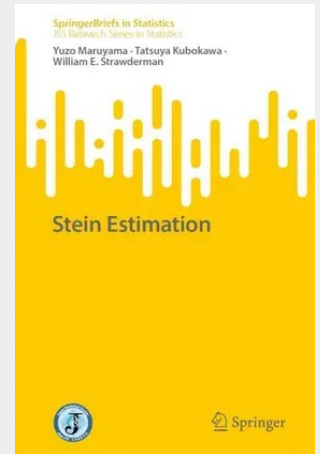


Stein Estimation

This book provides a self-contained introduction of Stein/shrinkage estimation for the mean vector of a multivariate normal distribution. The book begins with a brief discussion of basic notions and results from decision theory such as admissibility, minimaxity, and (generalized) Bayes estimation. It also presents Stein's unbiased risk estimator and the James-Stein estimator in the first chapter. In the following chapters, the authors consider estimation of the mean vector of a multivariate normal distribution in the known and unknown scale case when the covariance matrix is a multiple of the identity matrix and the loss is scaled squared error. The focus is on admissibility, inadmissibility, and minimaxity of (generalized) Bayes estimators, where particular attention is paid to the class of (generalized) Bayes estimators with respect to an extended Strawderman-type prior. For almost all results of this book, the authors present a self-contained proof. The book is helpful for researchers and graduate students in various fields requiring data analysis skills as well as in mathematical statistics.

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