

The Institute of Mathematical Statistics

announces the publication of

Directions in Time Series

Table of Contents

Keynote Address

Can We Predict Where "Time Series" Should Go Next? John W. Tukey

Time Series Models

Parametric Time Series with Some Applications George E. P. Box

Maximum Likelihood Estimation for Vector Autoregressive Moving Average Models T. W. Anderson

Computer Packages and Graphics

What Will Your Time Series Analysis Computer Package Do? David J. Pack

Time Series Modeling, Spectral Analysis, and Forecasting Emanuel Parzen

Some Remarks on Time Series Graphics William S. Cleveland and Douglas M. Dunn

Econometric Models

Some Recent Developments in Seasonal Adjustment David A. Pierce

Comments. John Geweke

On the Synthesis of Time Series and Econometric Models C. W. J. Granger

Comments. John Geweke

Comments. Kenneth F. Wallis

Control Theory and Engineering Applications

On the Identification of State Space Models and Their Use in Control Hirotugu Akaike

System Identification, Kalman Filtering, and Stochastic Control M. B. Priestley

Self-Tuning Algorithms for Control, Prediction and Smoothing Bjorn Wit-tenmark

Robust Methods

Robust Estimation of Autoregressive Models R. Douglas Martin

Comments. Robert B. Miller

Continuous Processes and Periodic Models

Continuous Model Fitting from Discrete Data P. M. Robinson

Comments. David A. Dickey

Some Recent Advances in Autoregressive Processes Marcello Pagano

Comments. Herbert T. Davis

List Price \$20.00

(Members) \$15.00

Order Pre-paid from:

The Institute of Mathematical Statistics
3401 Investment Boulevard, Suite 6
Hayward, California 94545 (USA)

For those of you who need to know what's happening in statistics . . .

The Institute of Mathematical Statistics
and
The American Statistical Association

announce publication of

**CURRENT INDEX TO
STATISTICS:
APPLICATIONS, METHODS AND
THEORY**

An annual computerized index to the statistical literature

Coverage—Over 7,000 articles in “core” and “related” journals are indexed. Author index and index by key words. Example of subject index (complete reference to journal, volume, pages, etc., is given):

Asymptotic Properties of Non-linear Least Squares Estimators • R. I. Jennrich
Interval Estimation of Non-linear Parametric Functions • Halpern, Mantel
Interval Estimation of Non-linear Parametric Functions, II • M. Halpern
On a Problem in Non-linear Prediction Theory • J. B. Robertson
Convergence in Non-linear Regression • T. Tornheim
Non-linear Regression with Minimal Assumptions • H. M. Wagner
Non-linear
Discrimination Among Mechanistic Models • G.E.P. Box
New Analysis of Variance Model for Nonadditive Data • J. Mandel
Simplified Experimental Design • M. J. Box

Important word

Key word

Who should subscribe—All individuals who spend any significant fraction of their time doing statistics. Anyone who spends more than *one hour per year* looking for an article on a particular topic in statistics or redeveloping some technique that already exists in the literature will find it cost effective to have a personal copy of this index.

Editor—James E. Gentle, IMSL, Inc.

Management Committee—Donald A. Gardiner, Chairman; Heebok Park, Seymour Geisser, David Hoaglin, David L. Wallace

Subscription Rates—Vols. 2-5 (per vol.) [VOLUME 1 OUT OF PRINT]
Nonmember \$ 22.00; Member \$ 11.00
Vol. 6 (per vol.)
Nonmember \$ 26.00; Member \$ 13.00

Send orders and remittance to—

**The Institute of Mathematical Statistics
Business Office
3401 Investment Blvd. Suite 6
Hayward, California 94545**

ANNALS OF PROBABILITY

Vol. 9

February 1981

No. 1

Special Invited Paper

General one-sided laws of the iterated logarithm . . . WILLIAM E. PRUITT

Articles

Stochastic integration and L^p -theory of semimartingales
KLAUS BICHTELER
Raw time changes of Markov processes JOSEPH GLOVER
The degenerate Neumann problem and degenerate diffusions with Vent-
tsel's boundary conditions K. NISHIOKA
Limiting behavior of a process of runs B. G. PITTEL
Limit behaviour of the empirical characteristic function
SÁNDOR CSÖRGŐ

