

CONTENTS

Preface	ix
I. ASYMPTOTIC DISTRIBUTIONS AND EXPANSIONS	
Error Bounds for Asymptotic Expansions of the Distributions of the Classification Statistic W and Related Statistics <i>Y. Fujikoshi</i>	3
Some Results on the Empirical Spacings Process and Its Bootstrapped Version <i>S. Rao Jammalamadaka and Jing Qin</i>	17
On the Cornish–Fisher Expansion in Finite Population <i>I. Traat</i>	35
II. GENERAL LINEAR REGRESSION MODELS	
On Proportionality of Regression Coefficients in Misspecified General Linear Regression Models <i>U. Pötter</i>	45
More on Partitioned Possibly Restricted Linear Regression <i>H. J. Werner and C. Yapar</i>	57
Simpler Tests of Linear Inequality Constraints in the Standard Linear Model <i>R. W. Farebrother</i>	67
Increasing the Correlations with the Response Variable may not Increase the Coefficient of Determination: A PCA Interpretation <i>C. M. Cuadras</i>	75
Discussion on the Paper of C. M. Cuadras: “ <i>Increasing the Correlations with the Response Variable may not Increase the Coefficient of Determination: A PCA Interpretation</i> ” <i>E.-M. Tiit</i>	85
Testing Lack of Fit in Mixed Effect Models for Longitudinal Data <i>M. Palta and R. P. Qu</i>	93

III. TESTS IN MULTIVARIATE STATISTICS

A Projection NT-type Test for Spherical Symmetry of a Multivariate Distribution <i>Li-Xing Zhu, Kai-Tai Fang and Jin-Ting Zhang</i>	109
Some Applications of Directional Statistics to Astronomy <i>P. E. Jupp</i>	123
Simple Methods for Fitting Circles or Points to Spherical Data <i>R. W. Farebrother</i>	135

IV. MULTIVARIATE NONPARAMETRIC MODELS AND THEIR APPLICATIONS

The Use of Hellinger Distance in Graphical Displays of Contingency Table Data <i>C. Radhakrishna Rao</i>	143
Bivariate Generalizations of the Median <i>A. Ninimaa</i>	163
Distance-Based Regression in some Heliophysical Data Analysis <i>A. Bartkowiak</i>	181
Some Applications of Multivariate Analysis in Environmental Research <i>M. Greenacre and R. Fieler</i>	197
Methods for Longitudinal Social Network Data: Review and Markov Process Models <i>T. A. B. Snijders</i>	211
Optimal Industrial Classification <i>J. S. Chipman and P. Winker</i>	229

V. DISCRIMINATION AND CLASSIFICATION

Small Sample Properties of Ridge-Estimate of the Covariance Matrix in Statistical and Neural Net Classification <i>Š. Raudys and M. Skurikhina</i>	237
Trimmed k -Means and the Cauchy Mean-Value Property <i>J. A. Cuesta-Albertos, A. Gordaliza and C. Matrán</i>	247
On some Properties of k -Variance <i>K. Pärna and J. Lember</i>	267
Random Multigraphs, Classification and Clustering <i>B. Harris, E. Godehardt and A. Horsch</i>	279

VI. MATRICES IN STATISTICS

Shorted Matrices and Their Applications in Linear Statistical
Models: A Review

S. K. Mitra, S. Puntanen and G. P. H. Styan

289

Arrays of Multivariate Statistics and Their Representation

E. Käärrik and E.-M. Tiit

313

On the Calculations with the Indexed Sets of Data

O. Karma

325

On Statistical Applications of Matrix Majorization

J. Hauke and A. Markiewicz

335