Y. - April 27-29, 1966.
WESTERN REGIONAL - Los Angeles, California - mid-August, 1966.
ANNUAL MEETING - New Brunswick, New Jersey - late August, 1966.

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.