

THE INSTITUTE OF MATHEMATICAL STATISTICS

(Organized September 12, 1935)

OFFICERS

President:

Z. W. Birnbaum, Department of Mathematics, University of Washington,
Seattle 5, Washington

President-Elect:

Herbert Solomon, Department of Statistics, Stanford University, Stan-
ford, California

Executive Secretary:

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

Program Secretary:

Dorothy Gilford, Office of Naval Research, Washington 25, D.C.

Treasurer:

Gerald Lieberman, Institute of Mathematical Statistics, Sequoia Hall,
Stanford University, Stanford, California

Editor:

J. L. Hodges, Jr., Department of Statistics, University of California,
Berkeley 4, California

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 \$15.00 per year for residents of the United States or Canada and \$7.00 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 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 Property of Some Symmetric Two-Stage Sequential Procedures.....	J. W. THOMPSON	755
On Two-Sided Tolerance Intervals for a Normal Distribution.....	BOB E. ELLISON	762
The Linear Hypothesis and Large Sample Theory.....	G. A. F. SEBBER	773
Confidence Region for a Linear Relation.....	C. VILLEGAS	780
On the Admissibility of Some Tests of Manova.....	M. N. GHOSH	789
Sufficiency in Sampling Theory.....	P. K. PATRAK	795
Two Estimates of the Binomial Distribution.....	J. C. MOTT-SMITH	809
A New Proof of the Pearson-Fisher Theorem.....	M. W. BIRCH	817
A Bayesian Approach to Some Best Population Problems	IRWIN GUTTMAN AND GEORGE C. TIAO	825
Invariant Prior Distributions.....	J. HARTIGAN	836
Asymptotic Behavior of Bayes' Estimates.....	J. FABIUS	846
Max-Min Probabilities in the Voting Paradox.....	ZALMAN USISKIN	857
Notes		
Memoryless Strategies in Finite-Stage Dynamic Programming.....	DAVID BLACKWELL	863
A Limit Theorem for Random Interval Sampling of a Stochastic Process	RICHARD F. GEBHARD	866
Non-Singular Recurrent Markov Processes Have Stationary Measures	RICHARD ISAAC	869
On Adding Independent Stochastic Processes.....	TOM S. PITCHER	872
The Dependence of Delays in Tandem Queues.....	P. J. BURKE	874
A Relationship Between Arbitrary Positive Matrices and Doubly Stochastic Matrices.....	RICHARD SINKHORN	876
A Note on Idempotent Matrices.....	K. S. BANERJEE	880
On the Line Graph of the Complete Bipartite Graph.....	A. J. HOFFMAN	883
Bayesian Bio-Assay.....	CHARLES H. KRAFT AND CONSTANCE VAN EMDEN	886
Significance Probability Bounds for Rank Orderings.....	PAUL SWITZER	891
Pseudo-Inverses in the Analysis of Variance.....	PETER W. M. JOHN	895
Balanced Designs With Unequal Numbers of Replicates.....	PETER W. M. JOHN	897
On Double Sampling for PPS Estimation.....	DES RAJ	900
Book Reviews.....	E. S. PEARSON, B. L. WELCH, OSCAR KEMPTHORNE, EDGAR REICH, ALEX M. MOOD, DAVID G. KENDALL AND ULF GRENANDER	903
Correction Notes and Acknowledgment of Priority.....		923
Abstracts of Papers.....		926
News and Notices.....		941
Report of the Copenhagen Meeting.....		945
Publications Received.....		947

MEETINGS OF THE INSTITUTE

TENTATIVE SCHEDULE

ANNUAL MEETING—Amherst, Mass., Aug. 26-29, 1964.

EUROPEAN REGIONAL—Bern, Switzerland—September 14-16, 1964.

CENTRAL REGIONAL—Chicago, Illinois—December 23-29, 1964.

Abstracts should be submitted in duplicate to the Editor, on abstract blanks which can be found in the back of every *Annals*, beginning with the March 1961 issue, or 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 March 15 should appear in the June *Annals*, by June 15 in September, 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 introduced by members. Abstracts must follow the stylistic requests on the abstract blank, or they may be returned.