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Nota di contenuto	Cover; Title Page; Copyright Page; CONTENTS; List of Figures; List of Tables; Preface; Glossary; List of Symbols; 1 Introduction; 1.1 Objective of the Book; 1.2 Models under Consideration; 1.2.1 Location Model; 1.2.2 Simple Linear Model; 1.2.3 ANOVA Model; 1.2.4 Parallelism Model; 1.2.5 Multiple Regression Model; 1.2.6 Ridge Regression; 1.2.7 Multivariate Model; 1.2.8 Simple Multivariate Linear Model; 1.3 Organization of the Book; 1.4 Problems; 2 Preliminaries; 2.1 Normal Distribution; 2.2 Chi-Square Distribution; 2.3 Student''s t-Distribution; 2.4 F-Distribution 2.5 Multivariate Normal Distribution2.6 Multivariate t-Distribution; 2.6.1 Expected Values of Functions of M_t^(p)(, ^2V_p, o) - Variables; 2.6.2 Sampling Distribution of Quadratic Forms; 2.6.3 Distribution of Linear Functions of t-Variables; 2.7 Problems; 3 Location Model; 3.1 Model Specification; 3.2 Unbiased Estimates of and ^2 and Test of Hypothesis; 3.3 Estimators; 3.4 Bias and MSE Expressions of the Location Estimators; 3.4.1 Analysis of the Estimators of Location Parameter; 3.5 Various Estimates of Variance; 3.5.1 Bias and MSE Expressions of the Variance Estimators 3.5.2 Analysis of the Estimators of the Variance Parameter3.6 Problems;

4 Simple Regression Model; 4.1 Introduction; 4.2 Estimation and Testing of ; 4.2.1 Estimation of ; 4.2.2 Test of Intercept Parameter; 4.2.3 Estimators of and ; 4.3 Properties of Intercept Parameter; 4.3.1 Bias Expressions of the Estimators; 4.3.2 MSE Expressions of the Estimators; 4.4 Comparison; 4.4.1 Optimum Level of Significance of _n^PT; 4.5 Numerical Illustration; 4.6 Problems; 5 ANOVA; 5.1 Model Specification; 5.2 Proposed Estimators and Testing; 5.3 Bias, MSE, and Risk Expressions; 5.4 Risk Analysis
5.4.1 Comparison of _n and _n5.4.2 Comparison of _n_PT and _n (_n); 5.4.3 Comparison of _n^S, _n , n, and _n^PT; 5.4.4 Comparison of _n^S and _n^S+; 5.5 Problems; 6 Parallelism Model; 6.1 Model Specification; 6.2 Estimation of the Parameters and Test of Parallelism; 6.2.1 Test of Parallelism; 6.3 Bias, MSE, and Risk Expressions; 6.3.1 Expressions of Bias, MSE Matrix, and Risks of _n, _n, _n, and _n; 6.3.2 Expressions of Bias, MSE Matrix, and Risks of the PTEs of and ; 6.3.3 Expressions of Bias, MSE Matrix, and Risks of the SSEs of and
6.3.4 Expressions of Bias, MSE Matrix, and Risks of the PRSEs of and 6.4 Risk Analysis; 6.5 Problems; 7 Multiple Regression Model; 7.1 Model Specification; 7.2 Shrinkage Estimators and Testing; 7.3 Bias and Risk Expressions; 7.3.1 Balanced Loss Function; 7.3.2 Properties; 7.4 Comparison; 7.5 Problems; 8 Ridge Regression; 8.1 Model Specification; 8.2 Proposed Estimators; 8.3 Bias, MSE, and Risk Expressions; 8.3.1 Biases of the Estimators; 8.3.2 MSE Matrices and Risks of the Estimators; 8.4 Performance of the Estimators; 8.4.1 Comparison between _n(k), _n^S(k), and _n^S+(k)
8.4.2 Comparison between _n (k) and _n^PT (k)

Sommario/riassunto

"This book summarizes the results of various models under normal theory with a brief review of the literature. Statistical Inference for Models with Multivariate t-Distributed Errors: Includes a wide array of applications for the analysis of multivariate observations Emphasizes the development of linear statistical models with applications to engineering, the physical sciences, and mathematics Contains an up-to-date bibliography featuring the latest trends and advances in the field to provide a collective source for research on the topic Addresses linear regression models with non-normal errors with practical real-world examples Uniquely addresses regression models in Student's t-distributed errors and t-models Supplemented with an Instructor's Solutions Manual, which is available via written request by the Publisher "--