

# THE ANNALS of MATHEMATICAL STATISTICS

FOUNDED AND EDITED BY H. C. CARVER, 1930-1938

EDITED BY S. S. WILKS, 1938-1949

THE OFFICIAL JOURNAL OF THE INSTITUTE  
OF MATHEMATICAL STATISTICS

## Contents

	PAGE
The Empirical Bayes Approach to Statistical Decision Problems. HERBERT ROBBINS	1
Local and Asymptotic Minimax Properties of Multivariate Tests	
N. GIRI AND J. KIEFER	21
Asymptotic Behavior of Expected Sample Size in Certain One Sided Tests	
R. H. FARRELL	36
Robust Estimation of a Location Parameter	PETER J. HUBER 73
Asymptotic Efficiency of a Class of $c$ -Sample Tests	MADAN LAL PURI 102
Rank Tests for Paired-Comparison Experiments Involving Several Treatments	
K. L. MEHRA	122
A Class of Nonparametric Tests for Independence in Bivariate Populations	
S. BHUCHONGKUL	138
Some Basic Theorems of Distribution-Free Statistics	
C. B. BELL	150
Consistent Estimates and Zero-One Sets	
LEO BREIMAN, LUCIEN LECAM AND LORRAINE SCHWARTZ	157
Sequential Tests for the Mean of a Normal Distribution II (Large $t$ )	
JOHN BREAKWELL AND HERMAN CHERNOFF	162
A Sequential Procedure for Selecting the Population With the Largest Mean From $k$ Normal Populations	
EDWARD PAULSON	174
On the Likelihood Ratio Test of a Normal Multivariate Testing Problem	N. GIRI 181
Tests for the Equality of Two Covariance Matrices in Relation to a Best Linear Discriminator Analysis	
A. P. DEMPSTER	191
Monotonicity of the Power Functions of Some Tests of the Multivariate Linear Hypothesis	
S. DAS GUPTA, T. W. ANDERSON AND G. S. MUDHOLKAR	200
Monotonicity of the Power Functions of Some Tests of Independence Between Two Sets of Variates	
T. W. ANDERSON AND S. DAS GUPTA	206
Effect of Truncation on a Test for the Scale Parameter of the Exponential Distribution	
A. P. BASU	209
The Twenty-Seven Per Cent Rule	
JOHN ROSS AND R. A. WEITZMAN	214
On Sampling Schemes Providing Unbiased Ratio Estimators	
P. K. PATHAK	222
A Review of the Literature on a Class of Coverage Problems	
WILLIAM C. GUENTHER AND PAUL J. TERRAGNO	232
Multivariate Beta Distributions and Independence Properties of the Wishart Distributions	
INGRAM OLKIN AND HERMAN RUBIN	261
Linear Forms in the Order Statistics From an Exponential Distribution	
ELLIOT A. TANIS	270
Distribution of Sum of Identically Distributed Exponentially Correlated Gamma-Variables	
SAMUEL KOTZ AND JOHN W. ADAMS	277
Tables of the Logarithmic Series Distribution	
E. WILLIAMSON AND M. H. BRETHERTON	284

(Continued on back cover)

Vol. 35, No. 1—March, 1964