## 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
Asymptotically Optimal Tests for Multinomial DistributionsWassily Hoeffding DiscussionJerzy Neyman, Herman Chernoff, D. G. Chapman Additive Functionals and Excessive Functions	401 409 423
On the Asymptotic Behavior of Bayes Estimates in the Discrete Case II	
DAVID A. FREEDMAN On the Asymptotic Theory of Fixed-Width Sequential Confidence Intervals for the	
MeanY. S. Chow and Herbert Robbins On the Asymptotic Theory of Fixed-Size Sequential Confidence Bounds for Linear Regression ParametersLeon J. Gleser	457
Regression Parameters	463
T. W. Anderson Large-Sample Estimation of an Unknown Discrete Waveform Which is Randomly Re-	468
peating in Gaussian Noise	489
M. R. LEADBETTER AND J. D. CRYER Integral Kernels and Invariant Measures for Markoff Transition Functions	<b>50</b> 9
A Characterisation of a Class of Functions of Finite Markov Chains  J. Feldman	517
S. W. Dharmadhikari	524
The Behavior of Likelihood Ratios of Stochastic Processes Related by Groups of Transformations	
Recurrent Sets	
A Local Limit Theorem for Nonlattice Multi-Dimensional Distribution Functions	FAG
Charles Stone Local Convergence of Martingales and the Law of Large NumbersY. S. Chow	
On the Convergence Rate of the Law of Large Numbers for Linear Combinations of	002
Independent Random VariablesD. L. HANSON AND L. H. KOOPMANS	559
Bounds on Integrals With Applications to Reliability Problems. RICHARD E. BARLOW	565
The Relationship Between Sufficiency and Invariance With Applications in Sequential	
Analysis W. J. Hall, R. A. Wijsman and J. K. Ghosh	575
On the Asymptotic Behavior of Densities With Applications to Sequential Analysis	615
Adnan Ifram Nonlinear Least Squares Estimation	019
Effect of Non-Normality on Stein's Two Sample Test	651
On the Complex Analogues of $T^2$ - and $R^2$ -Tests	664
Generalization of Sverdrup's Lemma and Its Applications to Multivariate Distribution	
Theory	671
Approximations to the Distribution of Quadratic Forms	677
Decomposition of Symmetric Matrices and Distributions of Quadratic Forms	000
Norman Y. Luther	683

Vol. 36, No. 2—April, 1965

(Continued on back cover)