Short Communications

A limit theorem for the maximum of autoregressive processes with
uniform marginal distributions MICHAEL R. CHERNICK
Asymptotic distribution and moments of normal extremes
K. AIYAPPAN NAIR
Thin but unavoidable sets
MAURY BRAMSON AND ARNOLD NEIDHARDT
Inequalities for B-valued random vectors with applications to the strong
law of large numbers ALEJANDRO DE ACOSTA
Multidimensional IFRA processes
HENRY W. BLOCK AND THOMAS H. SAVITS
Optimal stopping with sampling cost: the secretary problem
THOMAS J. LORENZEN

CATALOG OF PUBLICATIONS OF THE INSTITUTE OF
MATHEMATICAL STATISTICS

ANNALS INDEX

The Annals of Mathematical Statistics, Index to Volumes 1-31, 1930-60, edited by J. Arthur Greenwood, Ingram Olkin and I. Richard Savage, 1962. Nonmember Subscriber Cost—\$15.00, Member Cost—\$10.00

Current Index to Statistics: Applications, Methods and Theory, edited by Brian L. Joiner. Volumes 2-5, 1975-77. Nonmember Subscriber Cost—\$18.00, Member Cost—\$11.00. Volumes 6-7, 1978-79. Nonmember Subscriber Cost—\$22.00, Member Cost—\$13.00

Order directly from Heebok Park, Treasurer, Business Office, 3401 Investment Blvd., Suite 6, Hayward, California 94545.

STATISTICAL RESEARCH MONOGRAPHS

This series is sponsored jointly by the Institute of Mathematical Statistics and the University of Chicago. Discount to members of IMS is 20 percent.

The passage problem for a stationary Markov chain by J. H. B. Kemperman, 1961, 127 pp. OUT OF PRINT.

Statistical inference for Markov processes by Patrick Billingsley, 1961, 75 pp. List price—\$5.50 (Midway Reprint paperback only).

Sequential identification and ranking procedures by Robert E. Bechhofer, Jack Kiefer and Milton Sobel, 1968, xvii + 420 pp. List price—\$20.00.

The analysis of frequency data by Shelby J. Haberman, 1974, 432 pp. List price—\$15.00 (Midway Reprint paperback only).

Order directly from the University of Chicago Press, 11030 S. Langley Ave., Chicago, Illinois 60637.

SELECTED TABLES IN MATHEMATICAL STATISTICS

This series of volumes is prepared by the Committee of Mathematical Tables of the Institute of Mathematical Statistics and is published by the American Mathematical Society for the IMS. Discount to members of IMS is 50%.

Selected tables in mathematical statistics, Vol. I, edited by H. L. Harter and D. B. Owen, 1970, vi + 405 pp. \$13.20.

Selected tables in mathematical statistics, Vol. II, edited by H. L. Harter and D. B. Owen, 1974, viii + 388 pp. \$16.40.

Selected tables in mathematical statistics, Vol. III, edited by H. L. Harter and D. B. Owen with J. M. Davenport, vii + 424 pp. \$21.60.

Selected tables in mathematical statistics, Vol. IV, edited by D. B. Owen and R. E. Odeh with J. M. Davenport, x + 309 pp. \$18.00.

Selected tables in mathematical statistics, Vol. V, edited by D. B. Owen and R. E. Odeh and J. M. Davenport, viii + 263 pp. \$16.80.

Selected tables in mathematical statistics, Vol. VI, edited by W. J. Kennedy and R. E. Odeh with J. M. Davenport, 1980, viii + 207 pp. \$12.80.

Send prepaid orders directly to the American Mathematical Society, P.O. Box 1571, Providence, Rhode Island 02901, Attention: Sales Department.