

THE ANNALS *of* MATHEMATICAL STATISTICS

FOUNDED AND EDITED BY H. C. CARVER, 1930-1933

EDITED BY S. S. WILKS, 1933-1949

THE OFFICIAL JOURNAL OF THE INSTITUTE
OF MATHEMATICAL STATISTICS

Contents

PAGE

Information Theory for Mathematicians	J. WOLFOWITZ	351
Some Problems Connected with Statistical Inference	D. R. COX	357
Asymptotic Distribution of Stochastic Approximation Procedures	JEROME SACKS	373
Admissibility for Estimation with Quadratic Loss	SAMUEL KARLIN	406
On the Estimation of Parameters Restricted by Inequalities	H. D. BRUNK	437
Intersection Region Confidence Procedures with an Application to the Location of the Maximum in Quadratic Regression	DAVID L. WALLACE	455
Exact Probabilities and Asymptotic Relationships for Some Statistics From m -th Order Markov Chains	LEO A. GOODMAN	476
Tests of Multiple Independence and the Associated Confidence Bounds S. N. ROY AND R. E. BARGMANN		491
Sequential Tests for Variance Ratios and Components of Variance	ALLAN BIRNBAUM	504
Sums of Powers of Independent Random Variables	J. M. SHAPIRO	515
The Staircase Design: Theory	FRANKLIN A. GRAYBILL AND WILLIAM E. PRUITT	523
A Note on the Fundamental Identity on Sequential Analysis	R. R. BAHADUR	534
On the Statistical Treatment of Stochastic Processes ISIDORE FLEISCHER AND ANTHONY KOOHARIAN		544
Some Remarks on Sampling with Replacement	DES RAJ AND SALEM H. KHAMIS	550
A Distribution-free Upper Confidence Bound for $\Pr\{Y < X\}$, Based on Independent Samples of X and Y	Z. W. BIRNBAUM AND R. C. MCCARTY	558
On the Integrodifferential Equation of Takacs. I	EDGAR REICH	563
Notes:		
Probabilities of Hypotheses and Information-Statistics in Sampling from Exponential- class Populations	MORTON KUPPERMAN	571
On the Distribution of 2×2 Random Normal Determinants	W. L. NICHOLSON	575
A Smooth Invertibility Theorem	J. W. TUKEY	581
On the Inversion of the Sample Covariance Matrix in a Stationary Autogressive Process M. M. SIDDIQUI		585
A Problem of Berkson, and Minimum Variance Orderly Estimators.	J. W. TUKEY	588
An Elementary Theorem Concerning Stationary Ergodic Processes	LEO BREIMAN	592
A Test of Fit for Multivariate Distributions	LIONEL WEISS	595
Tables for Obtaining Non-parametric Tolerance Limits	PAUL N. SOMERVILLE	599

(Continued on outside back cover)

Vol. 29, No. 2 — June, 1958